

ModelArts
7.3.0

API Reference

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1 Before You Start

Before calling a ModelArts API, ensure that you have fully understood the concepts related to ModelArts. For details, see the [Service Overview](#).

ModelArts supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For details about API calling, see [Calling APIs](#).

In addition, ModelArts provides software development kits (SDKs) of multiple programming languages for you to use. For details about how to use the SDKs, see the [ModelArts SDK Reference](#).

Endpoint

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions. For the endpoints of all services, see [Regions and Endpoints](#).

Constraints

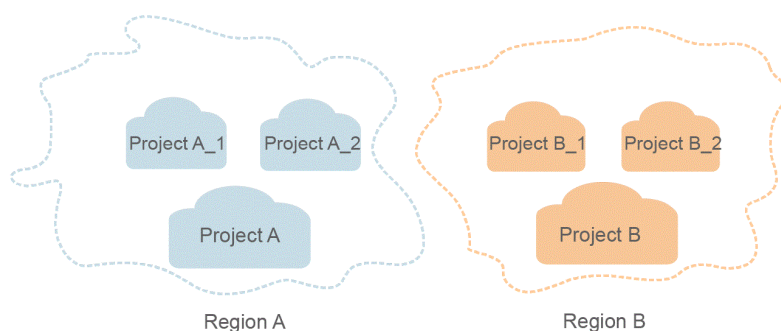
- The number of ModelArts resources you can create is determined by your quota. For details about the quota, see [Quotas](#).
- For more constraints, see API description.

Basic Concepts

- Account
An account is created upon successful registration with the cloud platform. The account has full access permissions for all of its cloud services and resources. It can be used to reset user passwords and grant user permissions. The account is a payment entity and should not be used directly to perform routine management. For security purposes, create IAM users and grant them permissions for routine management.
- IAM user
An IAM user is created using an account to use cloud services. Each IAM user has its own identity credentials (password and access keys).
An IAM user can view the account ID and user ID on the [My Credentials](#) page of the console. The account name, username, and password will be required for API authentication.

- **Region**
A region is a geographic area where cloud resources are deployed. Availability zones (AZs) in the same region can communicate with each other over an intranet, while AZs in different regions are isolated from each other. Deploying cloud resources in different regions can better suit certain user requirements or comply with local laws or regulations.
- **AZ**
An AZ contains one or more physical data centers. Each AZ has independent cooling, fire extinguishing, moisture-proof, and electricity facilities. An AZ's computing, network, storage, and other resources are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to allow users to build cross-AZ high-availability systems.
- **Project**
Projects group and isolate compute, storage, and network resources across physical regions. A default project is provided for each region, and subprojects can be created under each default project. Users can be granted permissions to access all resources in a specific project. If you need more refined access control, create subprojects under a default project and create resources in subprojects. Then you can assign users the permissions required to access only the resources in the specific subprojects.
To view a project ID, go to the [My Credentials](#) page.

Figure 1-1 Project isolation model



2 API OVERVIEW

Notebook Instance Management

Table 2-1 Notebook Instance Management

API	Description
Querying Notebook Instances	This API is used to obtain information about notebook instances that meet specific conditions.
Creating a Notebook Instance	This API is used to create a notebook instance based on specified parameters.
Querying All Notebook Instances	This API is used to obtain information about all created notebook instances.
Querying Details of a Notebook Instance	This API is used to obtain the details of a specified notebook instance.
Updating a Notebook Instance	This API is used to modify the instance configurations, including its name, description, specifications, and image.
Deleting a Notebook Instance	This API is used to delete a created notebook instance and its related resources.
Saving a Running Instance as a Container Image	This API is used to save a running instance as a container image.

API	Description
Querying the List of Valid Specifications Supported by Notebook Instances	This API is used to obtain the available specifications supported by notebook instances. This API applies to the following scenario: When you want to know the configuration options supported by a notebook instance, you can use this API to query the list of available specifications. Before using this API, ensure that you have logged in to the system and have the permission to access the target notebook instance. After this API is called, the system returns the valid specifications supported by the notebook instance. For example, the memory and CPU. If you do not have the permission to access the specified notebook instance or the notebook instance is not running, the API will return an error message.
Querying the List of Switchable Specifications Supported by Notebook Instances	This API is used to obtain the available specifications that can be switched during notebook instance creation.
Querying the Available Duration of a Running Notebook Instance	This API is used to obtain the available duration of a running notebook instance.
Prolonging a Notebook Instance	This API is used to prolong the running time of a running notebook instance. This API applies to the following scenarios: When you need to prolong the running time of a notebook instance to complete long-time tasks, you can call this API to do so. Before using this API, ensure that you have logged in to the system and have the permission to perform operations on the target notebook instance. In addition, the notebook instance must be running. After this API is called, the system prolongs the running time of the specified notebook instance, so that you can continue to use it. If you do not have the permission to perform operations on the specified notebook instance or the notebook instance is not running, the API will return an error message.
Starting a Notebook Instance	This API is used to start a created notebook instance.
Stopping a Notebook Instance	This API is used to stop a notebook instance that is running.

API	Description
Obtaining Details About All Notebook Resource Pool Instances	This API is used to obtain details about all notebook resource pool instances associated with a user. This API is used when you need to select a resource pool when creating a notebook instance. Before using this API, ensure that you have registered and logged in to the system and have the permission to view resource pool instances. After the API is called, the API returns a list of detailed information about all resource pool instances, including the instance name, status, and node specifications. If you have not logged in to the system, do not have the required permission to access the resource pool, or an internal error occurs in the system, the API returns an error message, for example, unauthorized access, service unavailable, or internal error.
Obtaining Details About a Notebook Resource Pool	This API is used to obtain details about a notebook resource pool. This API is used when you need to query details about a specified cluster when creating a notebook instance job. Before using this API, ensure that the cluster has been managed and you have the required permission. After this API is called, the system returns the instance ID, name, flavor, instance status, and URL for accessing the cluster. If the cluster does not exist, is not managed, or you do not have the access permission, the API will return an error message.
Querying the Switch and Quota of a Specified Feature of the Current User	This API is used to query the switch status and quota information of a specified feature of the current user. This API is used when you need to know whether a specific feature is enabled, check the quota limit, or monitor the used resources. Before using this API, ensure that you have logged in and have the query permission, and the specified feature must exist. After this API is called, the system returns the details, such as whether the feature is enabled, total quota, and used resources. If you do not have the required permission, the feature does not exist, or the system is abnormal, the API will return an error message.

OBS Storage Mounting

Table 2-2 OBS Storage Mounting

API	Description
Obtaining the Notebook Instances with OBS Storage Mounted	This API is used to obtain the OBS parallel file system that can be mounted to a running notebook instance.
OBS Storage Mounting	This API is used to mount an OBS parallel file system to a specified file directory of a running notebook instance.
Obtaining Details About a Notebook Instance with OBS Storage Mounted	This API is used to obtain the details of the OBS parallel file system that has been mounted to a running notebook instance.
Unmounting OBS Storage from a Notebook Instance	This API is used to unmount an OBS parallel file system from a running notebook instance.

Image Management

Table 2-3 Image Management

API	Description
Querying Supported Images	This API is used to query all images by page based on specified conditions.
Registering a Custom Image	This API is used to register a custom image with ModelArts image management.
Querying the User Image List	This API is used to obtain the overview of user image information. Image names are used for aggregation.
Obtaining Details of an Image	This API is used to query image details.
Deleting an Image	This API is used to delete an image object. For a private image, you can also delete its SWR image content using parameters.

API	Description
Synchronizing the Image Status	This API is used to correct the abnormal image status. This API is used when you need to synchronize the latest image status when the image status is abnormal due to misoperations, network problems, or system faults. Before using this API, ensure that the image exists and you have the required permission. After the synchronization, the image status is updated to the latest correct status, and related resources and configurations are synchronized. If the image does not exist, you do not have the operation permission, or an error occurs during the synchronization, the API will return an error message.

Algorithm Management

Table 2-4 Algorithm Management

API	Description
Creating an Algorithm	This API is used to create an algorithm on ModelArts.
Querying the Algorithm List	This API is used to obtain the list of all algorithms on ModelArts.
Querying Algorithm Details	This API is used to obtain the details of a specified algorithm on ModelArts.
Modifying an Algorithm	This API is used to modify the information of an existing algorithm.
Deleting an Algorithm	This API is used to remove a registered algorithm from ModelArts.

Training Job Management

Table 2-5 Training Job Management

API	Description
Creating a Training Job	This API is used to create a training job on ModelArts.
Querying the Details About a Training Job	This API is used to query the details about a training job on ModelArts.

API	Description
Modifying the Description of a Training Job	This API is used to modify the description of an existing training job.
Deleting a Training Job	This API is used to delete a training job from ModelArts.
Terminating a Training Job	This API is used to terminate a training job on ModelArts. Only jobs in the creating, awaiting, or running state can be terminated.
Querying the Logs of a Specified Task in a Given Training Job (Preview)	This API is used to query the logs of a specified task in a given training job on ModelArts (preview).
Querying the Logs of a Specified Task in a Training Job (OBS Link)	This API is used to obtain the OBS link where the log files of a specified training job are stored.
Querying the Running Metrics of a Specified Task in a Training Job	This API is used to query the running metrics of a specified task in a training job on ModelArts.
Querying a Training Job List	This API is used to obtain the list of all training jobs on ModelArts.
Obtaining the Events of a Training Job	This API is used to obtain the events of a training job on ModelArts.

Resource and Engine Specifications

Table 2-6 Resource and Engine Specifications

API	Description
Obtaining the General Specifications Supported by a Training Job	This API is used to obtain the supported resource specifications of training jobs on ModelArts.
Obtaining the Preset AI Frameworks Supported by a Training Job	This API is used to query the list of preset AI frameworks supported by the current system.

Model Management

Table 2-7 Model Management

API	Description
Obtaining the Model Runtime	This API is used to obtain the AI engine and runtime of models.
Querying the AI Application List	This API is used to query the AI application list based on different search parameters.
Creating an AI Application	Import a meta model to create an AI application.
Obtaining Details About an AI Application	This API is used to query details about an AI application based on the AI application ID.
Deleting an AI application	This interface is used to delete an AI application based on the AI application ID. When cascade is set to true, the AI application specified by the AI application ID and other AI applications with the same name but different versions as the specified AI application are deleted. By default, only the AI application corresponding to the current AI application ID is deleted.

App Authentication Management

Table 2-8 App Authentication Management

API	Description
Obtaining the App List	This API is used to obtain the basic information about APIG apps. You can obtain only the information about the apps created by yourself.
Creating Apps	This API is used to create API Gateway applications (apps for short). Each user can create a maximum of five apps. You can apply for increasing the quota as required.
Obtaining App Details	This API is used to obtain details about a specified app.
Deleting an App	This API is used to delete a specified app. Only the user who creates the app can delete it, and the app is not bound to any API.
Adding an App Code	This API is used to create an app code for a specified API Gateway app. Only the user who creates the app can create an app code, and only apps of the shared or dedicated API Gateway can have app codes.

API	Description
Resetting an App Code	This API is used to reset a specified app code of an API Gateway app. Only the user who creates the app can reset it, and only apps of the shared or dedicated API Gateway can have app codes.
Deleting an App Code	This API is used to delete a specified app code of an API Gateway app. Only the user who creates the app can delete it, and only apps of the shared or dedicated API Gateway can have app codes.
Resetting an AppSecret	This API is used to reset the AppSecret of a specified API Gateway app. Only the user who creates the app can reset the AppSecret.
Obtaining the List of APIs Bound to an App	This API is used to obtain the list of APIs bound to an app.
Registering an API and Authorizing the API to an App	This API is used to register an API and authorize the API to an App. Only Huawei Cloud users who have the permission to update the service can call this API.
Deleting an API	This API is used to delete a specified API. Only users who have the permission to delete the service to which the API belongs can delete the API.
Authorizing an API to an App	This API is used to authorize a specified API to an App. The API authentication mode must be App authentication. The user who creates an App must be the creator of the service to which the API belongs, and the request user must have the update permission on the service to which the API belongs.
Updating API Authorization	This API is used to update the authorization relationship of an API. The API authentication mode must be App authentication. The user who creates an App must be the creator of the service to which the API belongs, and the request user must have the update permission on the service to which the API belongs.
Canceling the Authorization of an API to an App	This API is used to cancel the authorization of a specified API to an app. The request user must have the update permission on the service to which the API belongs. Same as the URL: /v1/{project_id}/app-auth/{service_id}/apis/{api_id}/auths
Obtaining API Authorization Relationships	This API is used to obtain the authorization relationships between specified APIs and Apps. The API authentication mode must be App authentication. Administrators can obtain authorization information about all APIs. Common users can obtain only authorization information about APIs of services on which they have access permissions.

API	Description
Creates an API.	An API is created, but the API is not authorized to the app.
API query	This API is used to query details about a specified API.
Querying APIs and Apps	This API is used to query information about APIs and apps authorized by a service.
Check whether the app exists.	Check whether the app exists.

Service Management

Table 2-9 Service Management

API	Description
Obtaining Service Monitoring	This API is used to obtain service monitoring information.
Obtaining Services	This API is used to obtain model services.
Deploying Services	This API is used to deploy a model as a service.
Obtaining Supported Service Deployment Specifications	This API is used to obtain supported service deployment specifications.
Obtaining Service Details	This API is used to obtain the details about a model service based on the service ID.
Updating Service Configurations	This API is used to update configurations of a model service. It can also be used to start or stop a service.
Updating the Service Through the Patch Operation	This API is used to update the service through the patch operation. For details about the patch format, see json patch .
Deleting a Service	This API is used to delete a model service. You can delete your own services only.
Updating a Single Property of a Model Service	This API is used to update a single property of a model service. Currently, only instance_count (number of instances of the model service) is supported. This operation can be performed only for real-time services in the running, alarm, or abnormal state.
Obtaining Service Event Logs	This API is used to obtain service event logs, including service operation records, key actions during deployment, and deployment failure causes.

API	Description
Obtaining Service Update Logs	This API is used to obtain the update logs of a real-time service.
Adding a Resource Tag	This API is used to add tags to specified real-time services. If a tag to be added has the same key as an existing tag, the tag will overwrite the existing one.
Deleting Resource Tags	This API is used to delete tags of a real-time service. Tags can be deleted in batches.
Obtaining Inference Service Tags	This API is used to obtain inference service tags in the current project. Tags in all workspaces are obtained by default. If you do not have the permission, no tag is returned.
Obtaining an Inference VPC Access Channel	This API is used to obtain an inference VPC access channel.

Configuration Management

Table 2-10 Configuration Management

API	Description
Querying OS Configuration Parameters	This API is used to obtain the configuration parameters of ModelArts OS, such as network CIDR and user resource quota. This API is used when you need to query the network configuration, resource allocation, or system management of ModelArts OS. Before using this API, ensure that you have the permission to access ModelArts OS and the service is running properly. After the query, the configuration parameters are returned for future resource planning and system optimization. If you do not have the required permission, the service is unavailable, or the request parameter is invalid, the API will return an error message.

Plug-in Template Management

Table 2-11 Plug-in Template Management

API	Description
Querying a Plug-in Template	This API is used to obtain details about a specified plug-in template. This API is used when you need to query the configuration, functions, or usage of a specific plug-in template. Before using this API, ensure that the plug-in template exists and you have the required permission. After the query, the details of the specified plug-in template are returned, including the configuration parameters and function description of the template, helping you develop and manage plug-ins. If the plug-in template does not exist or you do not have the access permission, the API will return an error message.

Node management

Table 2-12 Node management

API	Description
Obtaining Nodes in a Resource Pool	This API is used to obtain the node list of a specified resource pool. This API is used when you need to obtain the details about a resource pool, such as the node distribution, status, or resource usage. Before using this API, ensure that the resource pool has been created and is available, and you have the required permission. After the query, the system returns the detailed information about the nodes in the resource pool, including the node ID, status, and resource usage, helping you manage and optimize resources. If the resource pool does not exist, you do not have the permission to access the resource pool, or the request parameters are invalid, the API will return an error message.

API	Description
Deleting nodes in batches	This API is used to delete nodes from a specified resource pool in batches. This API is used when you need to delete redundant nodes, re-allocate resources, or remove faulty nodes from a resource pool. Before using this API, ensure that the resource pool has been created and is available, you have the required permission, and at least one node is retained in the resource pool. After the deletion, the specified nodes are permanently removed, and the remaining nodes in the resource pool continue to work. If the resource pool does not exist, the node does not exist, you do not have the permission to perform the operation, or the number of nodes in the resource pool is insufficient, the API will return an error message.

Event management

Table 2-13 Event management

API	Description
Querying a Trace List	This API is used to obtain the event information recorded in the system. This API is used when you need to query the event records recorded in the system when monitoring the system status, locating faults, or auditing. Before using this API, ensure that you have the required permission and the event records exist in the system. After the query, the API returns the event list, including the event ID, type, time, and description. If you do not have the required permission, the event record does not exist, or the query parameter is incorrect, the API will return an error message.

Networking

Table 2-14 Networking

API	Description
Creating Network Resources	This API is used to create network resources in a system. This API is used when you need to create network resources, such as virtual networks, subnets, or routes, when you need to expand services, plan resources, or adjust the network architecture. Before using this API, ensure that you have the administrator permission and the system has sufficient resources to create network resources. After the creation, the network resources will be added to the system for future service configurations. If you do not have the required permission, the resources are insufficient, or the input parameter is incorrect, the API will return an error message.
Obtaining Network Resources	This API is used to obtain information about created network resources in the system. This API is used when you need to query the network resource list recorded in the system when monitoring network status, planning resources, locating network faults, or auditing. Before using this API, ensure that you have the required permission and the network resources exist in the system. After the query, the API returns the network resource list, including the resource ID, type, status, and creation time. If you do not have the required permission, the network resources do not exist in the system, or the query parameter is incorrect, the API will return an error message.
Obtaining a Network Resource	This API is used to obtain the details of a specified network resource. This API is used when you need to query details about a specified network resource, such as its configuration, status, or attributes. Before using this API, ensure that you have the required permission and the specified network resource exists in the system. After the query, the API returns the details of the specified network resource, including the resource ID, type, status, and configuration parameters. If the specified network resource does not exist, you do not have the operation permission, or the input parameters are incorrect, the API will return an error message.

API	Description
Deleting a Network Resource	This API is used to remove specified network resources. This API is used when you need to delete a specified network resource when the network resource is no longer required, the configuration is incorrect, or resources need to be cleared. Before using this API, ensure that the network resource exists and you have the administrator permissions. After the deletion, the specified network resource is permanently removed, and related configurations and associations are cleared. If the specified network resource does not exist, you do not have the operation permission, or the resource is depended on by other resources, the API will return an error message.
Updating a Network Resource	This API is used to update the configuration information of a specified network resource. This API is used when you need to update the details of a specified network resource, such as adjusting attributes, fixing configuration errors, or optimizing resource settings. Before using this API, ensure that the network resource exists and you have the administrator permissions. After the update, the configuration information of the specified network resource is modified, and the latest resource status and attributes are displayed. If the specified network resource does not exist, you do not have the operation permission, or the input parameters are incorrect, the API will return an error message.

Resource indicators

Table 2-15 Resource indicators

API	Description
Querying the Real-Time Resource Usage	This API is used to obtain the real-time usage of all resource pools in the current project. This API is used when you need to query the real-time usage of resource pools when monitoring resource usage, optimizing resources, planning capacity, or troubleshooting faults. The resource usage includes the usage of CPU, memory, and storage resources. Before using this API, ensure that you have the required permission and there is a running resource pool. After the query, the API returns the real-time usage data of the resource pool, including the usage percentage, resource type, and timestamp. If you do not have the required permission, the resource pool does not exist, or the system cannot obtain the real-time data, the API will return an error message.

Resource pool management

Table 2-16 Resource pool management

API	Description
Creating Resource Pools	This API is used to create a resource pool in the system. This API is used when you need to allocate resources for new services, optimize resource management, or isolate resources. You can use this API to create a resource pool to manage compute, storage, and network resources. Before using this API, ensure that you have the administrator permission and the system has sufficient resources to create resource pools. After the creation, the resource pool will be added to the system and be available for future resource allocation and management. If you do not have the required permission, the system resources are insufficient, or the input parameter is incorrect, the API will return an error message.

API	Description
Obtaining Resource Pools	This API is used to obtain information about resource pools created in the system. This API is used when you need to query the resource pool list recorded in the system when monitoring resource pool status, planning resources, managing resource allocation, or auditing. Before using this API, ensure that you have the required permission and the resource pool exists in the system. After the query, the API returns the resource pool list, including the resource pool ID, name, type, status, and resource quota. If you do not have the required permission, the resource pools do not exist in the system, or the query parameter is incorrect, the API will return an error message.
Obtaining a Resource Pool	This API is used to obtain the details of a specified resource pool. This API is used when you need to query details about a specified resource pool, such as its configuration, status, resource usage, or resource management. Before using this API, ensure that you have the required permission and the specified resource pool exists in the system. After the query, the API returns the resource pool details, including the resource pool ID, name, type, status, resource quota, and usage. If the specified resource pool does not exist, the user does not have the permission to perform the operation, or the input parameters are incorrect, the API will return an error message.
Deleting a Resource Pool	This API is used to delete a specified resource pool. This API is used when you need to delete a specified resource pool when the resource pool is no longer required, the configuration is incorrect, or resources need to be cleared. Before using this API, ensure that the resource pool exists and you have the administrator permissions. After the deletion, the specified resource pool is permanently removed, and related resources and configurations are cleared. If the resource pool does not exist, you do not have the operation permission, or the resource pool is depended on by other resources, the API will return an error message.

API	Description
Updating a Resource Pool	This API is used to update the configuration and capacity of a specified resource pool. This API is used when you need to update the information about a resource pool when the resource pool capacity needs to be expanded, the configuration needs to be adjusted, or the performance needs to be optimized. Before using this API, ensure that the resource pool exists and you have the administrator permissions. After the update, the configuration and capacity of the resource pool will be updated, and the related resources and configurations will be adjusted. If the resource pool does not exist, the user does not have the permission to perform the operation, or the resource pool cannot be updated, the API will return an error message.
Monitoring a Resource Pool	This API is used to obtain the real-time or historical monitoring information about a specified resource pool. This API is used when you need to obtain the monitoring data of a resource pool in real time, such as resource usage, performance status, or historical data. Before using this API, ensure that the resource pool exists and you have the administrator permissions. After the API is called, the system returns the monitoring information of the resource pool, including the resource usage, performance metrics, and historical trends. If the resource pool does not exist, the user does not have the permission to perform the operation, or the resource pool is unavailable, the API will return an error message.
Resource Pool Statistics	This API is used to obtain the statistics of a specified resource pool. This API is used when you need to obtain the resource usage, allocation, or usage of a resource pool. Before using this API, ensure that the resource pool exists and you have the administrator permissions. After the API is called, the system returns the statistics of the resource pool, including the total resource usage, allocated resources, usage, and resource allocation trend. If the resource pool does not exist, the user does not have the permission to perform the operation, or the resource pool is unavailable, the API will return an error message.

Resource flavor management APIs

Table 2-17 Resource flavor management APIs

API	Description
Obtaining Resource Specifications	This API is used to obtain available resource specifications. This API is used when you need to view or select resource specifications to create resource pools, allocate resources, or learn available resource specifications. Before using this API, ensure that you have the required permissions (such as administrator permissions or resource management permissions). After the API is called, the system returns the resource specifications, including the specification ID, name, number of CPUs, memory size, and storage capacity. If you do not have the required permission or the resource specifications are not configured, the API will return an error message.

Resource Pool Job Management

Table 2-18 Resource Pool Job Management

API	Description
Obtain Jobs in a Resource Pool	This API is used to obtain the job list in a specified dedicated resource pool. This API is used when you need to obtain details about a dedicated resource pool, such as resource usage, job status, or resource allocation. Before using this API, ensure that the dedicated resource pool exists and you have the required permissions (such as administrator permissions or resource management permissions). After the API is called, the system returns the job list of the dedicated resource pool, including the job ID, name, status, and resource usage. If the dedicated resource pool does not exist, the user does not have the operation permission, or the resource pool is unavailable, the API will return an error message.

API	Description
Querying dedicated resource pool Job Statistics	This API is used to obtain job statistics of a dedicated resource pool. This API is used when you need to obtain the job running information, resource usage, or job status distribution of a dedicated resource pool. Before using this API, ensure that the dedicated resource pool exists and you have the required permissions (such as administrator permissions or resource management permissions). After the API is called, the system returns the job statistics of the dedicated resource pool, including the total number of jobs, number of running jobs, number of completed jobs, and resource usage. If the dedicated resource pool does not exist, the user does not have the operation permission, or the resource pool is unavailable, the API returns an error message.

DevServer Management

Table 2-19 DevServer Management

API	Description
Obtaining All DevServer Instances of a User	This API is used to obtain all DevServer instances of a user.
Creating a DevServer Instance	This API is used to create a Lite Server, ECS, BMS, and supernode server.
Obtaining DevServer Instance Details	This API is used to obtain DevServer instance details.
Deleting DevServer Instances	This API is used to delete DevServer instances.
Synchronizing the Status of All DevServer Instances of a User in Real Time	This API is used to synchronize the status of all DevServer instances of a user in real time.
Starting DevServer Instances	This API is used to start DevServer instances.
Stopping DevServer Instances	This API is used to stop DevServer instances.
Creating DevServer Supernode Tags	This API is used to create the DevServer supernode tags.

API	Description
Deleting DevServer Supernode Tags	This API is used to delete the DevServer supernode tags.
Obtaining the DevServer Supernode Tags	This API is used to obtain the DevServer supernode tags.
Reinstalling the OS Image of the DevServer Server	This API is used to reinstall the OS image of the DevServer server.
Changing the OS Image of the DevServer Server	This API is used to change the OS image of the DevServer server.
Changing the OS Image of the DevServer Supernode Server	This API is used to change the OS image of the DevServer supernode server.
Obtaining Details About All Supernode Instances of a User	This API is used to obtain details about all supernode instances of a user.
Obtaining Details About a Specified Supernode Instance	This API is used to obtain details about a specified supernode instance.
Deleting a DevServer Supernode Instance	This API is used to delete the DevServer supernode instance in the ERROR state.
Restarting a DevServer Instance	This API is used to restart a DevServer instance.
Starting a DevServer Supernode Server	This API is used to start a DevServer supernode server.
Stopping a DevServer Supernode Server	This API is used to stop a DevServer supernode server.
Mounting Disks to the DevServer	This API is used to Mounting Disks to the DevServer.
Bind EIPs to a DevServer	EIPs bound to a DevServer.
Query Bound EIPs	Query bound EIPs.
Obtaining the Resource Flavor List	This API is used to obtain the resource flavor list.
Querying the Specification List	This API is used to query the specification list.

API	Description
Querying the List of Supported DevServer Scaling Specifications and Capacity Calculation	This API is used to query the specifications supported by DevServer supernode scaling and calculate the capacity.
Obtaining the Hyper Cluster Details List	This API is used to obtain the hyper cluster details list.
Creating a Hyper Cluster	This API is used to create a hyper cluster.
Querying Hyper Cluster Instance Details	This API is used to query details about a hyper cluster instance.
Deleting a Hyper Cluster Instance	This API is used to delete a hyper cluster instance.
Performing Operations on DevServer Instances in Batches	This API is used to perform operations on DevServer instances in batches.
Obtaining Details About a DevServer Job	This API is used to query details about a DevServer job.
Obtaining the DevServer Job List	This API is used to obtain the DevServer job list. The jobs can be filtered by status, ID, or other fields.
Deleting DevServer Jobs in Batches	Delete DevServer jobs in batches.
Creating a DevServer Job	This API is used to create a DevServer job.
Obtaining the DevServer Job Template List	This API is used to obtain the DevServer job template list.
Obtaining Details About a DevServer Job Template	This API is used to obtain details about a DevServer job template.
Obtaining the DevServer Plug-in List	This API is used to obtain the DevServer plug-in list.
Obtaining Software Information	This API is used to obtain the supported software information. The flavor_type and name parameters are supported.

Authorization Management

Table 2-20 Authorization Management

API	Description
Viewing an Authorization List	This API is used to view the authorization information.
Configuring Authorization	This API is used to configure ModelArts authorization.
Deleting Authorization	This API is used to delete the authorization of a specified user or all users.
Creating a ModelArts Agency	This API is used to create a ModelArts agency for ModelArts-dependent services, such as Object Storage Service (OBS), Software Repository for Container (SWR), and Intelligent EdgeFabric (IEF).

Workspace Management

Table 2-21 Workspace Management

API	Description
Querying Details About a Workspace	This API is used to query the details about a workspace.
Modifying a Workspace	This API is used to update the configuration information of a specified workspace.
Deleting a Workspace	This API is used to delete a created workspace.
Querying a Workspace Quota	This API is used to obtain the resource quota of a specified workspace.
Modifying a Workspace Quota	This API is used to update the resource quota of a specified workspace.
Querying a Workspace List	This API is used to obtain the details of all created workspaces.
Creating a Workspace	This API is used to create a workspace. The name of the created workspace cannot be default , which is the name of the default workspace reserved by the system.

API	Description
Querying the Authorization Mode	This API is used to obtain the authorization mode and permission configuration information of a specified resource or function. This API is used when system administrators can use this API to view the access permission settings of resources. Developers can use this API to verify whether authorization policies are correctly configured. Security auditors can use this API to check whether authorization configurations comply with security specifications. Before using this API, ensure that you have the query permission and the authorization mode of the target resource or function has been configured. After the API is called, the API returns details about the authorization mode, including the authorization mode type, rules, and permission scope. If you do not have the permission to access this API or the authorization mode of the target resource is not configured, the API will return an error message.
Updating the Authorization Mode	This API is used to modify the authorization mode and permission configuration information of a specified resource or function. This API is used when system administrators can use this API to adjust the access permission of resources. Developers can use this API to update authorization policies to meet new service requirements. Security auditors can use this API to modify authorization configurations to comply with new security specifications. Before using this API, ensure that you have the update permission and the authorization mode of the target resource or function exists. After the API is called, the API updates the authorization mode of the target resource and returns the updated authorization mode information. If you do not have the permission to access this API or the authorization mode of the target resource does not exist, the API will return an error message.
Authenticating Whether the Current Workspace Can Be Used	This API is used to check whether a user has the permission to access and use resources in the current workspace. This API is used when you try to access or operate resources in the workspace, and the system needs to check whether you have the required permission. Before using this API, ensure that you have logged in and the workspace exists. If the authentication is successful, the user can access and use resources in the workspace. If the authentication fails, the API returns an error message, for example, insufficient permissions or the workspace does not exist.

API	Description
Querying the User Role Information	This API is used to obtain the role information of a specified user in the system. This API is used when you need to know the permissions and roles of a user in the system. The administrator or system can use this API to query the role information of the user. Before using this API, ensure that the user exists and the role information is defined in the system. After the query, the API returns the role list of the user. If the user does not exist or the role information is not defined in the system, the API returns an error message.
Obtaining the User List	This API is used to obtain the user list in the system. This API is used when you need to view all users in the system or filter users based on specific conditions. The administrator or system can use this API to query the user list. Before using this API, ensure that the user exists and the query permission is granted. After the query, the API returns the list of users that meet the query conditions. If no user exists in the system or the query user does not have the required permission, the API returns an error message.

Quota Management

Table 2-22 Quota Management

API	Description
Obtaining OS Quotas	This API is used to obtain the quotas of some ModelArts OS resources, such as resource pool quotas and network quotas. This API is used when you need to know the usage limits of resource pools or network resources, plan resource allocation, or monitor resource usage. Before using this API, ensure that ModelArts OS is deployed and you have the required permissions (such as administrator permissions or resource management permissions). After the API is called, the system returns details about resource pool quotas and network quotas, helping you better plan and manage resources. If you do not have the required permission, the service is unavailable, or the quota information is not configured, the API will return an error message.

Resource Tag Management

Table 2-23 Resource Tag Management

API	Description
Obtaining All Tags of Resource Pools	This API is used to obtain all tags of resource pools in the current project. By default, all workspaces are queried, but tag data is not returned for workspaces to which you do not have permissions. This API is used when you need to manage, classify, or collect statistics on resource pool tags. Before using this API, ensure that you have the required permission and the resource pool exists. After the API is called, the system returns the resource pool tags of all accessible workspaces in the current project. If you do not have the required permission, the resource pool does not exist, or the project is not created, the API will return an error message.
Obtaining Tags of a Resource Pool	This API is used to obtain the tag information of a specified resource pool. This API is used when you need to view, manage, or collect statistics on resource pool tags. Before using this API, ensure that the resource pool exists and you have the required permission. After the API is called, the system returns the tag information of the specified resource pool, including the tag key and tag value. If the resource pool does not exist, you do not have the access permission, or the resource pool is not configured with tags, the API will return an error message.

Node Pool Management

Table 2-24 Node Pool Management

API	Description
Obtaining Node Pools	This API is used to obtain the list of a specified node pool. This API is used when you need to obtain the details about a node pool, such as the configuration, status, or resource management. Before using this API, ensure that the node pool exists and you have the administrator permissions. After the API is called, the system returns the node pool list, including the node pool ID, name, number of nodes, and status. If the node pool does not exist, the user does not have the permission to perform the operation, or the node pool is unavailable, the API will return an error message.

API	Description
Creating a Node Pool	This API is used to create a node pool. This API is used when you need to create a node pool with specified configurations when you need to expand compute resources, optimize resource allocation, or deploy new services. Before using this API, ensure that you have the administrator permission and the node pool parameters (such as the number of nodes, specifications, and network configurations) are correctly set. After the creation, the node pool will be created and be available, and the related node information will be recorded. If you do not have the required permission, the parameter settings are incorrect, or system resources are insufficient, the API will return an error message.
Obtaining Details About a Specified Node Pool	This API is used to obtain the details of a specified node pool. This API is used when you need to obtain the details about a node pool, such as the configuration, status, resource usage, or resource management. Before using this API, ensure that the node pool exists and you have the permission to access the node pool. After the API is called, the system returns the details about the node pool, including the node pool ID, name, number of nodes, status, creation time, and configuration parameters. If the node pool does not exist, the user does not have the permission to access the node pool, or the node pool is unavailable, the API will return an error message.
Updating a Node Pool	This API is used to update the configurations of a specified node pool. This API is used when you need to expand the capacity of a node pool, adjust node specifications, optimize resource allocation, or repair node pool configurations. Before using this API, ensure that the node pool exists and you have the administrator permissions. After the update, the configurations of the node pool will be updated, including the number of nodes, node specifications, and network configurations. If the node pool does not exist, the user does not have the permission to operate the node pool, or the configuration parameters are incorrect, the API will return an error message.

API	Description
Deleting a Node Pool	This API is used to remove a created node pool. This function is not supported for yearly/monthly resource pools. This API is used when you need to delete a specified node pool when the tasks in the node pool are complete, the configuration is incorrect, or resources need to be cleared. Before using this API, ensure that the node pool exists and you have the administrator permissions. After the deletion, the node pool is permanently removed, and related resources and configurations are cleared. If the node pool does not exist, the user does not have the permission to perform the operation, or the node pool cannot be deleted, for example, it is a yearly/monthly resource pool or the node pool is in use, the API will return an error message.
Obtaining Nodes in a Node Pool	This API is used to obtain details about all nodes in a specified node pool. This API is used when you need to obtain the details about a node pool, such as the node status, resource usage, or resource management. Before using this API, ensure that the node pool exists and you have the permission to access the node pool. After the API is called, the system returns the node list of the node pool, including the node ID, name, status, IP address, and resource usage. If the node pool does not exist, the user does not have the permission to access the node pool, or the node pool is unavailable, the API will return an error message.

Order Management

Table 2-25 Order Management

API	Description
Querying Order Details	This API is used to query order details.

Plugin Management

Table 2-26 Plugin Management

API	Description
Creating a Plugin	This API is used to create plugin instances.

API	Description
Querying the Plugin List	This API is used to list plugin instances.

Task Management

Table 2-27 Task Management

API	Description
Querying Tasks	This API is used to obtain the jobs of the current user.

3 Calling APIs

3.1 Making an API Request

This section describes the structure of a REST API request, and uses the IAM API for [Obtaining a User Token](#) as an example to demonstrate how to call an API. The obtained token can then be used to authenticate the calling of other APIs.

Request URI

The format of a request URI is as follows:

{URI-scheme} :// {Endpoint} / {resource-path} ? {query-string}

Table 3-1 Request URI

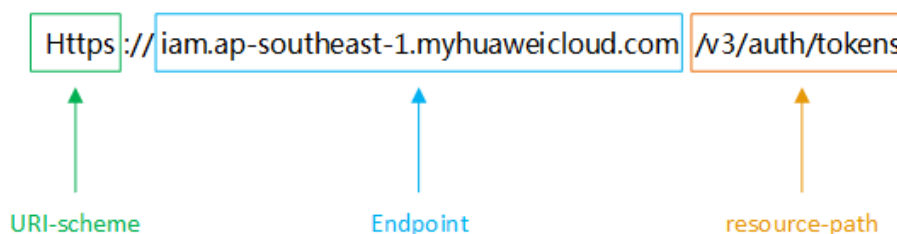
Parameter	Description
URI-scheme	Protocol used to transmit requests. All APIs use HTTPS.
Endpoint	Domain name or IP address of the server for the REST service endpoint. The endpoint varies depending on services in different regions. It can be obtained in Endpoint . For example, the endpoint of IAM in the CN-Hong Kong region is iam.ap-southeast-1.myhuaweicloud.com .
resource-path	Access path of an API for performing a specified operation. Obtain the value from the URI of an API. For example, the resource-path of the API used to obtain a user token is /v3/auth/tokens .
query-string	Query parameter, which is optional. Ensure that a question mark (?) is included before a query parameter that is in the format of "Parameter name=Parameter value". For example, ? limit=10 indicates that a maximum of 10 data records will be displayed.

For example, to obtain a token in the **CN-Hong Kong** region, obtain the endpoint of IAM (**iam.ap-southeast-1.myhuaweicloud.com**) for this region and the

resource-path (/v3/auth/tokens) in the URI of the API used to **obtain a user token**. Then, construct the URI as follows:

```
https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
```

Figure 3-1 Example URI



NOTE

To simplify the URI display, each API is provided with only a **resource-path** and a request method. The **URI-scheme** of all APIs is HTTPS, and the endpoints of all APIs in the same region are identical.

Request Methods

HTTP defines the following request methods that can be used to send a request to the server.

Table 3-2 HTTP methods

Method	Description
GET	Request the server to return specified resources.
PUT	Request the server to update specified resources.
POST	Request the server to add resources or perform special operations.
DELETE	Request the server to delete specified resources, for example, an object.
HEAD	Request header.
PATCH	Request the server to update partial content of a specified resource. If the requested resource does not exist, the server may create the resource using the PATCH method.

For example, in the URI of the API for **obtaining a user token**, the request method is POST. The request is as follows:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
```

Request Header

You can add additional header fields to a request, such as the fields required by a specified URI or HTTP method. For example, to request for the authentication information, add **Content-Type**, which specifies the request body type.

Table 3-3 describes common request header fields.

Table 3-3 Common request headers

Parameter	Description	Mandatory	Example
Content-type	Request body type or format. The default value is application/json .	Yes	application/json
Content-Length	Length of the request body, in bytes.	Mandatory for POST and PUT requests but must be left blank for GET requests	3495
X-Project-Id	Project ID. This parameter is used to obtain a token for each project.	No	e9993fc787d94b6c886cbaa340f9c0f4
X-Auth-Token	User token, a response to the API used to obtain a user token . This API is the only one that does not require authentication.	Mandatory for token-based authentication	N/A
X-Sdk-Date	Time when the request is sent. The time is in <i>YYYYMMDD'THHMMSS'Z'</i> format. The value is the current GMT time of the system.	Mandatory for AK/SK-based authentication, optional for PKI token-based authentication	20190307T101459Z

Parameter	Description	Mandatory	Example
Authorization	Authentication information. The value is obtained from the request signature result and is required when the AK/SK are used to encrypt the signature. Type: string Default value: none	Mandatory for AK/SK-based authentication	SDK-HMAC-SHA256 Credential=ZIRRKMT WPTQFQI1WKNKB/ 20150907//ec2/ sdk_request, SignedHeaders=content-type;host;x-sdk-date, Signature=55741b610f 3c9fa3ae40b5a8021eb f7ebc2a28a603fc62d2 5cb3bfe6608e1994
Host	Server information of the resource being requested. The value can be obtained from the URL of the service API. This value is <i>host name[:port number]</i> . If the port number is not specified, the default port is used. The default port number for https is 443 .	Mandatory for AK/SK-based authentication	code.test.com or code.test.com:443

 NOTE

In addition to supporting token-based authentication, APIs support authentication using AK/SK. During AK/SK authentication, an SDK is used to sign a request, and the **Authorization** (signature authentication) and **X-Sdk-Date** (time when a request is sent) headers are automatically added to the request. For details about AK/SK authentication, see [API Request Signing Guide](#).

The API used to **obtain a user token** does not require authentication. Therefore, only the **Content-Type** field needs to be added to requests for calling the API. An example of such requests is as follows:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json
```

Request Body

The body of a request is often sent in a structured format as specified in the Content-Type header field. The request body transfers content except the request header. If the request body contains Chinese characters, these characters must be encoded in UTF-8.

The request body varies depending on APIs. Some APIs do not require the request body, such as the APIs requested using the GET or DELETE method.

If an API is used to **obtain a user token**, the request parameters and parameter description can be obtained from the API request. The following provides an

example request with a body included. Replace *user_name*, *domain_name*, and *user_password* with the actual username, account name, and login password, respectively. **ap-southeast-1** is the project name. For details, see [Obtaining a Username](#), [Obtaining an Account Name and ID](#), and [Obtaining a Project Name](#).

NOTE

The **scope** parameter specifies where a token takes effect. In the example, the token takes effect only for the resources in a specified project. ModelArts uses a region-specific endpoint to call this API. Set **scope** to **project**. You can set **scope** to an account or a project under an account. For details, see [Obtaining a User Token](#).

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
Content-Type:application/json
{
  "auth": {
    "identity": {
      "methods": ["password"],
      "password": {
        "user": {
          "name": "user_name",
          "password": "user_password",
          "domain": {
            "name": "domain_name"
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "ap-southeast-1"
      }
    }
  }
}
```

After all data required for the API request is available, send the request to call the API through [curl](#), [Postman](#), or coding. In the response to the API used to [obtain a user token](#), **x-subject-token** is the desired user token. This token can then be used to authenticate the calling of other APIs.

3.2 Authentication

You can use either of the authentication methods below to call APIs. AK/SK-based authentication is recommended because it is more secure than token-based authentication.

- Token-based authentication: General requests are authenticated using tokens.
- AK/SK-based authentication: Requests are authenticated by encrypting the request body using an AK/SK.

Token-based Authentication

NOTE

The validity period of a token is 24 hours. When using a token for authentication, cache it to prevent frequently calling the IAM API used to obtain a user token.

A token specifies certain permissions in a computer system. During token-based authentication, the token is added to requests to get permissions for calling the API.

When calling the API to [obtain a user token](#), you must set **auth.scope** in the request body to **project**.

In [Making an API Request](#), the process of calling the API used to obtain a user token is described.

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "user_name",
          "password": "user_password",
          "domain": {
            "name": "domain_name"
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "project_name"
      }
    }
  }
}
```

After a token is obtained, the **X-Auth-Token** header must be added to requests to specify the token when calling other APIs. For example, if the token is **ABCDEFJ....**, add **X-Auth-Token: ABCDEFJ....** to a request as follows:

```
GET https://modelarts.ap-southeast-1.myhuaweicloud.com/v1/{project_id}/services
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

AK/SK-based Authentication

NOTE

AK/SK-based authentication supports API requests with a body not larger than 12 MB. For API requests with a larger body, token authentication is recommended.

In AK/SK-based authentication, AK/SK is used to sign requests and the signature is then added to the request for authentication.

- AK: access key ID, which is a unique identifier used with a secret access key to sign requests cryptographically.
- SK: secret access key, which is used in conjunction with an AK to sign requests cryptographically. It identifies a request sender and prevents the request from being modified.

In AK/SK authentication, you can use an AK/SK to sign requests based on the signature algorithm or use the signing SDK to sign requests. For details about how to sign requests and use the signing SDK, see [API Request Signing Guide](#).

NOTICE

The signature SDK supports only signature, which is different from the SDKs provided by services.

3.3 Response

After sending a request, you will receive a response, including the status code, response header, and response body.

Status Code

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request. For more information, see [Status Code](#).

For example, if status code **201** is returned for calling the API used to [obtain a user token](#), the request is successful.

Response Header

Similar to a request, a response also has a header, for example, **Content-type**.

[Figure 1](#) shows the response header fields for the API used to [obtain a user token](#).

x-subject-token is the desired user token. This token can then be used to authenticate the calling of other APIs.

Figure 3-2 Header fields of the response to the request for obtaining a user token

```
connection → keep-alive
content-type → application/json
date → Tue, 12 Feb 2019 06:52:13 GMT
server → Web Server
strict-transport-security → max-age=31536000; includeSubdomains;
transfer-encoding → chunked
via → proxy A
x-content-type-options → nosniff
x-download-options → noopen
x-frame-options → SAMEORIGIN
x-iam-trace-id → 218d45ab-d674-4995-af3a-2d0255ba41b5
x-subject-token → MIIXYQYJKoZIhvcNAQcCoIIYJCCEoCAQExDTALBgIghkgBZQMEAgEwgharBgkqhkiG9w0BBwGgghacBIIWmHsidG9rZW4iOnsiZXhwaXJlc19hdCI6IjwMTktMTNtMTNUMCfj3KIs6YgKnpVNRbW2eZ5eb78SZOkqjACgklQ1wi4JlGzrpd18LGXK5tdfq4lqHCYb8P4NaY0NYejcAgzIVeFYtLWT1GSO0zxKZmlQHQj82HBqHdglZO9fuEbl5dMhdavj+33wEIxHRCE9I87o+k9-j+CMZSEB7bUGd5Uj6eRASXI1jipPEGA270g1FrUooL6jqglFkNPQuFSOU8+uSsttVwRtNfsC+qTp22Rkd5MCqFGQ8LcuUxC3a+9CMBnOintWW7oeRUVhVpxk8pxiX1wTEboX-RzT6MUbpvGw-oPNFYxJECKnoH3Hrozv0vN--n5d6Nbxg==
x-xss-protection → 1; mode=block;
```

Response Body

The body of a response is often returned in structured format as specified in the **Content-Type** header field. The response body transfers content except the response header.

The following is part of the response body for the API used to [obtain a user token](#).

```
{
  "token": {
    "expires_at": "2019-02-13T06:52:13.855000Z",
    "methods": [
      "password"
    ],
    "catalog": [
      {
        "endpoints": [
          {
            "region_id": "ap-southeast-1",
            .....

```

If an error occurs during API calling, an error code and a message will be displayed. The following shows an error response body.

```
{
  "error_msg": "The format of message is error",
  "error_code": "AS.0001"
}
```

In the error response body, **error_code** is an error code, and **error_msg** provides information about the error. For more details, see [Error Codes](#).

4 Development Environment Management

4.1 Creating a Notebook Instance

Function

This API is used to create a notebook instance based on specified parameters.

This API applies to the following scenario: When you need to create a notebook instance for a specific task or project, you can use this API to specify the instance specifications, AI engine images, and storage configurations. Before using this API, ensure that you have logged in to the system, have the permission to create a notebook instance, and provide valid creation parameters. After this API is called, the system asynchronously creates a notebook instance. You can obtain the instance status by calling the query API. After the notebook instance is created, you can access the notebook instance through the web page or SSH client. If you do not have the permission to create an instance or the parameters are invalid, the API will return an error message. Other exceptions include insufficient system resources and creation failure. The API will return the corresponding error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/notebooks

Table 4-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 4-2 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	Definition: Instance description. Constraints: N/A Range: The value can contain up to 512 characters and cannot contain these special characters (&<>"/"). Default Value: N/A
duration	No	Long	Definition: Running duration calculated from the current time, in milliseconds. The instance automatically stops when the duration expires. It is recommended that this parameter be set in leaseReq . If this parameter is set here, the value set in leaseReq is ignored and the instance is stopped as scheduled. Constraints: N/A Range: 3600000 to 259200000 Default Value: 3600000

Parameter	Mandatory	Type	Description
endpoints	No	Array of EndpointsRequest objects	Definition: Only a local IDE (such as PyCharm or VS Code) or SSH client can be used to access a notebook instance. Constraints: Configurations are only required for remotely accessing a notebook instance via SSH on a local IDE (such as PyCharm or VS Code) or SSH client.
feature	No	String	Definition: Instance type. Constraints: N/A Range: • DEFAULT: free CodeLab instance. Each user can create only one. • NOTEBOOK: billed instance. Default Value: NOTEBOOK
flavor	Yes	String	Definition: Instance flavor. The following flavors are for reference only. Obtain the flavors displayed on the console in the target region. • modelarts.vm.cpu.2u: General-purpose Intel CPU flavor, ideal for rapid data exploration and experiments • modelarts.vm.cpu.8u: General computing-plus Intel CPU flavors, ideal for compute-intensive applications Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
image_id	Yes	String	Definition: ID of the image used for creating notebook instances. The ID is in the format of a Universally Unique Identifier (UUID). For details, see[Querying Supported Images]](https://support.huaweicloud.com/intl/en-us/api-modelarts/ListImage.html). Constraints: N/A Range: Valid image IDs obtained by calling the API for Querying Supported Images . Default Value: N/A
name	Yes	String	Definition: Instance name. Constraints: N/A Range: The value can contain a maximum of 128 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. The name can be duplicate. Default Value: N/A
pool_id	No	String	Definition: ID of a dedicated resource pool. This parameter is mandatory if a dedicated resource pool is used to create an instance. The dedicated resource pool ID can be obtained by calling the API for Obtaining Resource Pools . Constraints: N/A Range: Valid resource pool IDs obtained by calling the API for Obtaining Resource Pools . Default Value: N/A
volume	Yes	VolumeReq object	Definition: Storage configuration. Constraints: N/A

Parameter	Mandatory	Type	Description
workspace_id	No	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Constraints: N/A Range: This value is a string of 0 or 32 characters. Only digits or lowercase letters are allowed. Default Value: 0
hooks	No	CustomHooks object	Definition: Hook configuration of a custom boot script. Constraints: N/A
lease	No	LeaseReq object	Definition: Instance lease configuration. Constraints: N/A

Table 4-3 EndpointsReq

Parameter	Mandatory	Type	Description
allowed_access_ips	No	Array of strings	Definition: Public IP addresses that can remotely access the notebook instance. A maximum of five public IP addresses are supported. Constraints: N/A
service	No	String	Definition: Supported services. Constraints: N/A Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH. Default Value: N/A

Parameter	Mandatory	Type	Description
key_pair_names	No	Array of strings	Definition: Name of the SSH key pair, which can be created and viewed on the Key Pair page of the Elastic Cloud Server (ECS) console. Constraints: N/A

Table 4-4 VolumeReq

Parameter	Mandatory	Type	Description
capacity	No	Integer	Definition: Storage capacity, in GB. Constraints: This attribute takes effect when category is set to EVS . Range: 5 to 4096 Default Value: 5
category	Yes	String	Definition: Supported storage type. For details about the differences between the storage types, see Selecting Storage in DevEnviron . Constraints: N/A Range: • SFS • EVS • OBS • OBSFS: parallel file system • EFS: SFS Turbo Default Value: EVS
ownership	Yes	String	Definition: Resource owner. Constraints: N/A Range: • MANAGED: Resources are managed by the service. • DEDICATED: Resources are managed by the user account. This mode is supported only when the instance category is EFS. Default Value: N/A

Parameter	Mandatory	Type	Description
uri	No	String	Definition: URI of the EFS dedicated storage disk or path of the OBS parallel file system. To view the value, follow these steps: • EFS: Log in to the SFS console. In the file system list, click the file system name to go to the file system details page. The shared path is the value of this parameter. • OBS: The parallel file system name is in the format of obs://<bucket_name>/<directory_path>/. Log in to the OBS console. In the parallel file system list, the file system name is the bucket name. Click the file system name to access its details page. Select a specific directory and choose More > Copy Path on the right. The path is the directory path. Constraints: This parameter is only mandatory when category is set to EFS, OBS, or OBSFS and ownership is set to DEDICATED. Range: N/A Default Value: N/A
id	No	String	Disk ID of the EFS. This parameter is mandatory only when the instance category is EFS and the ownership is DEDICATED. This parameter is mandatory. To obtain the parameter value, log in to the SFS console. In the file system list, click the file system name to go to the file system details page. ID is the value of this parameter.

Table 4-5 CustomHooks

Parameter	Mandatory	Type	Description
container_hooks	No	ContainerHooks object	Definition: Container hook configuration. Constraints: N/A

Table 4-6 ContainerHooks

Parameter	Mandatory	Type	Description
post_start	No	Config object	Definition: Script configuration after the service is started. Constraints: N/A
pre_start	No	Config object	Definition: Script configuration before the service is started. Constraints: N/A

Table 4-7 Config

Parameter	Mandatory	Type	Description
script	No	String	Definition: Custom script (Base64 encoding) or absolute path of a script. Constraints: N/A Range: N/A Default Value: N/A
type	No	String	Definition: Script type. Constraints: N/A Range: • COMMAND: The script content (Base64-encoded) must be specified. • SCRIPT: The script path must be specified. Default Value: SCRIPT

Table 4-8 LeaseReq

Parameter	Mandatory	Type	Description
duration	No	Long	Definition: The instance stops as scheduled. Its runtime is measured in milliseconds starting now. Constraints: N/A Range: 3600000 to 259200000 Default Value: 3600000
type	No	String	Definition: Auto stop type. Constraints: N/A Range: • TIMING: auto stop • IDLE: stop when idle Default Value: TIMING

Response Parameters

Status code: 200

Table 4-9 Response body parameters

Parameter	Type	Description
action_progress	Array of JobProgress objects	Definition: Initialization progress of the instance.
description	String	Definition: Instance description. Range: N/A
endpoints	Array of EndpointsRes objects	Definition: Local IDE (such as PyCharm and VS Code) or SSH client for remotely accessing a notebook instance through SSH.
fail_reason	String	Definition: Instance failure cause. Range: N/A
flavor	String	Definition: Instance flavor. Range: N/A
id	String	Definition: Instance ID. Range: N/A
image	Image object	Definition: Instance image information.

Parameter	Type	Description
lease	Lease object	Definition: Countdown to auto stop of an instance.
name	String	Definition: Instance name. Range: N/A
pool	Pool object	Definition: Basic information about the dedicated pool, which is returned by the instance created in the dedicated pool.
status	String	Definition: Instance status. Range: • INIT: The instance is being initialized. • CREATING: The instance is being created. • STARTING: The instance is being started. • STOPPING: The instance is being stopped. • DELETING: The instance is being deleted. • RUNNING: The instance is running. • STOPPED: The instance has been stopped. • SNAPSHOTTING: The image of the instance is being saved. • CREATE_FAILED: Creating the instance failed. • START_FAILED: Starting the instance failed. • DELETE_FAILED: Deleting the instance failed. • ERROR: An error occurred. • DELETED: The instance has been deleted. • FROZEN: The instance is frozen.
token	String	Description: Token used for notebook authentication. Range: N/A
url	String	Definition: URL for accessing the instance. Range: N/A

Parameter	Type	Description
volume	VolumeRes object	Definition: Instance storage information.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A
feature	String	Definition: Instance type. Range: • DEFAULT: free CodeLab instance. Each user can create only one. • NOTEBOOK: billed instance.
billing_items	Array of strings	Definition: Billing resource type. Range: • STORAGE: Storage resource billing • COMPUTE: Computing resources billing • ALL: All billing types
user	user object	Description: Account information.

Table 4-10 JobProgress

Parameter	Type	Description
notebook_id	String	Definition: Instance ID. Range: N/A
status	String	Definition: Job status in a specified step. Range: • WAITING: The job is awaiting. • PROCESSING: The job is being processed. • FAILED: The job failed. • COMPLETED: The job is complete.

Parameter	Type	Description
step	Integer	Definition: Job step. Range: • 1: Prepare storage. • 2: Prepare compute resources. • 3: Configure the network. • 4: Initialize the instance.
step_description	String	Definition: Job description in a specified step. Range: N/A

Table 4-11 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 4-12 Image

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • x86_64: x86 architecture • aarch64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A
description	String	Definition: Image description. Range: Up to 512 characters
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND

Parameter	Type	Description
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved

Parameter	Type	Description
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Table 4-13 Lease

Parameter	Type	Description
create_at	Long	Definition: UTC time when the instance is created, accurate to millisecond. Range: N/A
duration	Long	Definition: Instance runtime, which is calculated based on the instance creation time. If the instance creation time plus the runtime is greater than the current time, the system automatically stops the instance. Range: N/A
enable	Boolean	Definition: Specifies whether to enable auto stop. Range: Boolean • true: Auto stop is enabled. • false: Auto stop is disabled.

Parameter	Type	Description
type	String	Definition: Auto stop type. Range: • TIMING: auto stop • IDLE: stop when idle
update_at	Long	Definition: Time (UTC) when the instance is last updated (excluding liveness check), accurate to millisecond. Range: N/A

Table 4-14 Pool

Parameter	Type	Description
id	String	Definition: Dedicated resource pool ID. Range: N/A
name	String	Definition: Dedicated resource pool name. Range: N/A

Table 4-15 VolumeRes

Parameter	Type	Description
capacity	Integer	Definition: Storage capacity. Range: The default value is 5 GB for EVS and 50 GB for EFS. The maximum value is 4,096 GB.
category	String	Definition: Supported storage type. For details about the differences between the storage types, see Selecting Storage in DevEnviron . Range: • SFS • EVS • OBS • OBSFS: parallel file system • EFS: SFS Turbo

Parameter	Type	Description
mount_path	String	Definition: Directory of the notebook instance to which the storage is mounted. Currently, the directory is <code>/home/ma-user/work/</code> . Range: N/A
ownership	String	Definition: Resource owner. Range: • MANAGED: Resources are managed by the service. • DEDICATED: Resources are managed by the user account. This mode is supported only when the instance category is EFS.
status	String	Definition: EVS disk capacity expansion status, which is RESIZING during capacity expansion and does not affect the instance. Range: N/A

Table 4-16 user

Parameter	Type	Description
domain	domain object	Description: Domain information of the account.
id	String	Definition: IAM user ID. For details, see Obtaining a Username and ID . Range: N/A
name	String	Definition: IAM username. Range: N/A

Table 4-17 domain

Parameter	Type	Description
id	String	Definition: Account ID. Range: N/A
name	String	Definition: Account name. Range: N/A

Status code: 201

Created

Example Requests

The following is an example of how to create a notebook instance whose flavor is **modelarts.vm.cpu.2u**, storage type is **evs**, ownership is **MANAGED**, and storage capacity is 50 GB.

```
{
  "name": "notebooks_test",
  "feature": "NOTEBOOK",
  "workspace_id": "0",
  "description": "api-test",
  "flavor": "modelarts.vm.cpu.2u",
  "image_id": "e1a07296-22a8-4f05-8bc8-e936c8e54090",
  "volume": {
    "category": "evs",
    "ownership": "managed",
    "capacity": 50
  }
}
```

Example Responses**Status code: 200**

OK

```
{
  "description": "api-test",
  "feature": "NOTEBOOK",
  "flavor": "modelarts.vm.cpu.2u",
  "id": "f9937afa-4451-42db-a76b-72d624749f66",
  "image": {
    "description": "description",
    "id": "e1a07296-22a8-4f05-8bc8-e936c8e54090",
    "name": "notebook2.0-mul-kernel-cpu-cp36",
    "swr_path": "swr.xxxx.com/atelier/notebook2.0-mul-kernel-cpu-cp36:3.3.2-release_v1",
    "tag": "3.3.2-release_v1",
    "type": "BUILD_IN"
  },
  "lease": {
    "create_at": 1638841744515,
    "duration": 3600000,
    "enable": true,
    "type": "TIMING",
    "update_at": 1638841744515
  },
  "name": "notebooks_test",
  "status": "CREATING",
  "token": "3eff13f2-3d70-5456-6dc7-e3f99f562022",
  "workspace_id": "0"
}
```

Status Codes

Status Code	Description
200	OK

Status Code	Description
201	Created
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.2 Querying Notebook Instances

Function

This API is used to obtain information about notebook instances that meet specific conditions.

This API applies to the following scenarios: When you manage multiple notebook instances or view notebook instances in a specified status, you can use this API to obtain related information. Before using this API, ensure that you have created a notebook instance and have the query permission. After the API is successfully called, the system returns the list of notebook instances that meet the search criteria. Details such as the instance ID, status, and creation time can be obtained. If you do not have the access permission or the query conditions are unclear, the API will return an error message or an empty list.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/notebooks

Table 4-18 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 4-19 Query Parameters

Parameter	Mandatory	Type	Description
feature	No	String	Definition: Instance type Constraints: N/A Range: Enums: • DEFAULT: free CodeLab instance. Each user can create only one. • NOTEBOOK: billed instance Default Value: NOTEBOOK
limit	No	Integer	Definition: Number of instances displayed on each page Constraints: N/A Range: [10,20,50] Default Value: 10
name	No	String	Definition: Instance name. Fuzzy match is supported. Constraints: N/A Range: The value can contain a maximum of 128 characters. Letters, digits, hyphens (-), and underscores (_) are allowed. Default Value: N/A

Parameter	Mandatory	Type	Description
pool_id	No	String	Definition: Dedicated resource pool ID Constraints: N/A Range: This value contains 4 to 64 characters. Lowercase letters, digits, and hyphens (-) are allowed. It must start with a lowercase letter and end with a lowercase letter or digit. Default Value: N/A
offset	No	Integer	Definition: Start offset of the records on each page Constraints: N/A Range: N/A Default Value: 0
owner	No	String	Definition: User ID of the instance. This parameter is valid only when the account is a big account or has the admin permission. Generally, the value is the ID of the current login user. Constraints: N/A Range: This value contains 32 characters. Lowercase letters and digits are allowed. Default Value: N/A
sort_dir	No	String	Definition: Instance sorting mode Constraints: N/A Range: Enums: • ASC: ascending order • DESC: descending order Default Value: DESC

Parameter	Mandatory	Type	Description
sort_key	No	String	Definition: Sorting field. Separate multiple fields with commas (,). Constraints: N/A Range: The value can contain a maximum of 128 characters. Letters, digits, hyphens (-), underscores (_), and commas (,) are allowed. Default Value: N/A
status	No	String	Definition: Instance status Constraints: N/A Range: Enums: • INIT: The instance is being initialized. • CREATING: The instance is being created. • STARTING: The instance is starting. • STOPPING: The instance is being stopped. • DELETING: The instance is being deleted. • RUNNING: The instance is running. • STOPPED: The instance has been stopped. • SNAPSHOTTING: The image of the instance is being saved. • CREATE_FAILED: Creating the instance failed. • START_FAILED: Starting the instance failed. • DELETE_FAILED: Deleting the instance failed. • ERROR: An error occurred. • DELETED: The instance has been deleted. • FROZEN: The instance is frozen. Default Value: N/A

Parameter	Mandatory	Type	Description
workspaceId	No	String	Definition: Workspace ID. For details about how to obtain the value, see Obtaining Workspaces . If no workspace is created, the default value is 0 . If a workspace is created and used, use the actual value. Constraints: N/A Range: N/A Default Value: 0

Request Parameters

None

Response Parameters

Status code: 200

Table 4-20 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Range: Positive integers
data	Array of NotebookResp objects	Definition: Notebook instance data.
pages	Integer	Definition: Total number of pages. Range: Positive integers
size	Integer	Definition: Number of records on each page. Range: Positive integers
total	Long	Definition: Total number of records. Range: Non-negative integers

Table 4-21 NotebookResp

Parameter	Type	Description
action_progress	Array of JobProgress objects	Definition: Initialization progress of the instance.
description	String	Definition: Instance description. Range: N/A
endpoints	Array of EndpointsRes objects	Definition: Local IDE (such as PyCharm and VS Code) or SSH client for remotely accessing a notebook instance through SSH.
fail_reason	String	Definition: Instance failure cause. Range: N/A
flavor	String	Definition: Instance flavor. Range: N/A
id	String	Definition: Instance ID. Range: N/A
image	Image object	Definition: Instance image information.
lease	Lease object	Definition: Countdown to auto stop of an instance.
name	String	Definition: Instance name. Range: N/A
pool	Pool object	Definition: Basic information about the dedicated pool, which is returned by the instance created in the dedicated pool.

Parameter	Type	Description
status	String	Definition: Instance status. Range: • INIT: The instance is being initialized. • CREATING: The instance is being created. • STARTING: The instance is being started. • STOPPING: The instance is being stopped. • DELETING: The instance is being deleted. • RUNNING: The instance is running. • STOPPED: The instance has been stopped. • SNAPSHOTTING: The image of the instance is being saved. • CREATE_FAILED: Creating the instance failed. • START_FAILED: Starting the instance failed. • DELETE_FAILED: Deleting the instance failed. • ERROR: An error occurred. • DELETED: The instance has been deleted. • FROZEN: The instance is frozen.
token	String	Description: Token used for notebook authentication. Range: N/A
url	String	Definition: URL for accessing the instance. Range: N/A
volume	VolumeRes object	Definition: Instance storage information.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0. If a workspace is created and used, use the actual value. Range: N/A

Parameter	Type	Description
feature	String	Definition: Instance type. Range: • DEFAULT: free CodeLab instance. Each user can create only one. • NOTEBOOK: billed instance.
billing_items	Array of strings	Definition: Billing resource type. Range: • STORAGE: Storage resource billing • COMPUTE: Computing resources billing • ALL: All billing types
user	user object	Description: Account information.

Table 4-22 JobProgress

Parameter	Type	Description
notebook_id	String	Definition: Instance ID. Range: N/A
status	String	Definition: Job status in a specified step. Range: • WAITING: The job is awaiting. • PROCESSING: The job is being processed. • FAILED: The job failed. • COMPLETED: The job is complete.
step	Integer	Definition: Job step. Range: • 1: Prepare storage. • 2: Prepare compute resources. • 3: Configure the network. • 4: Initialize the instance.
step_description	String	Definition: Job description in a specified step. Range: N/A

Table 4-23 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 4-24 Image

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • x86_64: x86 architecture • aarch64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A

Parameter	Type	Description
description	String	Definition: Image description. Range: Up to 512 characters
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A

Parameter	Type	Description
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A

Parameter	Type	Description
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Table 4-25 Lease

Parameter	Type	Description
create_at	Long	Definition: UTC time when the instance is created, accurate to millisecond. Range: N/A
duration	Long	Definition: Instance runtime, which is calculated based on the instance creation time. If the instance creation time plus the runtime is greater than the current time, the system automatically stops the instance. Range: N/A
enable	Boolean	Definition: Specifies whether to enable auto stop. Range: Boolean • true: Auto stop is enabled. • false: Auto stop is disabled.
type	String	Definition: Auto stop type. Range: • TIMING: auto stop • IDLE: stop when idle
update_at	Long	Definition: Time (UTC) when the instance is last updated (excluding liveness check), accurate to millisecond. Range: N/A

Table 4-26 Pool

Parameter	Type	Description
id	String	Definition: Dedicated resource pool ID. Range: N/A
name	String	Definition: Dedicated resource pool name. Range: N/A

Table 4-27 VolumeRes

Parameter	Type	Description
capacity	Integer	Definition: Storage capacity. Range: The default value is 5 GB for EVS and 50 GB for EFS. The maximum value is 4,096 GB.
category	String	Definition: Supported storage type. For details about the differences between the storage types, see Selecting Storage in DevEnviron . Range: • SFS • EVS • OBS • OBSFS: parallel file system • EFS: SFS Turbo
mount_path	String	Definition: Directory of the notebook instance to which the storage is mounted. Currently, the directory is / home/ma-user/work/ . Range: N/A
ownership	String	Definition: Resource owner. Range: • MANAGED: Resources are managed by the service. • DEDICATED: Resources are managed by the user account. This mode is supported only when the instance category is EFS.

Parameter	Type	Description
status	String	Definition: EVS disk capacity expansion status, which is RESIZING during capacity expansion and does not affect the instance. Range: N/A

Table 4-28 user

Parameter	Type	Description
domain	domain object	Description: Domain information of the account.
id	String	Definition: IAM user ID. For details, see Obtaining a Username and ID . Range: N/A
name	String	Definition: IAM username. Range: N/A

Table 4-29 domain

Parameter	Type	Description
id	String	Definition: Account ID. Range: N/A
name	String	Definition: Account name. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/notebooks
```

Example Responses

Status code: 200

OK

```
{
  "current" : 0,
  "data" : [ {
    "description" : "api-test",
    "feature" : "DEFAULT",
    "flavor" : "modelarts.vm.cpu.free",
    "id" : "f9937afa-ca78-45b6-bc12-7ecf42553c48",
    "image" : {
      "id" : "e1a07296-22a8-4f05-8bc8-e936c8e54090",
```

```
{
  "name": "notebook2.0-mul-kernel-cpu-cp36",
  "swr_path": "swr.xxxx.com/atelier/notebook2.0-mul-kernel-cpu-cp36:3.3.2-release_v1",
  "type": "BUILD_IN"
},
{
  "lease": {
    "create_at": 1638841805439,
    "duration": 3600000,
    "enable": true,
    "update_at": 1638841805439
  },
  "name": "notebook_5ee4bf0e",
  "status": "CREATING",
  "token": "58ba50c6-e8ff-245c-4840-49e51aa70737",
  "volume": {
    "category": "EVS",
    "ownership": "MANAGED",
    "mount_path": "/home/ma-user/work/",
    "capacity": 50
  },
  "workspace_id": "0"
}, {
  "description": "api-test",
  "feature": "NOTEBOOK",
  "flavor": "modelarts.vm.cpu.2u",
  "id": "f9937afa-4451-42db-a76b-72d624749f66",
  "image": {
    "id": "e1a07296-22a8-4f05-8bc8-e936c8e54090",
    "name": "notebook2.0-mul-kernel-cpu-cp36",
    "swr_path": "swr.xxxx.com/atelier/notebook2.0-mul-kernel-cpu-cp36:3.3.2-release_v1",
    "type": "BUILD_IN"
  },
  "lease": {
    "create_at": 1638841744515,
    "duration": 3600000,
    "enable": true,
    "update_at": 1638841744515
  },
  "name": "notebooks_test",
  "status": "CREATING",
  "token": "3eff13f2-3d70-5456-6dc7-e3f99f562022",
  "volume": {
    "category": "EVS",
    "ownership": "MANAGED",
    "mount_path": "/home/ma-user/work/",
    "capacity": 50
  },
  "workspace_id": "0"
}],
"pages": 1,
"size": 10,
"total": 2
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.3 Querying All Notebook Instances

Function

This API is used to obtain information about all created notebook instances.

This API applies to the following scenarios: When you need to know the status and resource usage of all notebook instances in the current system or manage multiple notebook instances, you can use this API to obtain related information. Before using this API, ensure that you have created a notebook instance and have the query permission. After the API is successfully called, the system returns the list of all notebook instances. Details such as the instance ID, status, and creation time can be obtained. If you do not have the access permission, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/notebooks/all

Table 4-30 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 4-31 Query Parameters

Parameter	Mandatory	Type	Description
feature	No	String	Definition: Instance type Constraints: N/A Range: Enums: • DEFAULT: free CodeLab instance. Each user can create only one. • NOTEBOOK: billed instance Default Value: NOTEBOOK
limit	No	Integer	Definition: Number of instances displayed on each page Constraints: N/A Range: [10,20,50] Default Value: 10
name	No	String	Definition: Instance name. Fuzzy match is supported. Constraints: N/A Range: The value can contain a maximum of 128 characters. Letters, digits, hyphens (-), and underscores (_) are allowed. Default Value: N/A
pool_id	No	String	Definition: ID of a dedicated resource pool. For details about how to obtain the ID, see Obtaining Resource Pools . Constraints: N/A Range: This value contains 4 to 64 characters. Lowercase letters, digits, and hyphens (-) are allowed. It must start with a lowercase letter and end with a lowercase letter or digit. Default Value: N/A

Parameter	Mandatory	Type	Description
offset	No	Integer	Definition: Start offset of the records on each page Constraints: N/A Range: N/A Default Value: 0
owner	No	String	Definition: User ID of the instance. This parameter is valid only when the account is a big account or has the admin permission. Generally, the value is the ID of the current login user. Constraints: N/A Range: This value contains 32 characters. Lowercase letters and digits are allowed. Default Value: N/A
sort_dir	No	String	Definition: Instance sorting mode Constraints: N/A Range: Enums: • ASC: ascending order • DESC: descending order Default Value: DESC
sort_key	No	String	Definition: Sorting field. Separate multiple fields with commas (,). Constraints: N/A Range: The value can contain a maximum of 128 characters. Letters, digits, hyphens (-), underscores (_), and commas (,) are allowed. Default Value: N/A

Parameter	Mandatory	Type	Description
status	No	String	Definition: Instance status Constraints: N/A Range: Enums: • INIT: The instance is being initialized. • CREATING: The instance is being created. • STARTING: The instance is starting. • STOPPING: The instance is being stopped. • DELETING: The instance is being deleted. • RUNNING: The instance is running. • STOPPED: The instance has been stopped. • SNAPSHOTTING: The image of the instance is being saved. • CREATE_FAILED: Creating the instance failed. • START_FAILED: Starting the instance failed. • DELETE_FAILED: Deleting the instance failed. • ERROR: An error occurred. • DELETED: The instance has been deleted. • FROZEN: The instance is frozen. Default Value: N/A
workspaceId	No	String	Definition: Workspace ID. For details about how to obtain the value, see Obtaining Workspaces. If no workspace is created, the default value is 0. If a workspace is created and used, use the actual value. Constraints: N/A Range: N/A Default Value: 0

Request Parameters

None

Response Parameters

Status code: 200

Table 4-32 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Range: Positive integers
data	Array of NotebookResp objects	Definition: Notebook instance data.
pages	Integer	Definition: Total number of pages. Range: Positive integers
size	Integer	Definition: Number of records on each page. Range: Positive integers
total	Long	Definition: Total number of records. Range: Non-negative integers

Table 4-33 NotebookResp

Parameter	Type	Description
action_progress	Array of JobProgress objects	Definition: Initialization progress of the instance.
description	String	Definition: Instance description. Range: N/A
endpoints	Array of EndpointsRes objects	Definition: Local IDE (such as PyCharm and VS Code) or SSH client for remotely accessing a notebook instance through SSH.
fail_reason	String	Definition: Instance failure cause. Range: N/A
flavor	String	Definition: Instance flavor. Range: N/A

Parameter	Type	Description
id	String	Definition: Instance ID. Range: N/A
image	Image object	Definition: Instance image information.
lease	Lease object	Definition: Countdown to auto stop of an instance.
name	String	Definition: Instance name. Range: N/A
pool	Pool object	Definition: Basic information about the dedicated pool, which is returned by the instance created in the dedicated pool.
status	String	Definition: Instance status. Range: • INIT: The instance is being initialized. • CREATING: The instance is being created. • STARTING: The instance is being started. • STOPPING: The instance is being stopped. • DELETING: The instance is being deleted. • RUNNING: The instance is running. • STOPPED: The instance has been stopped. • SNAPSHOTTING: The image of the instance is being saved. • CREATE_FAILED: Creating the instance failed. • START_FAILED: Starting the instance failed. • DELETE_FAILED: Deleting the instance failed. • ERROR: An error occurred. • DELETED: The instance has been deleted. • FROZEN: The instance is frozen.

Parameter	Type	Description
token	String	Description: Token used for notebook authentication. Range: N/A
url	String	Definition: URL for accessing the instance. Range: N/A
volume	VolumeRes object	Definition: Instance storage information.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A
feature	String	Definition: Instance type. Range: • DEFAULT: free CodeLab instance. Each user can create only one. • NOTEBOOK: billed instance.
billing_items	Array of strings	Definition: Billing resource type. Range: • STORAGE: Storage resource billing • COMPUTE: Computing resources billing • ALL: All billing types
user	user object	Description: Account information.

Table 4-34 JobProgress

Parameter	Type	Description
notebook_id	String	Definition: Instance ID. Range: N/A

Parameter	Type	Description
status	String	Definition: Job status in a specified step. Range: • WAITING: The job is awaiting. • PROCESSING: The job is being processed. • FAILED: The job failed. • COMPLETED: The job is complete.
step	Integer	Definition: Job step. Range: • 1: Prepare storage. • 2: Prepare compute resources. • 3: Configure the network. • 4: Initialize the instance.
step_description	String	Definition: Job description in a specified step. Range: N/A

Table 4-35 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 4-36 Image

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • x86_64: x86 architecture • aarch64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A
description	String	Definition: Image description. Range: Up to 512 characters
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.

Parameter	Type	Description
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A

Parameter	Type	Description
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Table 4-37 Lease

Parameter	Type	Description
create_at	Long	Definition: UTC time when the instance is created, accurate to millisecond. Range: N/A

Parameter	Type	Description
duration	Long	Definition: Instance runtime, which is calculated based on the instance creation time. If the instance creation time plus the runtime is greater than the current time, the system automatically stops the instance. Range: N/A
enable	Boolean	Definition: Specifies whether to enable auto stop. Range: Boolean • true: Auto stop is enabled. • false: Auto stop is disabled.
type	String	Definition: Auto stop type. Range: • TIMING: auto stop • IDLE: stop when idle
update_at	Long	Definition: Time (UTC) when the instance is last updated (excluding liveness check), accurate to millisecond. Range: N/A

Table 4-38 Pool

Parameter	Type	Description
id	String	Definition: Dedicated resource pool ID. Range: N/A
name	String	Definition: Dedicated resource pool name. Range: N/A

Table 4-39 VolumeRes

Parameter	Type	Description
capacity	Integer	Definition: Storage capacity. Range: The default value is 5 GB for EVS and 50 GB for EFS. The maximum value is 4,096 GB.

Parameter	Type	Description
category	String	Definition: Supported storage type. For details about the differences between the storage types, see Selecting Storage in DevEnviron . Range: • SFS • EVS • OBS • OBSFS: parallel file system • EFS: SFS Turbo
mount_path	String	Definition: Directory of the notebook instance to which the storage is mounted. Currently, the directory is <code>/home/ma-user/work/</code> . Range: N/A
ownership	String	Definition: Resource owner. Range: • MANAGED: Resources are managed by the service. • DEDICATED: Resources are managed by the user account. This mode is supported only when the instance category is EFS.
status	String	Definition: EVS disk capacity expansion status, which is RESIZING during capacity expansion and does not affect the instance. Range: N/A

Table 4-40 user

Parameter	Type	Description
domain	domain object	Description: Domain information of the account.
id	String	Definition: IAM user ID. For details, see Obtaining a Username and ID . Range: N/A
name	String	Definition: IAM username. Range: N/A

Table 4-41 domain

Parameter	Type	Description
id	String	Definition: Account ID. Range: N/A
name	String	Definition: Account name. Range: N/A

Example Requests

GET https://{endpoint}/v1/{project_id}/notebooks/all

Example Responses

Status code: 200

OK

```
{
  "current" : 0,
  "data" : [ {
    "description" : "api-test",
    "feature" : "DEFAULT",
    "flavor" : "modelarts.vm.cpu.free",
    "id" : "f9937afa-ca78-45b6-bc12-7ecf42553c48",
    "image" : {
      "id" : "e1a07296-22a8-4f05-8bc8-e936c8e54090",
      "name" : "notebook2.0-mul-kernel-cpu-cp36",
      "swr_path" : "swr.xxxx.com/atelier/notebook2.0-mul-kernel-cpu-cp36:3.3.2-release_v1",
      "type" : "BUILD_IN"
    },
    "lease" : {
      "create_at" : 1638841805439,
      "duration" : 3600000,
      "enable" : true,
      "update_at" : 1638841805439
    },
    "name" : "notebook_5ee4bf0e",
    "status" : "CREATING",
    "token" : "58ba50c6-e8ff-245c-4840-49e51aa70737",
    "volume" : {
      "category" : "EVS",
      "ownership" : "MANAGED",
      "mount_path" : "/home/ma-user/work/",
      "capacity" : 50
    },
    "workspace_id" : "0"
  }, {
    "description" : "api-test",
    "feature" : "NOTEBOOK",
    "flavor" : "modelarts.vm.cpu.2u",
    "id" : "f9937afa-4451-42db-a76b-72d624749f66",
    "image" : {
      "id" : "e1a07296-22a8-4f05-8bc8-e936c8e54090",
      "name" : "notebook2.0-mul-kernel-cpu-cp36",
      "swr_path" : "swr.xxxx.com/atelier/notebook2.0-mul-kernel-cpu-cp36:3.3.2-release_v1",
      "type" : "BUILD_IN"
    },
    "lease" : {
      "create_at" : 1638841744515,
      "duration" : 3600000,
```

```
{
  "enable" : true,
  "update_at" : 1638841744515
},
"name" : "notebooks_test",
"status" : "CREATING",
"token" : "3eff13f2-3d70-5456-6dc7-e3f99f562022",
"volume" : {
  "category" : "EVS",
  "ownership" : "MANAGED",
  "mount_path" : "/home/ma-user/work/",
  "capacity" : 50
},
"workspace_id" : "0"
} ],
"pages" : 1,
"size" : 10,
"total" : 2
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.4 Querying Details of a Notebook Instance

Function

This API is used to obtain the details of a specified notebook instance.

This API applies to the following scenario: When you need to view the detailed configuration and status of a specified notebook instance or obtain the access link, you can use this API to obtain related information. Before using this API, ensure that a notebook instance exists and you have the query permission. After the API is successfully called, the system returns the instance ID, name, specifications, image, status, and URL for access the instance. If the instance does not exist or you do not have the access permission, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/notebooks/{id}

Table 4-42 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: Notebook instance ID. The ID is in the format of a Universally Unique Identifier (UUID). For details about how to obtain the ID, see Querying Notebook Instances . Constraints: N/A Range: N/A Default Value: N/A
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-43 Response body parameters

Parameter	Type	Description
action_progress	Array of JobProgress objects	Definition: Initialization progress of the instance.
description	String	Definition: Instance description. Range: N/A

Parameter	Type	Description
endpoints	Array of EndpointsRes objects	Definition: Local IDE (such as PyCharm and VS Code) or SSH client for remotely accessing a notebook instance through SSH.
fail_reason	String	Definition: Instance failure cause. Range: N/A
flavor	String	Definition: Instance flavor. Range: N/A
id	String	Definition: Instance ID. Range: N/A
image	Image object	Definition: Instance image information.
lease	Lease object	Definition: Countdown to auto stop of an instance.
name	String	Definition: Instance name. Range: N/A
pool	Pool object	Definition: Basic information about the dedicated pool, which is returned by the instance created in the dedicated pool.

Parameter	Type	Description
status	String	Definition: Instance status. Range: • INIT: The instance is being initialized. • CREATING: The instance is being created. • STARTING: The instance is being started. • STOPPING: The instance is being stopped. • DELETING: The instance is being deleted. • RUNNING: The instance is running. • STOPPED: The instance has been stopped. • SNAPSHOTTING: The image of the instance is being saved. • CREATE_FAILED: Creating the instance failed. • START_FAILED: Starting the instance failed. • DELETE_FAILED: Deleting the instance failed. • ERROR: An error occurred. • DELETED: The instance has been deleted. • FROZEN: The instance is frozen.
token	String	Description: Token used for notebook authentication. Range: N/A
url	String	Definition: URL for accessing the instance. Range: N/A
volume	VolumeRes object	Definition: Instance storage information.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A

Parameter	Type	Description
feature	String	Definition: Instance type. Range: • DEFAULT: free CodeLab instance. Each user can create only one. • NOTEBOOK: billed instance.
billing_items	Array of strings	Definition: Billing resource type. Range: • STORAGE: Storage resource billing • COMPUTE: Computing resources billing • ALL: All billing types
user	user object	Description: Account information.

Table 4-44 JobProgress

Parameter	Type	Description
notebook_id	String	Definition: Instance ID. Range: N/A
status	String	Definition: Job status in a specified step. Range: • WAITING: The job is awaiting. • PROCESSING: The job is being processed. • FAILED: The job failed. • COMPLETED: The job is complete.
step	Integer	Definition: Job step. Range: • 1: Prepare storage. • 2: Prepare compute resources. • 3: Configure the network. • 4: Initialize the instance.
step_description	String	Definition: Job description in a specified step. Range: N/A

Table 4-45 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 4-46 Image

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • x86_64: x86 architecture • aarch64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A

Parameter	Type	Description
description	String	Definition: Image description. Range: Up to 512 characters
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A

Parameter	Type	Description
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A

Parameter	Type	Description
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Table 4-47 Lease

Parameter	Type	Description
create_at	Long	Definition: UTC time when the instance is created, accurate to millisecond. Range: N/A
duration	Long	Definition: Instance runtime, which is calculated based on the instance creation time. If the instance creation time plus the runtime is greater than the current time, the system automatically stops the instance. Range: N/A
enable	Boolean	Definition: Specifies whether to enable auto stop. Range: Boolean • true: Auto stop is enabled. • false: Auto stop is disabled.
type	String	Definition: Auto stop type. Range: • TIMING: auto stop • IDLE: stop when idle
update_at	Long	Definition: Time (UTC) when the instance is last updated (excluding liveness check), accurate to millisecond. Range: N/A

Table 4-48 Pool

Parameter	Type	Description
id	String	Definition: Dedicated resource pool ID. Range: N/A
name	String	Definition: Dedicated resource pool name. Range: N/A

Table 4-49 VolumeRes

Parameter	Type	Description
capacity	Integer	Definition: Storage capacity. Range: The default value is 5 GB for EVS and 50 GB for EFS. The maximum value is 4,096 GB.
category	String	Definition: Supported storage type. For details about the differences between the storage types, see Selecting Storage in DevEnviron . Range: • SFS • EVS • OBS • OBSFS: parallel file system • EFS: SFS Turbo
mount_path	String	Definition: Directory of the notebook instance to which the storage is mounted. Currently, the directory is / home/ma-user/work/ . Range: N/A
ownership	String	Definition: Resource owner. Range: • MANAGED: Resources are managed by the service. • DEDICATED: Resources are managed by the user account. This mode is supported only when the instance category is EFs.

Parameter	Type	Description
status	String	Definition: EVS disk capacity expansion status, which is RESIZING during capacity expansion and does not affect the instance. Range: N/A

Table 4-50 user

Parameter	Type	Description
domain	domain object	Description: Domain information of the account.
id	String	Definition: IAM user ID. For details, see Obtaining a Username and ID . Range: N/A
name	String	Definition: IAM username. Range: N/A

Table 4-51 domain

Parameter	Type	Description
id	String	Definition: Account ID. Range: N/A
name	String	Definition: Account name. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/notebooks/{id}
```

Example Responses

Status code: 200

OK

```
{
  "description": "api-test",
  "feature": "NOTEBOOK",
  "flavor": "modelarts.vm.cpu.2u",
  "id": "f9937afa-631e-4a8f-a8f7-3b6c800585f0",
  "image": {
    "id": "e1a07296-22a8-4f05-8bc8-e936c8e54090",
    "name": "notebook2.0-mul-kernel-cpu-cp36",
    "swr_path": "swr.xxxxx.com/atelier/notebook2.0-mul-kernel-cpu-cp36:3.3.1.B007_V2",
```

```
{
  "type" : "BUILD_IN"
},
"lease" : {
  "create_at" : 1638778344300,
  "duration" : 3600000,
  "enable" : true,
  "update_at" : 1638778344300
},
"name" : "notebooks_test",
"status" : "CREATING",
"token" : "7b22482a-a4cb-4b46-e3b3-6a793a47967e",
"url" : "https://authoring-modelarts-xxxxx.xxxxx.com/f9937afa-631e-4a8f-a8f7-3b6c800585f0/lab",
"workspace_id" : "0"
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.5 Updating a Notebook Instance

Function

This API is used to modify the instance configurations, including its name, description, specifications, and image.

This API applies to the following scenario: When you need to modify the configuration of a notebook instance to adapt to new requirements, you can use this API to update the instance details. Before using this API, ensure that you have logged in to the system and have the permission to perform operations on the target notebook instance. In addition, the notebook instance must have been stopped. After this API is called, the system updates the configuration of the specified notebook instance. If you do not have the permission to perform operations on the specified notebook instance or the notebook instance has not been stopped, the API will return an error message. If the specified notebook instance is not found or the modification to the parameters is invalid, the API will return an error message.

Constraints

None

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/{project_id}/notebooks/{id}

Table 4-52 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: Notebook instance ID. The ID is in the format of a Universally Unique Identifier (UUID). For details about how to obtain the ID, see Querying Notebook Instances . Constraints: N/A Range: N/A Default Value: N/A
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 4-53 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	Definition: Instance description can be updated. Constraints: N/A Range: The value can contain up to 512 characters and cannot contain special characters (&<>"'/). Default Value: N/A

Parameter	Mandatory	Type	Description
endpoints	No	Array of EndpointsRequest objects	Definition: Only local IDE (such as PyCharm and VS Code) or SSH client can be used to access a notebook instance. Constraints: Configurations required for remotely accessing a notebook instance through SSH only on the local IDE (such as PyCharm and VS Code) or SSH client.
flavor	No	String	Definition: The machine specifications of the notebook instance can be changed. Specifications that can be changed. You can call the API in Querying Flavors Available for a Notebook Instance to obtain them. Constraints: N/A Range: N/A Default Value: N/A
image_id	No	String	Definition: Image ID can be updated. For details, see Querying Supported Images . Constraints: N/A Range: Valid image IDs obtained by calling APIs in Querying Supported Images . Default Value: N/A
name	No	String	Definition: Instance name can be updated. Constraints: N/A Range: The value can contain a maximum of 128 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. The name can be repeated. Default Value: N/A

Parameter	Mandatory	Type	Description
storage_new_size	No	Integer	Definition: EVS instance capacity that can be expanded dynamically, in GB. Only scale-out is supported. Constraints: N/A Range: The capacity can be expanded to at most 4,096 GB. Default Value: N/A
hooks	No	CustomHooks object	Definition: The instance startup script can be updated. Constraints: N/A

Table 4-54 EndpointsReq

Parameter	Mandatory	Type	Description
allowed_access_ips	No	Array of strings	Definition: Public IP addresses that can remotely access the notebook instance. A maximum of five public IP addresses are supported. Constraints: N/A
service	No	String	Definition: Supported services. Constraints: N/A Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH. Default Value: N/A
key_pair_names	No	Array of strings	Definition: Name of the SSH key pair, which can be created and viewed on the Key Pair page of the Elastic Cloud Server (ECS) console. Constraints: N/A

Table 4-55 CustomHooks

Parameter	Mandatory	Type	Description
container_hooks	No	ContainerHooks object	Definition: Container hook configuration. Constraints: N/A

Table 4-56 ContainerHooks

Parameter	Mandatory	Type	Description
post_start	No	Config object	Definition: Script configuration after the service is started. Constraints: N/A
pre_start	No	Config object	Definition: Script configuration before the service is started. Constraints: N/A

Table 4-57 Config

Parameter	Mandatory	Type	Description
script	No	String	Definition: Custom script (Base64 encoding) or absolute path of a script. Constraints: N/A Range: N/A Default Value: N/A
type	No	String	Definition: Script type. Constraints: N/A Range: • COMMAND: The script content (Base64-encoded) must be specified. • SCRIPT: The script path must be specified. Default Value: SCRIPT

Response Parameters

Status code: 200

Table 4-58 Response body parameters

Parameter	Type	Description
action_progress	Array of JobProgress objects	Definition: Initialization progress of the instance.
description	String	Definition: Instance description. Range: N/A
endpoints	Array of EndpointsRes objects	Definition: Local IDE (such as PyCharm and VS Code) or SSH client for remotely accessing a notebook instance through SSH.
fail_reason	String	Definition: Instance failure cause. Range: N/A
flavor	String	Definition: Instance flavor. Range: N/A
id	String	Definition: Instance ID. Range: N/A
image	Image object	Definition: Instance image information.
lease	Lease object	Definition: Countdown to auto stop of an instance.
name	String	Definition: Instance name. Range: N/A
pool	Pool object	Definition: Basic information about the dedicated pool, which is returned by the instance created in the dedicated pool.

Parameter	Type	Description
status	String	Definition: Instance status. Range: • INIT: The instance is being initialized. • CREATING: The instance is being created. • STARTING: The instance is being started. • STOPPING: The instance is being stopped. • DELETING: The instance is being deleted. • RUNNING: The instance is running. • STOPPED: The instance has been stopped. • SNAPSHOTTING: The image of the instance is being saved. • CREATE_FAILED: Creating the instance failed. • START_FAILED: Starting the instance failed. • DELETE_FAILED: Deleting the instance failed. • ERROR: An error occurred. • DELETED: The instance has been deleted. • FROZEN: The instance is frozen.
token	String	Description: Token used for notebook authentication. Range: N/A
url	String	Definition: URL for accessing the instance. Range: N/A
volume	VolumeRes object	Definition: Instance storage information.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A

Parameter	Type	Description
feature	String	Definition: Instance type. Range: • DEFAULT: free CodeLab instance. Each user can create only one. • NOTEBOOK: billed instance.
billing_items	Array of strings	Definition: Billing resource type. Range: • STORAGE: Storage resource billing • COMPUTE: Computing resources billing • ALL: All billing types
user	user object	Description: Account information.

Table 4-59 JobProgress

Parameter	Type	Description
notebook_id	String	Definition: Instance ID. Range: N/A
status	String	Definition: Job status in a specified step. Range: • WAITING: The job is awaiting. • PROCESSING: The job is being processed. • FAILED: The job failed. • COMPLETED: The job is complete.
step	Integer	Definition: Job step. Range: • 1: Prepare storage. • 2: Prepare compute resources. • 3: Configure the network. • 4: Initialize the instance.
step_description	String	Definition: Job description in a specified step. Range: N/A

Table 4-60 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 4-61 Image

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • x86_64: x86 architecture • aarch64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A

Parameter	Type	Description
description	String	Definition: Image description. Range: Up to 512 characters
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A

Parameter	Type	Description
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A

Parameter	Type	Description
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Table 4-62 Lease

Parameter	Type	Description
create_at	Long	Definition: UTC time when the instance is created, accurate to millisecond. Range: N/A
duration	Long	Definition: Instance runtime, which is calculated based on the instance creation time. If the instance creation time plus the runtime is greater than the current time, the system automatically stops the instance. Range: N/A
enable	Boolean	Definition: Specifies whether to enable auto stop. Range: Boolean • true: Auto stop is enabled. • false: Auto stop is disabled.
type	String	Definition: Auto stop type. Range: • TIMING: auto stop • IDLE: stop when idle
update_at	Long	Definition: Time (UTC) when the instance is last updated (excluding liveness check), accurate to millisecond. Range: N/A

Table 4-63 Pool

Parameter	Type	Description
id	String	Definition: Dedicated resource pool ID. Range: N/A
name	String	Definition: Dedicated resource pool name. Range: N/A

Table 4-64 VolumeRes

Parameter	Type	Description
capacity	Integer	Definition: Storage capacity. Range: The default value is 5 GB for EVS and 50 GB for EFS. The maximum value is 4,096 GB.
category	String	Definition: Supported storage type. For details about the differences between the storage types, see Selecting Storage in DevEnviron . Range: • SFS • EVS • OBS • OBSFS: parallel file system • EFS: SFS Turbo
mount_path	String	Definition: Directory of the notebook instance to which the storage is mounted. Currently, the directory is <code>/home/ma-user/work/</code> . Range: N/A
ownership	String	Definition: Resource owner. Range: • MANAGED: Resources are managed by the service. • DEDICATED: Resources are managed by the user account. This mode is supported only when the instance category is EFS.

Parameter	Type	Description
status	String	Definition: EVS disk capacity expansion status, which is RESIZING during capacity expansion and does not affect the instance. Range: N/A

Table 4-65 user

Parameter	Type	Description
domain	domain object	Description: Domain information of the account.
id	String	Definition: IAM user ID. For details, see Obtaining a Username and ID . Range: N/A
name	String	Definition: IAM username. Range: N/A

Table 4-66 domain

Parameter	Type	Description
id	String	Definition: Account ID. Range: N/A
name	String	Definition: Account name. Range: N/A

Status code: 201

Created

Example Requests

```
{
  "description" : "update"
}
```

Example Responses

Status code: 200

OK

```
{
  "description" : "test",
}
```

```
"flavor" : "modelarts.vm.cpu.8u",  
"name" : "notebook-1111",  
"endpoints" : [ {  
  "allowed_access_ips" : [ "1.1.1.1" ]  
} ]  
}
```

Status Codes

Status Code	Description
200	OK
201	Created
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

4.6 Deleting a Notebook Instance

Function

This API is used to delete a created notebook instance and its related resources.

This API applies to the following scenario: When your notebook instance is no longer needed, you can use this API to delete the specified notebook instance, including its containers and all storage resources. Before using this API, ensure that you have logged in to the system and have the permission to perform operations on the target notebook instance. After this API is called, the system deletes the specified notebook instance and its related resources. If you do not have the permission to perform operations on the specified notebook instance or the notebook instance has not been stopped, the API will return an error message. If the specified notebook instance is not found or fails to be deleted, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/notebooks/{id}

Table 4-67 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: Notebook instance ID. The ID is in the format of a Universally Unique Identifier (UUID). For details about how to obtain the ID, see Querying Notebook Instances . Constraints: N/A Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-68 Response body parameters

Parameter	Type	Description
action_progress	Array of JobProgress objects	Definition: Initialization progress of the instance.
description	String	Definition: Instance description. Range: N/A
endpoints	Array of EndpointsRes objects	Definition: Local IDE (such as PyCharm and VS Code) or SSH client for remotely accessing a notebook instance through SSH.

Parameter	Type	Description
fail_reason	String	Definition: Instance failure cause. Range: N/A
flavor	String	Definition: Instance flavor. Range: N/A
id	String	Definition: Instance ID. Range: N/A
image	Image object	Definition: Instance image information.
lease	Lease object	Definition: Countdown to auto stop of an instance.
name	String	Definition: Instance name. Range: N/A
pool	Pool object	Definition: Basic information about the dedicated pool, which is returned by the instance created in the dedicated pool.

Parameter	Type	Description
status	String	Definition: Instance status. Range: • INIT: The instance is being initialized. • CREATING: The instance is being created. • STARTING: The instance is being started. • STOPPING: The instance is being stopped. • DELETING: The instance is being deleted. • RUNNING: The instance is running. • STOPPED: The instance has been stopped. • SNAPSHOTTING: The image of the instance is being saved. • CREATE_FAILED: Creating the instance failed. • START_FAILED: Starting the instance failed. • DELETE_FAILED: Deleting the instance failed. • ERROR: An error occurred. • DELETED: The instance has been deleted. • FROZEN: The instance is frozen.
token	String	Description: Token used for notebook authentication. Range: N/A
url	String	Definition: URL for accessing the instance. Range: N/A
volume	VolumeRes object	Definition: Instance storage information.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A

Parameter	Type	Description
feature	String	Definition: Instance type. Range: • DEFAULT: free CodeLab instance. Each user can create only one. • NOTEBOOK: billed instance.
billing_items	Array of strings	Definition: Billing resource type. Range: • STORAGE: Storage resource billing • COMPUTE: Computing resources billing • ALL: All billing types
user	user object	Description: Account information.

Table 4-69 JobProgress

Parameter	Type	Description
notebook_id	String	Definition: Instance ID. Range: N/A
status	String	Definition: Job status in a specified step. Range: • WAITING: The job is awaiting. • PROCESSING: The job is being processed. • FAILED: The job failed. • COMPLETED: The job is complete.
step	Integer	Definition: Job step. Range: • 1: Prepare storage. • 2: Prepare compute resources. • 3: Configure the network. • 4: Initialize the instance.
step_description	String	Definition: Job description in a specified step. Range: N/A

Table 4-70 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 4-71 Image

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • x86_64: x86 architecture • aarch64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A

Parameter	Type	Description
description	String	Definition: Image description. Range: Up to 512 characters
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A

Parameter	Type	Description
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A

Parameter	Type	Description
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Table 4-72 Lease

Parameter	Type	Description
create_at	Long	Definition: UTC time when the instance is created, accurate to millisecond. Range: N/A
duration	Long	Definition: Instance runtime, which is calculated based on the instance creation time. If the instance creation time plus the runtime is greater than the current time, the system automatically stops the instance. Range: N/A
enable	Boolean	Definition: Specifies whether to enable auto stop. Range: Boolean • true: Auto stop is enabled. • false: Auto stop is disabled.
type	String	Definition: Auto stop type. Range: • TIMING: auto stop • IDLE: stop when idle
update_at	Long	Definition: Time (UTC) when the instance is last updated (excluding liveness check), accurate to millisecond. Range: N/A

Table 4-73 Pool

Parameter	Type	Description
id	String	Definition: Dedicated resource pool ID. Range: N/A
name	String	Definition: Dedicated resource pool name. Range: N/A

Table 4-74 VolumeRes

Parameter	Type	Description
capacity	Integer	Definition: Storage capacity. Range: The default value is 5 GB for EVS and 50 GB for EFS. The maximum value is 4,096 GB.
category	String	Definition: Supported storage type. For details about the differences between the storage types, see Selecting Storage in DevEnviron . Range: • SFS • EVS • OBS • OBSFS: parallel file system • EFS: SFS Turbo
mount_path	String	Definition: Directory of the notebook instance to which the storage is mounted. Currently, the directory is <code>/home/ma-user/work/</code> . Range: N/A
ownership	String	Definition: Resource owner. Range: • MANAGED: Resources are managed by the service. • DEDICATED: Resources are managed by the user account. This mode is supported only when the instance category is EFS.

Parameter	Type	Description
status	String	Definition: EVS disk capacity expansion status, which is RESIZING during capacity expansion and does not affect the instance. Range: N/A

Table 4-75 user

Parameter	Type	Description
domain	domain object	Description: Domain information of the account.
id	String	Definition: IAM user ID. For details, see Obtaining a Username and ID . Range: N/A
name	String	Definition: IAM username. Range: N/A

Table 4-76 domain

Parameter	Type	Description
id	String	Definition: Account ID. Range: N/A
name	String	Definition: Account name. Range: N/A

Status code: 204

No content

Example Requests

```
DELETE https://{endpoint}/v1/{project_id}/notebooks/{id}
```

Example Responses**Status code: 200**

OK

```
{
  "create_at" : 1638841805440,
  "description" : "update",
  "feature" : "DEFAULT",
```



```
"flavor" : "modelarts.vm.cpu.free",
"id" : "f9937afa-ca78-45b6-bc12-7ecf42553c48",
"image" : {
  "description" : "description",
  "id" : "e1a07296-22a8-4f05-8bc8-e936c8e54090",
  "name" : "notebook2.0-mul-kernel-cpu-cp36",
  "swr_path" : "swr.xxxxx.com/atelier/notebook2.0-mul-kernel-cpu-cp36:3.3.2-release_v1",
  "tag" : "3.3.2-release_v1",
  "type" : "BUILD_IN"
},
"lease" : {
  "create_at" : 1638841805439,
  "duration" : 3600000,
  "enable" : true,
  "update_at" : 1638841805439
},
"name" : "notebook_5ee4bf0e",
"status" : "DELETING",
"token" : "58ba50c6-e8ff-245c-4840-49e51aa70737",
"update_at" : 1638842504178,
"workspace_id" : "0"
}
```

Status Codes

Status Code	Description
200	OK
204	No content
401	Unauthorized
403	Forbidden

Error Codes

See [Error Codes](#).

4.7 Saving a Running Instance as a Container Image

Function

This API is used to save a running instance as a container image.

This API applies to the following scenario: When you need to save the current running environment for future use or development, you can use this API to save an instance as an image. Before using this API, ensure that you have logged in to the system and have the permission to access the target instance. In addition, the instance must be running. After this API is called, the system saves the running instance as a container image, including the installed dependency packages and plug-ins. If you do not have the permission to access the specified instance or the instance is not running, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/notebooks/{id}/create-image

Table 4-77 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: Notebook instance ID. The ID is in the format of a Universally Unique Identifier (UUID). For details about how to obtain the ID, see Querying Notebook Instances . Constraints: N/A Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 4-78 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	Definition: Image description. Constraints: N/A Range: Up to 512 characters Default Value: N/A

Parameter	Mandatory	Type	Description
name	Yes	String	Definition: Image name. Constraints: N/A Range: The value can contain up to 128 characters. Only lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. The string must start and end with a lowercase letter or digit. Default Value: N/A
namespace	Yes	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Constraints: N/A Range: The value can contain a maximum of 64 characters and must start with a lowercase letter. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Default Value: N/A
tag	No	String	Definition: Image tag. Constraints: N/A Range: The value can contain a maximum of 64 characters. Letters, digits, hyphens (-), underscores (_), and commas (,) are allowed. Default Value: N/A
workspace_id	No	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc,hk)If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Constraints: N/A Range: N/A Default Value: 0

Response Parameters

Status code: 200

Table 4-79 Response body parameters

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • x86_64: x86 architecture • aarch64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A
description	String	Definition: Image description. Range: Up to 512 characters
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND

Parameter	Type	Description
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved

Parameter	Type	Description
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Status code: 201

Created

Example Requests

The following is an example of how to save a running instance as a container image whose image name is **pytorch1_4** and organization is **atelier-auto**.

```
{
  "name" : "pytorch1_4",
  "namespace" : "atelier-auto",
  "tag" : "20221223",
  "description" : "save from notebook-x21d",
  "workspace_id" : "0"
}
```

Example Responses

Status code: 200

OK

```
{
  "arch" : "x86_64",
  "create_at" : 1671786468811,
  "description" : "notebook2.0 20200816",
}
```

```
{
  "id": "4e0d1854-63e5-4517-b683-a0ee97a692a1",
  "name": "pytorch1_4",
  "namespace": "atelier-auto",
  "resource_categories": [ "CPU", "GPU" ],
  "service_type": "TRAIN",
  "status": "INIT",
  "swr_path": "swr.xxxxx.com/atelier-auto/pytorch1_4:20221223",
  "tag": "20221223",
  "type": "DEDICATED",
  "update_at": 1671786468811,
  "visibility": "PRIVATE",
  "workspace_id": "0"
}
```

Status Codes

Status Code	Description
200	OK
201	Created
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.8 Querying the List of Valid Specifications Supported by Notebook Instances

Function

This API is used to obtain the available specifications supported by notebook instances. This API applies to the following scenario: When you want to know the configuration options supported by a notebook instance, you can use this API to query the list of available specifications. Before using this API, ensure that you have logged in to the system and have the permission to access the target notebook instance. After this API is called, the system returns the valid specifications supported by the notebook instance. For example, the memory and CPU. If you do not have the permission to access the specified notebook instance or the notebook instance is not running, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/notebooks/flavors

Table 4-80 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 4-81 Query Parameters

Parameter	Mandatory	Type	Description
category	No	String	Definition: Processor type Constraints: N/A Range: Enums: • CPU • GPU • ASCEND Default Value: N/A
limit	No	Integer	Definition: Number of valid specifications displayed on each page. There is no limit by default. Constraints: N/A Range: N/A Default Value: N/A
offset	No	Integer	Definition: Start offset of the records on each page Constraints: N/A Range: N/A Default Value: 0

Parameter	Mandatory	Type	Description
type	No	String	Definition: Cluster type Constraints: N/A Range: Enums: • MANAGED: public cluster • DEDICATED: dedicated cluster Default Value: N/A
sort_dir	No	String	Definition: Sorting mode Constraints: N/A Range: Enums: • ASC: ascending order • DESC: descending order Default Value: DESC
sort_key	No	String	Definition: Sorting field. Separate multiple fields with commas (,). Constraints: N/A Range: The value can contain a maximum of 128 characters. Letters, digits, hyphens (-), underscores (_), and commas (,) are allowed. Default Value: N/A
flavor_type	No	String	Definition: Resource type. Constraints: N/A Range • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-82 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Range: Positive integers
data	Array of NotebookFlavor objects	Definition: Pagination data.
flavors	Array of NotebookFlavor objects	Definition: List of flavors that can be switched.
pages	Integer	Definition: Total number of pages. Range: Positive integers
size	Integer	Definition: Number of records on each page Range: Positive integers
total	Long	Definition: Total number of records. Range: Non-negative integers

Table 4-83 NotebookFlavor

Parameter	Type	Description
arch	String	Definition: Architecture type. Range: • X86_64 • AARCH64
ascend	AscendInfo object	Description: NPU information.
billing	BillingInfo object	Definition: CDR information.
category	String	Definition: Processor type. Range: • CPU • GPU • ASCEND
description	String	Definition: Specifications description. Range: N/A

Parameter	Type	Description
feature	String	Definition: Instance type. Range: • DEFAULT: free CodeLab instance. Each user can create only one. • NOTEBOOK: billed instance.
free	Boolean	Definition: Whether free specifications are used. Range: Boolean • true: free specifications • false: non-free specifications
gpu	GPUInfo object	Description: GPU information.
id	String	Definition: Specification ID. Range: N/A
memory	Long	Definition: Memory size. Range: N/A
name	String	Definition: Specification name. Range: N/A
sold_out	Boolean	Definition: Whether resources are sufficient. Range: Boolean • true: Resources are insufficient. • false: Resources are sufficient.
storages	Array of strings	Definition: Storage type supported by the specification. Range: • EFS • EVS
vcpus	Integer	Definition: Number of CPU cores. Range: N/A

Table 4-84 AscendInfo

Parameter	Type	Description
npu	Integer	Definition: Number of NPUs. Range: N/A
npu_memory	String	Definition: NPU memory. Range: N/A

Parameter	Type	Description
type	String	Definition: NPU type. Range: N/A

Table 4-85 BillingInfo

Parameter	Type	Description
code	String	Definition: Billing code. Range: N/A
unit_num	Integer	Definition: Billing unit. Range: N/A

Table 4-86 GPUInfo

Parameter	Type	Description
gpu	Integer	Definition: Number of GPUs. Range: N/A
gpu_memory	String	Definition: GPU memory. Range: N/A
type	String	Definition: GPU type. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/notebooks/flavors
```

Example Responses

Status code: 200

OK

```
{
  "current" : 1,
  "data" : [ {
    "arch" : "x86_64",
    "billing" : {
      "code" : "modelarts.vm.cpu.2u",
      "unit_num" : 1
    },
    "category" : "CPU",
    "description" : "General-purpose Intel CPU flavor, ideal for rapid data exploration and experiments",
    "feature" : "NOTEBOOK",
    "free" : false,
    "id" : "modelarts.vm.cpu.2u",
    "memory" : 8388608,
```

```
"name" : "CPU: 2 vCPUs 8 GB",  
"sold_out" : false,  
"storages" : [ "EVS", "OBSFS", "EFS", "OBS" ],  
"vcpus" : 2  
}],  
"pages" : 1,  
"size" : 1,  
"total" : 1  
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.9 Querying the List of Switchable Specifications Supported by Notebook Instances

Function

This API is used to obtain the available specifications that can be switched during notebook instance creation.

This API applies to the following scenario: When you want to know the configuration options supported by a notebook instance, you can use this API to query the list of available specifications. Before using this API, ensure that you have logged in to the system and have the permission to create a notebook instance. After this API is called, the system returns the switchable specifications supported by the notebook instance. For example, the memory and CPU. If you do not have the permission to create a notebook instance, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/notebooks/{id}/flavors

Table 4-87 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: Notebook instance ID. The ID is in the format of a Universally Unique Identifier (UUID). For details about how to obtain the ID, see Querying Notebook Instances . Constraints: N/A Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 4-88 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Definition: Number of valid specifications displayed on each page. There is no limit by default. Constraints: N/A Range: N/A Default Value: N/A
offset	No	Integer	Definition: Start offset of the records on each page Constraints: N/A Range: N/A Default Value: 0

Request Parameters

None

Response Parameters

Status code: 200

Table 4-89 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Range: Positive integers
data	Array of NotebookFlavor objects	Definition: Pagination data.
flavors	Array of NotebookFlavor objects	Definition: List of flavors that can be switched.
pages	Integer	Definition: Total number of pages. Range: Positive integers
size	Integer	Definition: Number of records on each page Range: Positive integers
total	Long	Definition: Total number of records. Range: Non-negative integers

Table 4-90 NotebookFlavor

Parameter	Type	Description
arch	String	Definition: Architecture type. Range: • X86_64 • AARCH64
ascend	AscendInfo object	Description: NPU information.
billing	BillingInfo object	Definition: CDR information.
category	String	Definition: Processor type. Range: • CPU • GPU • ASCEND
description	String	Definition: Specifications description. Range: N/A

Parameter	Type	Description
feature	String	Definition: Instance type. Range: • DEFAULT: free CodeLab instance. Each user can create only one. • NOTEBOOK: billed instance.
free	Boolean	Definition: Whether free specifications are used. Range: Boolean • true: free specifications • false: non-free specifications
gpu	GPUInfo object	Description: GPU information.
id	String	Definition: Specification ID. Range: N/A
memory	Long	Definition: Memory size. Range: N/A
name	String	Definition: Specification name. Range: N/A
sold_out	Boolean	Definition: Whether resources are sufficient. Range: Boolean • true: Resources are insufficient. • false: Resources are sufficient.
storages	Array of strings	Definition: Storage type supported by the specification. Range: • EFS • EVS
vcpus	Integer	Definition: Number of CPU cores. Range: N/A

Table 4-91 AscendInfo

Parameter	Type	Description
npu	Integer	Definition: Number of NPUs. Range: N/A
npu_memory	String	Definition: NPU memory. Range: N/A

Parameter	Type	Description
type	String	Definition: NPU type. Range: N/A

Table 4-92 BillingInfo

Parameter	Type	Description
code	String	Definition: Billing code. Range: N/A
unit_num	Integer	Definition: Billing unit. Range: N/A

Table 4-93 GPUInfo

Parameter	Type	Description
gpu	Integer	Definition: Number of GPUs. Range: N/A
gpu_memory	String	Definition: GPU memory. Range: N/A
type	String	Definition: GPU type. Range: N/A

Example Requests

GET https://{endpoint}/v1/{project_id}/notebooks/{id}/flavors

Example Responses

Status code: 200

OK

```
{
  "current" : 1,
  "data" : [ {
    "arch" : "aarch64",
    "ascend" : {
      "npu_memory" : "32",
      "npu" : 2,
      "type" : "ascend-snt9"
    },
    "billing" : {
      "code" : "modelarts.kat1.xlarge",
      "unit_num" : 2
    },
    "category" : "ASCEND",
```

```
"description" : "The Ascend specification is suitable for deep learning code running and debugging",
"feature" : "NOTEBOOK",
"free" : false,
"id" : "modelarts.bm.snt9.xlarge.2",
"memory" : 201326592,
"name" : "Ascend: 2*Ascend snt9|CPU: 48vCPUs 192GB",
"sold_out" : false,
"storages" : [ "EFS" ],
"vcpus" : 48
}, {
  "arch" : "aarch64",
  "ascend" : {
    "npu_memory" : "128",
    "npu" : 8,
    "type" : "ascend-snt9"
  },
  "billing" : {
    "code" : "modelarts.kat1.8xlarge",
    "unit_num" : 1
  },
  "category" : "ASCEND",
  "description" : "The Ascend specification is suitable for deep learning code running and debugging",
  "feature" : "NOTEBOOK",
  "free" : false,
  "id" : "modelarts.bm.snt9.xlarge.8",
  "memory" : 805306368,
  "name" : "Ascend: 8*Ascend snt9|CPU: 192vCPUs 768GB",
  "sold_out" : false,
  "storages" : [ "EFS" ],
  "vcpus" : 192
} ],
"flavors" : [ {
  "arch" : "aarch64",
  "ascend" : {
    "npu_memory" : "32",
    "npu" : 2,
    "type" : "ascend-snt9"
  },
  "billing" : {
    "code" : "modelarts.kat1.xlarge",
    "unit_num" : 2
  },
  "category" : "ASCEND",
  "description" : "The Ascend specification is suitable for deep learning code running and debugging",
  "feature" : "NOTEBOOK",
  "free" : false,
  "id" : "modelarts.bm.snt9.xlarge.2",
  "memory" : 201326592,
  "name" : "Ascend: 2*Ascend snt9|CPU: 48vCPUs 192GB",
  "sold_out" : false,
  "storages" : [ "EFS" ],
  "vcpus" : 48
}, {
  "arch" : "aarch64",
  "ascend" : {
    "npu_memory" : "128",
    "npu" : 8,
    "type" : "ascend-snt9"
  },
  "billing" : {
    "code" : "modelarts.kat1.8xlarge",
    "unit_num" : 1
  },
  "category" : "ASCEND",
  "description" : "The Ascend specification is suitable for deep learning code running and debugging",
  "feature" : "NOTEBOOK",
  "free" : false,
  "id" : "modelarts.bm.snt9.xlarge.8",
  "memory" : 805306368,
```

```
"name" : "Ascend: 8*Ascend snt9|CPU: 192vCPUs 768GB",  
"sold_out" : false,  
"storages" : [ "EFS" ],  
"vcpus" : 192  
}],  
"pages" : 1,  
"size" : 2,  
"total" : 2  
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.10 Querying the Available Duration of a Running Notebook Instance

Function

This API is used to obtain the available duration of a running notebook instance.

This API applies to the following scenario: When you need to know how long a notebook instance can remain running to properly arrange tasks, you can use this API to query the available duration of it. Before using this API, ensure that you have logged in to the system and have the permission to access the target notebook instance. In addition, the notebook instance must be running. After this API is called, the system returns the available duration of the specified notebook instance. If you do not have the permission to access the specified notebook instance or the notebook instance is not running, the API will return an error message. If the specified notebook instance is not found or the query fails, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/notebooks/{id}/lease

Table 4-94 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: Notebook instance ID. The ID is in the format of a Universally Unique Identifier (UUID). For details about how to obtain the ID, see Querying Notebook Instances . Constraints: N/A Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-95 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: UTC time when the instance is created, accurate to millisecond. Range: N/A
duration	Long	Definition: Instance runtime, which is calculated based on the instance creation time. If the instance creation time plus the runtime is greater than the current time, the system automatically stops the instance. Range: N/A

Parameter	Type	Description
enable	Boolean	Definition: Specifies whether to enable auto stop. Range: Boolean true: Auto stop is enabled. false: Auto stop is disabled.
type	String	Definition: Auto stop type. Range: TIMING: auto stop IDLE: stop when idle
update_at	Long	Definition: Time (UTC) when the instance is last updated (excluding liveness check), accurate to millisecond. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/notebooks/{id}/lease
```

Example Responses

Status code: 200

OK

```
{
  "create_at" : 1638841744515,
  "duration" : 3600000,
  "enable" : true,
  "type" : "TIMING",
  "update_at" : 1638842905925
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.11 Prolonging a Notebook Instance

Function

This API is used to prolong the running time of a running notebook instance. This API applies to the following scenarios: When you need to prolong the running time of a notebook instance to complete long-time tasks, you can call this API to do so. Before using this API, ensure that you have logged in to the system and have the permission to perform operations on the target notebook instance. In addition, the notebook instance must be running. After this API is called, the system prolongs the running time of the specified notebook instance, so that you can continue to use it. If you do not have the permission to perform operations on the specified notebook instance or the notebook instance is not running, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PATCH /v1/{project_id}/notebooks/{id}/lease

Table 4-96 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: Notebook instance ID. The ID is in the format of a Universally Unique Identifier (UUID). For details about how to obtain the ID, see Querying Notebook Instances . Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 4-97 Query Parameters

Parameter	Mandatory	Type	Description
duration	No	Long	Definition: Renewal duration (unit: ms). It is recommended that this parameter be set in leaseReq . If the query parameters include duration , the value set in leaseReq is ignored and the instance is stopped as scheduled. Constraints: N/A Range: 3600000 to 259200000 Default Value: 3600000

Request Parameters

Table 4-98 Request body parameters

Parameter	Mandatory	Type	Description
duration	No	Long	Definition: The instance stops as scheduled. Its runtime is measured in milliseconds starting now. Constraints: N/A Range: 3600000 to 259200000 Default Value: 3600000
type	No	String	Definition: Auto stop type. Constraints: N/A Range: ● TIMING: auto stop ● IDLE: stop when idle Default Value: TIMING

Response Parameters

Status code: 200

Table 4-99 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: UTC time when the instance is created, accurate to millisecond. Range: N/A
duration	Long	Definition: Instance runtime, which is calculated based on the instance creation time. If the instance creation time plus the runtime is greater than the current time, the system automatically stops the instance. Range: N/A
enable	Boolean	Definition: Specifies whether to enable auto stop. Range: Boolean true: Auto stop is enabled. false: Auto stop is disabled.
type	String	Definition: Auto stop type. Range: TIMING: auto stop IDLE: stop when idle
update_at	Long	Definition: Time (UTC) when the instance is last updated (excluding liveness check), accurate to millisecond. Range: N/A

Status code: 204

No content

Example Requests

Prolong the duration of a running notebook instance.

```
https://{endpoint}/v1/{project_id}/notebooks/{id}/lease
{
```



```
"duration" : 3600000,  
"type" : "timing"  
}
```

Example Responses

Status code: 200

OK

```
{  
  "create_at" : 1638841744515,  
  "duration" : 3600000,  
  "enable" : true,  
  "type" : "TIMING",  
  "update_at" : 1638843018759  
}
```

Status Codes

Status Code	Description
200	OK
204	No content
401	Unauthorized
403	Forbidden

Error Codes

See [Error Codes](#).

4.12 Starting a Notebook Instance

Function

This API is used to start a created notebook instance.

This API applies to the following scenarios: When you need to run a notebook instance for data processing, model training, or development, you can use this API to start a specified notebook instance. Before using this API, ensure that you have logged in to the system and have the permission to perform operations on the target notebook instance. In addition, the notebook instance must have been stopped, and configurations must be correct. After this API is called, the system starts the specified notebook instance for your use. If you do not have the permission to perform operations on the specified notebook instance or the notebook instance has not been stopped, the API will return an error message. If the specified notebook instance is not found or the startup fails, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/notebooks/{id}/start

Table 4-100 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: Notebook instance ID. The ID is in the format of a Universally Unique Identifier (UUID). For details about how to obtain the ID, see Querying Notebook Instances . Constraints: N/A Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 4-101 Query Parameters

Parameter	Mandatory	Type	Description
duration	No	Long	Definition: Running duration after startup, in milliseconds Constraints: N/A Range: 3600000 to 259200000 Default Value: 3600000

Parameter	Mandatory	Type	Description
type	No	String	Definition: Auto stop type Constraints: N/A Range: Enums: • TIMING: auto stop • IDLE: stop when idle Default Value: TIMING

Request Parameters

None

Response Parameters

Status code: 200

Table 4-102 Response body parameters

Parameter	Type	Description
action_progress	Array of JobProgress objects	Definition: Initialization progress of the instance.
description	String	Definition: Instance description. Range: N/A
endpoints	Array of EndpointsRes objects	Definition: Local IDE (such as PyCharm and VS Code) or SSH client for remotely accessing a notebook instance through SSH.
fail_reason	String	Definition: Instance failure cause. Range: N/A
flavor	String	Definition: Instance flavor. Range: N/A
id	String	Definition: Instance ID. Range: N/A
image	Image object	Definition: Instance image information.
lease	Lease object	Definition: Countdown to auto stop of an instance.
name	String	Definition: Instance name. Range: N/A

Parameter	Type	Description
pool	Pool object	Definition: Basic information about the dedicated pool, which is returned by the instance created in the dedicated pool.
status	String	Definition: Instance status. Range: • INIT: The instance is being initialized. • CREATING: The instance is being created. • STARTING: The instance is being started. • STOPPING: The instance is being stopped. • DELETING: The instance is being deleted. • RUNNING: The instance is running. • STOPPED: The instance has been stopped. • SNAPSHOTTING: The image of the instance is being saved. • CREATE_FAILED: Creating the instance failed. • START_FAILED: Starting the instance failed. • DELETE_FAILED: Deleting the instance failed. • ERROR: An error occurred. • DELETED: The instance has been deleted. • FROZEN: The instance is frozen.
token	String	Description: Token used for notebook authentication. Range: N/A
url	String	Definition: URL for accessing the instance. Range: N/A
volume	VolumeRes object	Definition: Instance storage information.

Parameter	Type	Description
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A
feature	String	Definition: Instance type. Range: • DEFAULT: free CodeLab instance. Each user can create only one. • NOTEBOOK: billed instance.
billing_items	Array of strings	Definition: Billing resource type. Range: • STORAGE: Storage resource billing • COMPUTE: Computing resources billing • ALL: All billing types
user	user object	Description: Account information.

Table 4-103 JobProgress

Parameter	Type	Description
notebook_id	String	Definition: Instance ID. Range: N/A
status	String	Definition: Job status in a specified step. Range: • WAITING: The job is awaiting. • PROCESSING: The job is being processed. • FAILED: The job failed. • COMPLETED: The job is complete.
step	Integer	Definition: Job step. Range: • 1: Prepare storage. • 2: Prepare compute resources. • 3: Configure the network. • 4: Initialize the instance.

Parameter	Type	Description
step_description	String	Definition: Job description in a specified step. Range: N/A

Table 4-104 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 4-105 Image

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • x86_64: x86 architecture • aarch64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A
description	String	Definition: Image description. Range: Up to 512 characters
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND

Parameter	Type	Description
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved

Parameter	Type	Description
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Table 4-106 Lease

Parameter	Type	Description
create_at	Long	Definition: UTC time when the instance is created, accurate to millisecond. Range: N/A
duration	Long	Definition: Instance runtime, which is calculated based on the instance creation time. If the instance creation time plus the runtime is greater than the current time, the system automatically stops the instance. Range: N/A
enable	Boolean	Definition: Specifies whether to enable auto stop. Range: Boolean • true: Auto stop is enabled. • false: Auto stop is disabled.

Parameter	Type	Description
type	String	Definition: Auto stop type. Range: • TIMING: auto stop • IDLE: stop when idle
update_at	Long	Definition: Time (UTC) when the instance is last updated (excluding liveness check), accurate to millisecond. Range: N/A

Table 4-107 Pool

Parameter	Type	Description
id	String	Definition: Dedicated resource pool ID. Range: N/A
name	String	Definition: Dedicated resource pool name. Range: N/A

Table 4-108 VolumeRes

Parameter	Type	Description
capacity	Integer	Definition: Storage capacity. Range: The default value is 5 GB for EVS and 50 GB for EFS. The maximum value is 4,096 GB.
category	String	Definition: Supported storage type. For details about the differences between the storage types, see Selecting Storage in DevEnviron . Range: • SFS • EVS • OBS • OBSFS: parallel file system • EFS: SFS Turbo

Parameter	Type	Description
mount_path	String	Definition: Directory of the notebook instance to which the storage is mounted. Currently, the directory is <code>/home/ma-user/work/</code> . Range: N/A
ownership	String	Definition: Resource owner. Range: • MANAGED: Resources are managed by the service. • DEDICATED: Resources are managed by the user account. This mode is supported only when the instance category is EFS.
status	String	Definition: EVS disk capacity expansion status, which is RESIZING during capacity expansion and does not affect the instance. Range: N/A

Table 4-109 user

Parameter	Type	Description
domain	domain object	Description: Domain information of the account.
id	String	Definition: IAM user ID. For details, see Obtaining a Username and ID . Range: N/A
name	String	Definition: IAM username. Range: N/A

Table 4-110 domain

Parameter	Type	Description
id	String	Definition: Account ID. Range: N/A
name	String	Definition: Account name. Range: N/A

Status code: 201

Created

Example Requests

```
{}
```

Example Responses

Status code: 200

OK

```
{
  "description": "api-test",
  "feature": "NOTEBOOK",
  "flavor": "modelarts.vm.cpu.2u",
  "id": "f9937afa-4451-42db-a76b-72d624749f66",
  "image": {
    "description": "description",
    "id": "e1a07296-22a8-4f05-8bc8-e936c8e54090",
    "name": "notebook2.0-mul-kernel-cpu-cp36",
    "swr_path": "swr.xxxx.com/atelier/notebook2.0-mul-kernel-cpu-cp36:3.3.2-release_v1",
    "tag": "3.3.2-release_v1",
    "type": "BUILD_IN"
  },
  "lease": {
    "create_at": 1638841744515,
    "duration": 6327212,
    "enable": true,
    "type": "TIMING",
    "update_at": 1638844471727
  },
  "name": "notebooks_test",
  "status": "STARTING",
  "token": "5cc60e8b-8772-7690-efd6-a5874ca387c0",
  "url": "https://authoring-modelarts-xxxxx.xxxx.com/f9937afa-4451-42db-a76b-72d624749f66/lab",
  "volume": {
    "category": "EFS",
    "ownership": "MANAGED",
    "mount_path": "/home/ma-user/work/",
    "capacity": 50
  },
  "workspace_id": "0"
}
```

Status Codes

Status Code	Description
200	OK
201	Created
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.13 Stopping a Notebook Instance

Function

This API is used to stop a notebook instance that is running.

This API applies to the following scenario: When you need to release the resources occupied by a notebook instance or stop a running task, you can use this API to stop a specified notebook instance. Before using this API, ensure that you have logged in to the system and have the permission to perform operations on the target notebook instance. In addition, the notebook instance must be running. After this API is called, the system stops the specified notebook instance and releases related resources. If you do not have the permission to perform operations on the specified notebook instance or the notebook instance is not running, the API will return an error message. If the specified notebook instance is not found or the stop fails, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/notebooks/{id}/stop

Table 4-111 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: Notebook instance ID. The ID is in the format of a Universally Unique Identifier (UUID). For details about how to obtain the ID, see Querying Notebook Instances . Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-112 Response body parameters

Parameter	Type	Description
action_progress	Array of JobProgress objects	Definition: Initialization progress of the instance.
description	String	Definition: Instance description. Range: N/A
endpoints	Array of EndpointsRes objects	Definition: Local IDE (such as PyCharm and VS Code) or SSH client for remotely accessing a notebook instance through SSH.
fail_reason	String	Definition: Instance failure cause. Range: N/A
flavor	String	Definition: Instance flavor. Range: N/A
id	String	Definition: Instance ID. Range: N/A
image	Image object	Definition: Instance image information.
lease	Lease object	Definition: Countdown to auto stop of an instance.
name	String	Definition: Instance name. Range: N/A

Parameter	Type	Description
pool	Pool object	Definition: Basic information about the dedicated pool, which is returned by the instance created in the dedicated pool.
status	String	Definition: Instance status. Range: • INIT: The instance is being initialized. • CREATING: The instance is being created. • STARTING: The instance is being started. • STOPPING: The instance is being stopped. • DELETING: The instance is being deleted. • RUNNING: The instance is running. • STOPPED: The instance has been stopped. • SNAPSHOTTING: The image of the instance is being saved. • CREATE_FAILED: Creating the instance failed. • START_FAILED: Starting the instance failed. • DELETE_FAILED: Deleting the instance failed. • ERROR: An error occurred. • DELETED: The instance has been deleted. • FROZEN: The instance is frozen.
token	String	Description: Token used for notebook authentication. Range: N/A
url	String	Definition: URL for accessing the instance. Range: N/A
volume	VolumeRes object	Definition: Instance storage information.

Parameter	Type	Description
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A
feature	String	Definition: Instance type. Range: • DEFAULT: free CodeLab instance. Each user can create only one. • NOTEBOOK: billed instance.
billing_items	Array of strings	Definition: Billing resource type. Range: • STORAGE: Storage resource billing • COMPUTE: Computing resources billing • ALL: All billing types
user	user object	Description: Account information.

Table 4-113 JobProgress

Parameter	Type	Description
notebook_id	String	Definition: Instance ID. Range: N/A
status	String	Definition: Job status in a specified step. Range: • WAITING: The job is awaiting. • PROCESSING: The job is being processed. • FAILED: The job failed. • COMPLETED: The job is complete.
step	Integer	Definition: Job step. Range: • 1: Prepare storage. • 2: Prepare compute resources. • 3: Configure the network. • 4: Initialize the instance.

Parameter	Type	Description
step_description	String	Definition: Job description in a specified step. Range: N/A

Table 4-114 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 4-115 Image

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • x86_64: x86 architecture • aarch64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A
description	String	Definition: Image description. Range: Up to 512 characters
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND

Parameter	Type	Description
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved

Parameter	Type	Description
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Table 4-116 Lease

Parameter	Type	Description
create_at	Long	Definition: UTC time when the instance is created, accurate to millisecond. Range: N/A
duration	Long	Definition: Instance runtime, which is calculated based on the instance creation time. If the instance creation time plus the runtime is greater than the current time, the system automatically stops the instance. Range: N/A
enable	Boolean	Definition: Specifies whether to enable auto stop. Range: Boolean • true: Auto stop is enabled. • false: Auto stop is disabled.

Parameter	Type	Description
type	String	Definition: Auto stop type. Range: • TIMING: auto stop • IDLE: stop when idle
update_at	Long	Definition: Time (UTC) when the instance is last updated (excluding liveness check), accurate to millisecond. Range: N/A

Table 4-117 Pool

Parameter	Type	Description
id	String	Definition: Dedicated resource pool ID. Range: N/A
name	String	Definition: Dedicated resource pool name. Range: N/A

Table 4-118 VolumeRes

Parameter	Type	Description
capacity	Integer	Definition: Storage capacity. Range: The default value is 5 GB for EVS and 50 GB for EFS. The maximum value is 4,096 GB.
category	String	Definition: Supported storage type. For details about the differences between the storage types, see Selecting Storage in DevEnviron . Range: • SFS • EVS • OBS • OBSFS: parallel file system • EFS: SFS Turbo

Parameter	Type	Description
mount_path	String	Definition: Directory of the notebook instance to which the storage is mounted. Currently, the directory is <code>/home/ma-user/work/</code> . Range: N/A
ownership	String	Definition: Resource owner. Range: • MANAGED: Resources are managed by the service. • DEDICATED: Resources are managed by the user account. This mode is supported only when the instance category is EFS.
status	String	Definition: EVS disk capacity expansion status, which is RESIZING during capacity expansion and does not affect the instance. Range: N/A

Table 4-119 user

Parameter	Type	Description
domain	domain object	Description: Domain information of the account.
id	String	Definition: IAM user ID. For details, see Obtaining a Username and ID . Range: N/A
name	String	Definition: IAM username. Range: N/A

Table 4-120 domain

Parameter	Type	Description
id	String	Definition: Account ID. Range: N/A
name	String	Definition: Account name. Range: N/A

Status code: 201

Created

Example Requests

POST https://{endpoint}/v1/{project_id}/notebooks/{id}/stop

Example Responses

Status code: 200

OK

```
{
  "description" : "api-test",
  "feature" : "NOTEBOOK",
  "flavor" : "modelarts.vm.cpu.2u",
  "id" : "f9937afa-4451-42db-a76b-72d624749f66",
  "image" : {
    "description" : "description",
    "id" : "e1a07296-22a8-4f05-8bc8-e936c8e54090",
    "name" : "notebook2.0-mul-kernel-cpu-cp36",
    "swr_path" : "swr.xxxxx.com/atelier/notebook2.0-mul-kernel-cpu-cp36:3.3.2-release_v1",
    "tag" : "3.3.2-release_v1",
    "type" : "BUILD_IN"
  },
  "lease" : {
    "create_at" : 1638841744515,
    "duration" : 5313106,
    "enable" : true,
    "update_at" : 1638843457621
  },
  "name" : "notebooks_test",
  "status" : "STOPPING",
  "token" : "7bddd8ff-8a0d-e063-3107-c70a862832de",
  "url" : "https://authoring-modelarts-xxxxx.xxxxx.com/f9937afa-4451-42db-a76b-72d624749f66/lab",
  "volume" : {
    "category" : "EFS",
    "ownership" : "MANAGED",
    "mount_path" : "/home/ma-user/work/",
    "capacity" : 50
  },
  "workspace_id" : "0"
}
```

Status Codes

Status Code	Description
200	OK
201	Created
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.14 Obtaining Details About All Notebook Resource Pool Instances

Function

This API is used to obtain details about all notebook resource pool instances associated with a user. This API is used when you need to select a resource pool when creating a notebook instance. Before using this API, ensure that you have registered and logged in to the system and have the permission to view resource pool instances. After the API is called, the API returns a list of detailed information about all resource pool instances, including the instance name, status, and node specifications. If you have not logged in to the system, do not have the required permission to access the resource pool, or an internal error occurs in the system, the API returns an error message, for example, unauthorized access, service unavailable, or internal error.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/authoring/clusters

Table 4-121 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 4-122 Query Parameters

Parameter	Mandatory	Type	Description
type	Yes	String	Definition: Resource pool type. Constraints: N/A Range • MANAGED: public pool • DEDICATED: dedicated pool Default Value: N/A
workspace_id	No	String	Definition: Workspace ID. . Constraints: There must be a workspace in use. Range: N/A Default Value: 0
limit	No	Integer	Definition: Number of instances displayed on each page. Constraints: N/A Range: greater than or equal to 0. Default Value: 1000
offset	No	Integer	Definition: Offset of data records. Constraints: N/A Range: greater than or equal to 0. Default Value: 0

Request Parameters

None

Response Parameters

Status code: 200

Table 4-123 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Range: Positive integers.
data	Array of ClusterResponse objects	Definition: Notebook instance data.
pages	Integer	Definition: Total number of pages. Range: Positive integers.
size	Integer	Definition: Number of records on each page. Range: Positive integers.
total	Long	Definition: Total number of records. Range: Non-negative integers.

Table 4-124 ClusterResponse

Parameter	Type	Description
logic_cluster_id	String	Definition: Logical resource pool ID. Range: N/A
status	String	Definition: Resource pool status. Range: • PENDING • INITIALIZING • INITIALIZE_FAILED • ACTIVE • DELETING • DELETED • DELETE_FAILED • MIGRATING
pool_id	String	Definition: Resource pool ID. Range: N/A
type	String	Definition: Resource pool type. Range: • MANAGED: public pool • DEDICATED: dedicated pool

Parameter	Type	Description
resource_categories	String	Definition: Resource type. Range: • GPU • CPU • ASCEND
workspace_id	String	Definition: Workspace ID. For details about how to obtain the value, see Obtaining Workspaces . If no workspace is created, the default value is 0. If a workspace is created and used, use the actual value. Range: N/A
create_at	String	Definition: UTC time when the instance is created, accurate to millisecond. Range: N/A
update_at	String	Definition: Time (UTC) when the instance was last updated, accurate to millisecond. Range: N/A
project_id	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
domain_id	String	Definition: Account ID. Range: N/A
flavors	Array of Flavor objects	Definition: Resource pool flavors.

Table 4-125 Flavor

Parameter	Type	Description
arch	String	Definition: Hardware architecture type. Range: • x86_64: x86 architecture • aarch64: Arm architecture

Parameter	Type	Description
billing	BillingInfo object	Definition: CDR information.
category	String	Definition: Processor type. Range: • CPU • GPU • ASCEND
description	String	Definition: Flavor description. Range: N/A
evs_max_size	String	Definition: Maximum size (GB) of EVS storage that can be created. Range: N/A
evs_sku_code	String	Definition: SKU code of EVS storage. Range: N/A
feature	String	Definition: Flavor type. Range: • DEFAULT: CodeLab • NOTEBOOK: notebook
free	Boolean	Definition: Indicates whether a free flavor is used. Range: Boolean • true: free flavor. • false: non-free flavor.
grow_support_type	String	Definition: Site type. Range: • COMMON: supported on both the Chinese mainland and International sites • NATIONAL: supported only on the Chinese mainland site • INTERNATIONAL: supported only on the International site • NONE: supported on neither the Chinese mainland nor International sites
id	String	Definition: Flavor ID. Range: N/A
memory	String	Definition: Memory size. Range: N/A

Parameter	Type	Description
name	String	Definition: Flavor name. Range: N/A
sold_out	Boolean	Definition: Indicates whether the flavor is sold out. Range: Boolean • true: The flavor is sold out. • false: The flavor is not sold out.
storages	Array of strings	Definition: Storage type supported by the flavor. Range: • EVS • OBS: Object Storage Service • OBSFS: parallel file system • EFS: SFS Turbo
vcpus	Integer	Definition: Number of CPU cores. Range: N/A
gpu	GPUsInfo object	Definition: GPU specifications when the processor type is GPU .
ascend	AscendInfo object	Definition: Ascend specifications when the processor type is ASCEND .

Table 4-126 BillingInfo

Parameter	Type	Description
code	String	Definition: Billing code. Range: N/A
unit_num	Integer	Definition: Billing unit. Range: N/A

Table 4-127 GPUsInfo

Parameter	Type	Description
type	String	Definition: GPU type. Range: N/A
gpu	Double	Definition: Number of GPUs. Range: N/A

Parameter	Type	Description
gpu_memory	String	Definition: GPU memory. Range: N/A

Table 4-128 AscendInfo

Parameter	Type	Description
npu	Integer	Definition: Number of NPUs. Range: N/A
npu_memory	String	Definition: NPU memory. Range: N/A
type	String	Definition: NPU type. Range: N/A

Status code: 401**Table 4-129** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 4-130** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404

Table 4-131 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET /v1/{project_id}/authoring/clusters
```

Example Responses

Status code: 200

Request succeeded.

```
{
  "current": 0,
  "data": [ {
    "logic_cluster_id": "e393b479-bd29-4131-9d89-e8f5d98ea16c",
    "status": "ACTIVE",
    "pool_id": "pool-traintest-memarts-06024304be00d5092fbdc0013d201342",
    "type": "DEDICATED",
    "resource_categories": [ "CPU" ],
    "flavors": [ {
      "arch": "x86_64",
      "billing": {
        "code": "modelarts.vm.cpu.2u",
        "unit_num": 1
      },
      "category": "CPU",
      "description": "General-purpose Intel CPU flavor, ideal for rapid data exploration and experiments.",
      "evs_max_size": "4096",
      "evs_sku_code": "modelarts.storage.evs.ssd",
      "feature": "NOTEBOOK",
      "free": false,
      "grow_support_type": "INTERNATIONAL",
      "id": "modelarts.vm.cpu.2u",
      "memory": 8388608,
      "name": "CPU: 2 vCPUs 8GB",
      "sold_out": false,
      "storages": [ "EFS_DEDICATED", "OBS", "OBSFS", "EVS" ],
      "vcpus": 2
    }, {
      "arch": "x86_64",
      "billing": {
        "code": "modelarts.vm.cpu.4u",
        "unit_num": 1
      },
      "category": "CPU",
      "description": "General-purpose Intel CPU flavor, ideal for rapid data exploration and experiments.",
      "evs_max_size": "4096",
      "evs_sku_code": "modelarts.storage.evs.ssd",
      "feature": "NOTEBOOK",
      "free": false,
      "grow_support_type": "COMMON",
      "id": "modelarts.vm.cpu.4u",
      "memory": 16777216,
      "name": "CPU: 4 vCPUs 16GB",
```

```
{
  "sold_out" : false,
  "storages" : [ "EFS_DEDICATED", "OBS", "OBSFS", "EVS" ],
  "vcpus" : 4
}, {
  "arch" : "x86_64",
  "billing" : {
    "code" : "modelarts.vm.cpu.8u.2xlarge.predefined",
    "unit_num" : 1
  },
  "category" : "CPU",
  "description" : "General computing-plus Intel CPU flavors, ideal for compute-intensive applications.",
  "evs_max_size" : "4096",
  "evs_sku_code" : "modelarts.storage.evs.ssd",
  "feature" : "NOTEBOOK",
  "free" : false,
  "grow_support_type" : "NONE",
  "id" : "modelarts.vm.cpu.8u.2xlarge.predefined",
  "memory" : 33554432,
  "name" : "CPU: 8 vCPUs 32GB",
  "sold_out" : false,
  "storages" : [ "EFS_DEDICATED", "OBS", "OBSFS", "EVS" ],
  "vcpus" : 8
} ],
"workspace_id" : "0",
"create_at" : 1737690370131,
"update_at" : 1752722684027,
"domain_id" : "06024304b180d5090fbac00141b6cae0",
"project_id" : "06024304be00d5092fbd0013d201342"
} ],
"pages" : 1,
"size" : 200,
"total" : 40
}
```

Status Codes

Status Code	Description
200	Request succeeded.
401	Unauthorized.
403	Forbidden.
404	Not found.

Error Codes

See [Error Codes](#).

4.15 Obtaining Details About a Notebook Resource Pool

Function

This API is used to obtain details about a notebook resource pool. This API is used when you need to query details about a specified cluster when creating a

notebook instance job. Before using this API, ensure that the cluster has been managed and you have the required permission. After this API is called, the system returns the instance ID, name, flavor, instance status, and URL for accessing the cluster. If the cluster does not exist, is not managed, or you do not have the access permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/authoring/clusters/{cluster_id}

Table 4-132 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
cluster_id	Yes	String	Definition: ID of the managed cluster. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-133 Response body parameters

Parameter	Type	Description
logic_cluster_id	String	Definition: Logical resource pool ID. Range: N/A

Parameter	Type	Description
status	String	Definition: Resource pool status. Range: • PENDING • INITIALIZING • INITIALIZE_FAILED • ACTIVE • DELETING • DELETED • DELETE_FAILED • MIGRATING
pool_id	String	Definition: Resource pool ID. Range: N/A
type	String	Definition: Resource pool type. Range: • MANAGED: public pool • DEDICATED: dedicated pool
resource_categories	String	Definition: Resource type. Range: • GPU • CPU • ASCEND
workspace_id	String	Definition: Workspace ID. For details about how to obtain the value, see Obtaining Workspaces . If no workspace is created, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A
create_at	String	Definition: UTC time when the instance is created, accurate to millisecond. Range: N/A
update_at	String	Definition: Time (UTC) when the instance was last updated, accurate to millisecond. Range: N/A

Parameter	Type	Description
project_id	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
domain_id	String	Definition: Account ID. Range: N/A
flavors	Array of Flavor objects	Definition: Resource pool flavors.

Table 4-134 Flavor

Parameter	Type	Description
arch	String	Definition: Hardware architecture type. Range: • x86_64: x86 architecture • aarch64: Arm architecture
billing	BillingInfo object	Definition: CDR information.
category	String	Definition: Processor type. Range: • CPU • GPU • ASCEND
description	String	Definition: Flavor description. Range: N/A
evs_max_size	String	Definition: Maximum size (GB) of EVS storage that can be created. Range: N/A
evs_sku_code	String	Definition: SKU code of EVS storage. Range: N/A
feature	String	Definition: Flavor type. Range: • DEFAULT: CodeLab • NOTEBOOK: notebook

Parameter	Type	Description
free	Boolean	Definition: Indicates whether a free flavor is used. Range: Boolean • true: free flavor. • false: non-free flavor.
grow_support_type	String	Definition: Site type. Range: • COMMON: supported on both the Chinese mainland and International sites • NATIONAL: supported only on the Chinese mainland site • INTERNATIONAL: supported only on the International site • NONE: supported on neither the Chinese mainland nor International sites
id	String	Definition: Flavor ID. Range: N/A
memory	String	Definition: Memory size. Range: N/A
name	String	Definition: Flavor name. Range: N/A
sold_out	Boolean	Definition: Indicates whether the flavor is sold out. Range: Boolean • true: The flavor is sold out. • false: The flavor is not sold out.
storages	Array of strings	Definition: Storage type supported by the flavor. Range: • EVS • OBS: Object Storage Service • OBSFS: parallel file system • EFS: SFS Turbo
vcpus	Integer	Definition: Number of CPU cores. Range: N/A
gpu	GPUsInfo object	Definition: GPU specifications when the processor type is GPU .

Parameter	Type	Description
ascend	AscendInfo object	Definition: Ascend specifications when the processor type is ASCEND .

Table 4-135 BillingInfo

Parameter	Type	Description
code	String	Definition: Billing code. Range: N/A
unit_num	Integer	Definition: Billing unit. Range: N/A

Table 4-136 GPUsInfo

Parameter	Type	Description
type	String	Definition: GPU type. Range: N/A
gpu	Double	Definition: Number of GPUs. Range: N/A
gpu_memory	String	Definition: GPU memory. Range: N/A

Table 4-137 AscendInfo

Parameter	Type	Description
npu	Integer	Definition: Number of NPUs. Range: N/A
npu_memory	String	Definition: NPU memory. Range: N/A
type	String	Definition: NPU type. Range: N/A

Status code: 401

Table 4-138 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 4-139** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 4-140** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

None

Example Responses

None

Status Codes

Status Code	Description
200	Request succeeded.
401	Unauthorized.
403	Forbidden.
404	Not found.

Error Codes

See [Error Codes](#).

4.16 Querying the Switch and Quota of a Specified Feature of the Current User

Function

This API is used to query the switch status and quota information of a specified feature of the current user. This API is used when you need to know whether a specific feature is enabled, check the quota limit, or monitor the used resources. Before using this API, ensure that you have logged in and have the query permission, and the specified feature must exist. After this API is called, the system returns the details, such as whether the feature is enabled, total quota, and used resources. If you do not have the required permission, the feature does not exist, or the system is abnormal, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/authoring/features/{feature}

Table 4-141 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
feature	Yes	String	Definition: Feature name. Constraints: N/A Range • NOTEBOOK: notebook instance explicitly created by you. Default Value: NOTEBOOK

Request Parameters

None

Response Parameters

Status code: 200

Table 4-142 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: UTC time when the instance is created, accurate to millisecond. Range: N/A
enabled	Boolean	Definition: Feature switch. Range: Boolean • true: enable • false: disabled.
id	String	Definition: Feature ID. Range: N/A

Parameter	Type	Description
name	String	Definition: Feature name. Range: • NOTEBOOK: notebook instance explicitly created by you.
quota	Integer	Definition: Feature quota. Range: N/A
used	Integer	Definition: Feature quota used. Range: N/A
update_at	Long	Definition: Time (UTC) when the instance was last updated, accurate to millisecond. Range: N/A
user_id	String	Definition: User ID. Range: N/A

Status code: 401**Table 4-143** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 4-144** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404

Table 4-145 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

None

Example Responses

Status code: 200

Request succeeded.

```
{
  "create_at" : 1597119549430,
  "enabled" : true,
  "id" : "432hjk3424kh432nb432km543m423m32",
  "name" : "NOTEBOOK",
  "quota" : 1000,
  "update_at" : 1735818559236,
  "used" : 300,
  "user_id" : "43278947598432457983257243532"
}
```

Status Codes

Status Code	Description
200	Request succeeded.
401	Unauthorized.
403	Forbidden.
404	Not found.

Error Codes

See [Error Codes](#).

4.17 Obtaining the Notebook Instances with OBS Storage Mounted

Function

This API is used to obtain the OBS parallel file system that can be mounted to a running notebook instance.

This API applies to the following scenario: When you need to mount an OBS parallel file system to the specified file directory of a notebook instance, you can use this API to obtain the list of available OBS parallel file systems. Before using this API, ensure that you have logged in to the system and have the permission to access the target notebook instance and OBS parallel file system. In addition, the notebook instance must be running. After this API is called, the system returns the list of OBS parallel file systems that can be dynamically mounted. If you do not have the permission to access the specified notebook instance or the notebook instance is not running, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/notebooks/{instance_id}/storage

Table 4-146 Path Parameters

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Definition: Notebook instance ID. The ID is in the format of a Universally Unique Identifier (UUID). For details about how to obtain the ID, see Querying Notebook Instances . Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-147 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Range: Positive integers
data	Array of DataVolumesRes objects	Definition: Dynamically mounted OBS instances.
pages	Integer	Definition: Total number of pages. Range: Positive integers
size	Integer	Definition: Number of records on each page Range: Positive integers
total	Long	Definition: Total number of records. Range: Non-negative integers

Table 4-148 DataVolumesRes

Parameter	Type	Description
category	String	Definition: Storage type. The value can be OBS . Range: N/A

Parameter	Type	Description
id	String	Definition: ID of the dynamically mounted instance. Range: N/A
mount_path	String	Definition: Path mounted to the notebook instance. Range: N/A
status	String	Definition: Status of dynamically mounted OBS storage. Range: • MOUNTING: being mounted • MOUNT_FAILED: mounting failed • MOUNTED: mounted • UNMOUNTING: being unmounted • UNMOUNT_FAILED: unmounting failed • UNMOUNTED: unmounted
uri	String	Definition: OBS object path. Range: N/A

Example Requests

GET https://{endpoint}/v1/{project_id}/notebooks/{instance_id}/storage

Example Responses

Status code: 200

OK

```
{
  "current" : 1,
  "data" : [ {
    "id" : "91dd2d3f-2d92-475f-a375-04636af26cc9",
    "category" : "OBSFS",
    "mount_path" : "/data/wang/",
    "uri" : "obs://authoring-test/wang/",
    "status" : "MOUNTED"
  } ],
  "pages" : 1,
  "size" : 1,
  "total" : 1
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.18 OBS Storage Mounting

Function

This API is used to mount an OBS parallel file system to a specified file directory of a running notebook instance.

This API applies to the following scenario: When you need to directly operate files in OBS in a notebook instance, you can use this API to mount the OBS parallel file system to a specified directory of the instance. Then the file system can be read and written. Before using this API, ensure that you have logged in to the system and have the permission to access the target notebook instance and OBS parallel file system. In addition, the notebook instance must be running. After this API is called, the system mounts the specified OBS parallel file system to the notebook instance. You can read and write objects in the OBS parallel file system in the container as a file system. If you do not have the permission to access the specified notebook instance or the notebook instance is not running, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/notebooks/{instance_id}/storage

Table 4-149 Path Parameters

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Definition: Notebook instance ID. The ID is in the format of a Universally Unique Identifier (UUID). For details about how to obtain the ID, see Querying Notebook Instances . Constraints: N/A Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 4-150 Request body parameters

Parameter	Mandatory	Type	Description
category	No	String	Definition: Storage type for dynamic mounting. Constraints: N/A Range: • OBS: Object Storage Service Default Value: OBS
mount_path	No	String	Definition: Path mounted to the notebook instance. Constraints: N/A Range: The value can contain a maximum of 256 characters and must be in the /data/ subdirectory of the notebook instance. Default Value: /home/ma-user/work/

Parameter	Mandatory	Type	Description
uri	No	String	Definition: OBS object path, for example, obs://modelarts/notebook/ . Constraints: Valid object path in the OBS parallel file system. Range: Up to 256 characters Default Value: N/A

Response Parameters

Status code: 200

Table 4-151 Response body parameters

Parameter	Type	Description
category	String	Definition: Storage type. The value can be OBS . Range: N/A
id	String	Definition: ID of the dynamically mounted instance. Range: N/A
mount_path	String	Definition: Path mounted to the notebook instance. Range: N/A
status	String	Definition: Status of dynamically mounted OBS storage. Range: • MOUNTING: being mounted • MOUNT_FAILED: mounting failed • MOUNTED: mounted • UNMOUNTING: being unmounted • UNMOUNT_FAILED: unmounting failed • UNMOUNTED: unmounted
uri	String	Definition: OBS object path. Range: N/A

Status code: 201

Created

Example Requests

The following is an example of how to dynamically mount an OBS parallel file system to the **/data/wang/** directory in the instance.

```
{
  "category": "OBS",
  "mount_path": "/data/wang/",
  "uri": "obs://authoring-test/wang/"
}
```

Example Responses

Status code: 200

OK

```
{
  "id": "91dd2d3f-2d92-475f-a375-04636af26cc9",
  "category": "OBSFS",
  "mount_path": "/data/wang/",
  "uri": "obs://authoring-test/wang/",
  "status": "MOUNTING"
}
```

Status Codes

Status Code	Description
200	OK
201	Created
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.19 Obtaining Details About a Notebook Instance with OBS Storage Mounted

Function

This API is used to obtain the details of the OBS parallel file system that has been mounted to a running notebook instance.

This API applies to the following scenario: When you want to view details about an OBS parallel file system that has been mounted to a notebook instance, you can use this API to obtain related information. Before using this API, ensure that

you have logged in to the system and have the permission to access the target notebook instance and OBS parallel file system. In addition, the notebook instance must be running. After this API is called, the system returns the details about the OBS parallel file system mounted to the specified notebook instance. If you do not have the permission to access the specified notebook instance or the notebook instance is not running, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/notebooks/{instance_id}/storage/{storage_id}

Table 4-152 Path Parameters

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Definition: Notebook instance ID. The ID is in the format of a Universally Unique Identifier (UUID). For details about how to obtain the ID, see Querying Notebook Instances . Constraints: N/A Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
storage_id	Yes	String	Definition: OBS storage ID. The ID is in the format of a Universally Unique Identifier (UUID). Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-153 Response body parameters

Parameter	Type	Description
category	String	Definition: Storage type. The value can be OBS . Range: N/A
id	String	Definition: ID of the dynamically mounted instance. Range: N/A
mount_path	String	Definition: Path mounted to the notebook instance. Range: N/A
status	String	Definition: Status of dynamically mounted OBS storage. Range: • MOUNTING: being mounted • MOUNT_FAILED: mounting failed • MOUNTED: mounted • UNMOUNTING: being unmounted • UNMOUNT_FAILED: unmounting failed • UNMOUNTED: unmounted
uri	String	Definition: OBS object path. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/notebooks/{instance_id}/storage/{storage_id}
```

Example Responses

Status code: 200

OK

```
{
  "id": "91dd2d3f-2d92-475f-a375-04636af26cc9",
  "category": "OBSFS",
  "mount_path": "/data/wang/",
```

```
"uri" : "obs://authoring-test/wang/",  
"status" : "MOUNTED"  
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.20 Unmounting OBS Storage from a Notebook Instance

Function

This API is used to unmount an OBS parallel file system from a running notebook instance.

This API applies to the following scenario: When you need to clear or reorganize the resources mounted to a notebook instance, you can use this API to unmount an OBS parallel file system from the instance. Before using this API, ensure that you have logged in to the system and have the permission to access the target notebook instance and OBS parallel file system. In addition, the notebook instance must be running, and have an OBS parallel file system mounted. After this API is called, the system unmounts the specified OBS parallel file system from the notebook instance. The notebook container cannot operate objects in OBS, but objects in OBS remain unchanged. If you do not have the permission to access the specified notebook instance or the notebook instance is not running, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/notebooks/{instance_id}/storage/{storage_id}

Table 4-154 Path Parameters

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Definition: Notebook instance ID. The ID is in the format of a Universally Unique Identifier (UUID). For details about how to obtain the ID, see Querying Notebook Instances . Constraints: N/A Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
storage_id	Yes	String	Definition: OBS storage ID. The ID is in the format of a Universally Unique Identifier (UUID). Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-155 Response body parameters

Parameter	Type	Description
category	String	Definition: Storage type. The value can be OBS . Range: N/A

Parameter	Type	Description
id	String	Definition: ID of the dynamically mounted instance. Range: N/A
mount_path	String	Definition: Path mounted to the notebook instance. Range: N/A
status	String	Definition: Status of dynamically mounted OBS storage. Range: • MOUNTING: being mounted • MOUNT_FAILED: mounting failed • MOUNTED: mounted • UNMOUNTING: being unmounted • UNMOUNT_FAILED: unmounting failed • UNMOUNTED: unmounted
uri	String	Definition: OBS object path. Range: N/A

Status code: 204

No content

Example Requests

```
DELETE https://{endpoint}/v1/{project_id}/notebooks/{instance_id}/storage/{storage_id}
```

Example Responses

Status code: 200

OK

```
{
  "category": "OBSFS",
  "id": "91dd2d3f-2d92-475f-a375-04636af26cc9",
  "mount_path": "/data/wang/",
  "status": "UNMOUNTING",
  "uri": "obs://authoring-test/wang/"
}
```

Status Codes

Status Code	Description
200	OK
204	No content
401	Unauthorized
403	Forbidden

Error Codes

See [Error Codes](#).

4.21 Querying Supported Images

Function

This API is used to query all images by page based on specified conditions.

This API applies to the following scenarios: When you need to search for a specific image, manage the image repository, or select an appropriate image version for deployment, you can use this API to obtain the image list that meets the conditions. Before using this API, ensure that there is an image repository and you have the access permission. After a query operation is complete, you can obtain an image list that meets the search criteria. Details about the images can be obtained, including the image ID, name, version, type, status, size, and creation time. If there is no image repository, you have no access permission, or the search criteria are incorrect, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/images

Table 4-156 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 4-157 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Description: Number of image instances displayed on each page Constraints: N/A Range: Positive integers Default Value: 200
name	No	String	Description: Image name Constraints: N/A Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Default Value: N/A
name_fuzzy_match	No	Boolean	Definition: Whether the image name is used for fuzzy match Constraints: N/A Range: The value is of the Boolean type. • true: Fuzzy match is supported. • false: Fuzzy match is not supported. Default Value: true

Parameter	Mandatory	Type	Description
namespace	No	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Constraints: N/A Range: The value can contain a maximum of 64 characters and must start with a lowercase letter. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Default Value: N/A
offset	No	Integer	Definition: Start offset of the records on each page Constraints: N/A Range: Non-negative integers Default Value: 0
service_type	No	String	Definition: Supported image types Constraints: N/A Range: Enums: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified Default Value: UNKNOWN

Parameter	Mandatory	Type	Description
sort_dir	No	String	Definition: Instance sorting mode Constraints: N/A Range: Enums: • ASC: ascending order • DESC: descending order Default Value: DESC
sort_key	No	String	Definition: Sorting field. Separate multiple fields with commas (,). Constraints: N/A Range: The value can contain a maximum of 128 characters. Letters, digits, hyphens (-), underscores (_), and commas (,) are allowed. Default Value: N/A
type	No	String	Definition: Image type Constraints: N/A Range: Enums: • BUILD_IN: built-in system image • DEDICATED: image you have saved Default Value: BUILD_IN
workspace_id	No	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Constraints: N/A Range: This value contains 0 or 32 characters. Only digits (0 to 9) or lowercase letters (a to z) are allowed. Default Value: 0

Request Parameters

None

Response Parameters

Status code: 200

Table 4-158 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Range: Positive integers
data	Array of ImageResponse objects	Definition: Image data that meets the search criteria.
pages	Integer	Definition: Total number of pages. Range: Positive integers
size	Integer	Definition: Number of records on each page Range: Positive integers
total	Long	Definition: Total number of records. Range: Non-negative integers

Table 4-159 ImageResponse

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • X86_64: x86 architecture • AARCH64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A
description	String	Definition: Image description with a maximum of 512 characters. Range: N/A
dev_services	Array of strings	Definition: Services supported by the image. Range: • NOTEBOOK: You can access a notebook instance using HTTPS. • SSH: You can remotely access a notebook instance from a local IDE through SSH.

Parameter	Type	Description
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
origin	String	Definition: Image source. Range: • CUSTOMIZE: custom image • IMAGE_SAVE: image saved by a notebook instance
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A

Parameter	Type	Description
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A

Parameter	Type	Description
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Status code: 401**Table 4-160** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 4-161** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 4-162** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/images
```

Example Responses

Status code: 200

OK

```
{
  "current" : 4,
  "data" : [ {
    "arch" : "x86_64",
    "create_at" : 1638841805439,
    "description" : "AI inference application development, preconfigured ModelBox and AI engine LibTorch,
only SSH connection supported.",
    "dev_services" : [ "AI_FLOW", "SSH" ],
    "id" : "e1a07296-22a8-4f05-8bc8-e936c8e54103",
    "name" : "modelbox1.3.0-libtorch1.9.1-cuda10.2-cudnn8-euler2.9.6",
    "resource_categories" : [ "GPU" ],
    "service_type" : "TRAIN",
    "status" : "ACTIVE",
    "swr_path" : "swr.xxx.com/atelier/modelarts-modelbox-libtorch-gpu-x86:1.3.0-20221027202714-160a680",
    "tag" : "1.3.0-20221027202714-160a680",
    "type" : "BUILD_IN",
    "update_at" : 1638234504492,
    "workspace_id" : "0"
  }, {
    "arch" : "x86_64",
    "create_at" : 1638841805439,
    "description" : "CPU and GPU general algorithm development and training, preconfigured with AI engine
PyTorch1.8",
    "dev_services" : [ "NOTEBOOK", "SSH" ],
    "id" : "278e88d1-5b71-4766-8502-b3ba72e824d9",
    "name" : "pytorch1.8-cuda10.2-cudnn7-ubuntu18.04",
    "resource_categories" : [ "GPU", "CPU" ],
    "service_type" : "COMMON",
    "status" : "ACTIVE",
    "swr_path" : "swr.xxx.com/atelier/pytorch_1_8:pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-
x86_64-20220926104358-041ba2e",
    "tag" : "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64-20220926104358-041ba2e",
    "type" : "BUILD_IN",
    "update_at" : 1638234504492,
    "workspace_id" : "0"
  } ],
  "pages" : 54,
  "size" : 2,
  "total" : 107
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.22 Registering a Custom Image

Function

This API is used to register a custom image with ModelArts image management.

This API applies to the following scenario: When you need to integrate a custom image (such as a specific algorithm environment, tool chain, or configuration) into ModelArts, you can use this API to register the image with image management for future use. Before using this API, ensure that you have the ModelArts image management permission and valid image path and the required image format are provided. After the registration is complete, the custom image is successfully added to the ModelArts image list. You can use this image subsequently. If the image path is invalid, the image format does not meet the requirements, or you do not have the relevant permission, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/images

Table 4-163 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 4-164 Request body parameters

Parameter	Mandatory	Type	Description
arch	No	String	Definition: Processor architecture supported by the image. Constraints: N/A Range: • X86_64: x86 architecture • AARCH64: Arm architecture Default Value: x86_64
description	No	String	Definition: Image description. Constraints: N/A Range: Up to 512 characters Default Value: N/A
origin	No	String	Definition: Image source. This parameter is optional. Constraints: N/A Range: • CUSTOMIZE: custom image • IMAGE_SAVE: image saved by a notebook instance Default Value: CUSTOMIZE
resource_category	No	Array of strings	Definition: Flavor supported by the image. The default value is CPU or GPU . Range: • CPU • GPU • ASCEND Constraints: N/A

Parameter	Mandatory	Type	Description
service_type	No	String	Definition: Supported image types. Constraints: N/A Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified Default Value: UNKNOWN
services	No	Array of strings	Definition: Services supported by the image. The default value is NOTEBOOK or SSH . Range: • NOTEBOOK: You can access a notebook instance using HTTPS. • SSH: You can remotely access a notebook instance from a local IDE through SSH. Constraints: N/A
swr_path	Yes	String	Definition: SWR image path. Constraints: N/A Range: The value can contain 16 to 2,048 characters. The address format is [repository_address[:port]]/[namespace]/[image_name]:[tag]. Default Value: N/A

Parameter	Mandatory	Type	Description
visibility	No	String	Definition: Image visibility. Constraints: N/A Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id. Default Value: PRIVATE
workspace_id	No	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc,hk)If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Constraints: N/A Range: This value must contain 0 or 32 characters. Only digits or lowercase letters are allowed. Default Value: 0
flavor_type	No	String	Definition: Resource type. Constraints: N/A Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip Default Value: N/A

Response Parameters

Status code: 200

Table 4-165 Response body parameters

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • x86_64: x86 architecture • aarch64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A
description	String	Definition: Image description. Range: Up to 512 characters
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND

Parameter	Type	Description
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved

Parameter	Type	Description
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Status code: 201

Created

Example Requests

The following is an example of how to register a custom image whose resource type is **CPU** and architecture is **X86_64**.

```
{
  "description" : "",
  "resource_category" : [ "CPU" ],
  "arch" : "X86_64",
  "swr_path" : "swr.xxx.com/op_svc_modelarts_container2/pytorch_1_8:train-pytorch_1.8.0-cuda_10.2-py_3.7"
}
```

Example Responses

Status code: 200

OK

```
{
  "arch" : "x86_64",
  "create_at" : 1671708630448,
  "description" : "",
  "id" : "708ca95d-c601-4dc7-86b9-670adfd5e818",
}
```

```
"name" : "pytorch_1_8",
"namespace" : "op_svc_modelarts_container2",
"resource_categories" : [ "CPU" ],
"service_type" : "UNKNOWN",
"size" : 3376133259,
"status" : "ACTIVE",
"swr_path" : "swr.xxx.com/op_svc_modelarts_container2/pytorch_1_8:train-pytorch_1.8.0-cuda_10.2-py_3.7",
"tag" : "train-pytorch_1.8.0-cuda_10.2-py_3.7",
"type" : "DEDICATED",
"update_at" : 1671708630448,
"visibility" : "PRIVATE",
"workspace_id" : "0"
}
```

Status Codes

Status Code	Description
200	OK
201	Created
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.23 Querying the User Image List

Function

This API is used to obtain the overview of user image information. Image names are used for aggregation.

This API applies to the following scenario: When you need to manage multiple images or learn basic information about each image, you can use this API to obtain the image list and overview information. Before using this API, ensure that you have the image management permission and the image exists. After a query operation is complete, you can obtain a list of all images. Details about the images can be obtained, including the image name, version, and status. If the image does not exist or you do not have the access permission, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/images/group

Table 4-166 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 4-167 Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Description: Image name Constraints: N/A Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Default Value: N/A
name_fuzzy_match	No	Boolean	Definition: Whether the image name is used for fuzzy match Constraints: N/A Range: The value is of the Boolean type. • true: Fuzzy match is supported. • false: Fuzzy match is not supported. Default Value: true

Parameter	Mandatory	Type	Description
namespace	No	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Constraints: N/A Range: The value can contain a maximum of 64 characters and must start with a lowercase letter. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Default Value: N/A
type	No	String	Definition: Image type Constraints: N/A Range: Enums: • BUILD_IN: built-in system image • DEDICATED: image you have saved Default Value: N/A
workspace_id	No	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. For details about how to obtain the ID, see Querying the Workspace List . Constraints: N/A Range: This value contains 0 or 32 characters. Only digits (0 to 9) or lowercase letters (a to z) are allowed. Default Value: 0

Request Parameters

None

Response Parameters

Status code: 200

Table 4-168 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Range: Positive integers
data	Array of ImageGroup objects	Definition: Image information overview.
pages	Integer	Definition: Total number of pages. Range: Positive integers
size	Integer	Definition: Number of records on each page Range: Positive integers
total	Long	Definition: Total number of records. Range: Non-negative integers

Table 4-169 ImageGroup

Parameter	Type	Description
name	String	Definition: Image name. Range: N/A
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A
namespace	String	Definition: SWR organization to which the image belongs. Range: N/A
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
version_count	Integer	Definition: Number of image versions. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/images/group
```

Example Responses

Status code: 200

OK

```
{
  "current" : 1,
  "data" : [ {
    "create_at" : 1652878011643,
    "name" : "123",
    "namespace" : "cnnorth7-infer-model-dev",
    "update_at" : 1652878531791,
    "version_count" : 1
  }, {
    "create_at" : 1671708630448,
    "name" : "pytorch_1_8",
    "namespace" : "op_svc_modelarts_container2",
    "update_at" : 1671708630448,
    "version_count" : 1
  }, {
    "create_at" : 1671093486722,
    "name" : "mock-service-python",
    "namespace" : "mock-service1",
    "update_at" : 1671093486722,
    "version_count" : 1
  } ],
  "pages" : 1,
  "size" : 3,
  "total" : 3
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.24 Obtaining Details of an Image

Function

This API is used to query image details.

This API applies to the following scenarios: When you need to obtain details about a specified image (such as the image name, version, creation time, size, and status) or perform operations on the image, you can use this API to obtain the image details. Before using this API, ensure that you have the image management permission and the image to be queried is valid and exists. After the query is complete, image details can be obtained, including the image ID, name, version,

creation time, size, and status. If the image does not exist or you do not have the access permission, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/images/{id}

Table 4-170 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: Image ID. The ID is in the format of a Universally Unique Identifier (UUID). Constraints: N/A Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-171 Response body parameters

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • x86_64: x86 architecture • aarch64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A
description	String	Definition: Image description. Range: Up to 512 characters
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND

Parameter	Type	Description
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved

Parameter	Type	Description
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Example Requests

```
GET https://{endpoint}/v1/{project_id}/images/{id}
```

Example Responses

Status code: 200

OK

```
{
  "arch": "x86_64",
  "create_at": 1638234504492,
  "description": "CPU and GPU general algorithm development and training, preconfigured with AI engine PyTorch1.8",
  "id": "278e88d1-5b71-4766-8502-b3ba72e824d9",
  "name": "pytorch1.8-cuda10.2-cudnn7-ubuntu18.04",
  "resource_categories": [ "GPU", "CPU" ],
  "service_type": "COMMON",
  "status": "ACTIVE",
  "swr_path": "swr.xxx.com/atelier/pytorch_1_8:pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64-20220926104358-041ba2e",
  "tag": "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64-20220926104358-041ba2e",
  "type": "BUILD_IN",
  "update_at": 1638234504492,
  "workspace_id": "0"
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

4.25 Deleting an Image

Function

This API is used to delete an image object. For a private image, you can also delete its SWR image content using parameters.

This API applies to the following scenarios: When an image is no longer required, the configuration is incorrect, or resources need to be cleared, you can use this API to delete the specified image object. Before using this API, ensure that the image exists and you have the permission to delete it. After the deletion is complete, the image object is permanently removed, and related resources and configurations are cleared. If the image does not exist, you do not have the operation permission, or the image is being used, the API will return an error message.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/images/{id}

Table 4-172 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: Image ID. The ID is in the format of a Universally Unique Identifier (UUID). Constraints: N/A Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 4-173 Query Parameters

Parameter	Mandatory	Type	Description
force	No	Boolean	Definition: Image content to be deleted from SWR. This parameter is valid only for private images. Constraints: N/A Range: The value is of the Boolean type. • true: The image content is deleted. • false: The image content is not deleted. Default Value: false

Request Parameters

None

Response Parameters

Status code: 200

Table 4-174 Response body parameters

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • x86_64: x86 architecture • aarch64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A
description	String	Definition: Image description. Range: Up to 512 characters
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND

Parameter	Type	Description
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved

Parameter	Type	Description
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Status code: 204

No content

Example Requests

```
DELETE https://{endpoint}/v1/{project_id}/images/{id}
```

Example Responses

Status code: 200

OK

```
{
  "arch": "x86_64",
  "create_at": 1671093486722,
  "description": "",
  "dev_services": [ "NOTEBOOK", "SSH" ],
  "id": "c9ab2b2f-edda-4556-bdbb-494e868d043c",
  "name": "mock-service-python",
  "namespace": "mock-service1",
  "origin": "CUSTOMIZE",
  "resource_categories": [ "CPU" ],
  "service_type": "UNKNOWN",
  "size": 387840321,
  "status": "DELETED",
  "swr_path": "swr.xxx.com/mock-service1/mock-service-python:0.0.17",
```

```
"tag" : "0.0.17",  
"type" : "DEDICATED",  
"update_at" : 1671093486722,  
"visibility" : "PRIVATE",  
"workspace_id" : "0"  
}
```

Status Codes

Status Code	Description
200	OK
204	No content
401	Unauthorized
403	Forbidden

Error Codes

See [Error Codes](#).

4.26 Synchronizing the Image Status

Function

This API is used to correct the abnormal image status. This API is used when you need to synchronize the latest image status when the image status is abnormal due to misoperations, network problems, or system faults. Before using this API, ensure that the image exists and you have the required permission. After the synchronization, the image status is updated to the latest correct status, and related resources and configurations are synchronized. If the image does not exist, you do not have the operation permission, or an error occurs during the synchronization, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/images/{image_id}/sync

Table 4-175 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
image_id	Yes	String	Definition: Image ID. The ID is in the format of a Universally Unique Identifier (UUID). Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-176 Response body parameters

Parameter	Type	Description
arch	String	Definition: Processor architecture supported by the image. Range: • x86_64: x86 architecture • aarch64: Arm architecture
create_at	Long	Definition: UTC time when the image is created, accurate to millisecond. Range: N/A
description	String	Definition: Image description. Range: Up to 512 characters

Parameter	Type	Description
id	String	Definition: ID of the image used for creating notebook instances. The ID is in Universally Unique Identifier (UUID) format. For details, see Querying Supported Images . Range: N/A
name	String	Definition: Image name. Range: The name can contain a maximum of 512 characters. Lowercase letters, digits, hyphens (-), underscores (_), and periods (.) are allowed.
namespace	String	Definition: Organization to which the image belongs. You can create and view an organization on the Organization Management page of the SWR console. Range: N/A
resource_categories	Array of strings	Definition: Flavors supported by the image. Range: • CPU • GPU • ASCEND
service_type	String	Definition: Supported image types. Range: • COMMON: common image • INFERENCE: image used for inference • TRAIN: image used for training • DEV: image used for development and debugging • UNKNOWN: image whose supported services are not specified
size	Long	Definition: Image size, in KB. Range: N/A

Parameter	Type	Description
status	String	Definition: Image status. Range: • INIT: The image is being initialized. • CREATING: The image is being saved. In this case, the notebook instance is unavailable. • CREATE_FAILED: Saving the image failed. • ERROR: An error occurs. • DELETED: The image has been deleted. • ACTIVE: The image has been saved, which you can view on the SWR console and use to create notebook instances.
status_message	String	Definition: Build information during image saving. Range: N/A
swr_path	String	Definition: SWR image path. Range: N/A
tag	String	Definition: Image tag. Range: N/A
type	String	Definition: Image type. Range: • BUILD_IN: built-in system image • DEDICATED: image you have saved
update_at	Long	Definition: Time (UTC) when the image was last updated, accurate to millisecond. Range: N/A
visibility	String	Definition: Image visibility. Range: • PRIVATE: private image • PUBLIC: All users can perform read-only operations based on image_id.
workspace_id	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Range: N/A

Parameter	Type	Description
flavor_type	String	Definition: Resource type of the image. Range: • ASCEND_SNT9: 910 chip • ASCEND_SNT9B: 910B chip • ASCEND_SNT3: 310 chip

Status code: 401**Table 4-177** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 4-178** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 4-179** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

None

Example Responses

Status code: 200

Request succeeded.

```
{
  "arch" : "x86_64",
  "create_at" : 1638234504492,
  "description" : "CPU and GPU general algorithm development and training, preconfigured with AI engine PyTorch1.8",
  "id" : "278e88d1-5b71-4766-8502-b3ba72e824d9",
  "name" : "pytorch1.8-cuda10.2-cudnn7-ubuntu18.04",
  "resource_categories" : [ "GPU", "CPU" ],
  "service_type" : "COMMON",
  "status" : "ACTIVE",
  "swr_path" : "swr.xxx.com/atelier/pytorch_1_8:pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64-20220926104358-041ba2e",
  "tag" : "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64-20220926104358-041ba2e",
  "type" : "BUILD_IN",
  "update_at" : 1638234504492,
  "workspace_id" : "0"
}
```

Status Codes

Status Code	Description
200	Request succeeded.
401	Unauthorized.
403	Forbidden.
404	Not found.

Error Codes

See [Error Codes](#).

5 Training Management

5.1 Creating an Algorithm

Function

This API is used to create an algorithm on ModelArts.

This API applies to the following scenario: When you need to upload a customized algorithm model to the platform and manage it, you can use this API to create an algorithm. Before using this API, ensure that you have prepared the algorithm code and related configuration files and uploaded them to ModelArts, or you have built a custom image and uploaded it to ModelArts. ModelArts adds the algorithm to the algorithm list after verifying that the code path and related configurations are correct. If the algorithm code path or related configurations are incomplete, have wrong format, or you do not have the operation permission, the API will return the corresponding error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/algorithms

Table 5-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 5-2 Request body parameters

Parameter	Mandatory	Type	Description
metadata	No	AlgorithmMetadata object	Definition: Algorithm metadata, which describes basic algorithm information. Constraints: N/A
job_config	No	AlgorithmJobConfig object	Definition: Algorithm configuration, such as the boot file. Constraints: N/A
resource_requirements	No	Array of ResourceRequirement objects	Definition: Algorithm resource constraints. This parameter is optional. After this parameter is set, the console filters available public resource pools when the algorithm is used in training jobs. Constraints: N/A
advanced_config	No	AlgorithmAdvancedConfig object	Definition: Advanced algorithm policy. • auto_search Constraints: N/A

Table 5-3 AlgorithmMetadata

Parameter	Mandatory	Type	Description
id	No	Integer	Definition: Algorithm ID. You do not need to set this parameter when creating an algorithm. Constraints: N/A Range: N/A Default Value: N/A
name	Yes	String	Definition: Algorithm name. Constraints: The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-). Range: N/A Default Value: N/A
description	No	String	Definition: Algorithm description. Constraints: The value must contain 0 to 256 characters. Range: N/A Default Value: NULL
workspace_id	No	String	Definition: Workspace where a specified algorithm is located. Constraints: N/A Range: N/A Default Value: 0, which is the default workspace.
ai_project	No	String	Definition: AI project to which a specified algorithm belongs. The AI project has been brought offline. Ignore it. Constraints: N/A Range: N/A Default Value: default-ai-project

Table 5-4 AlgorithmJobConfig

Parameter	Mandatory	Type	Description
code_dir	No	String	Definition: Algorithm code directory, for example, <code>/usr/app/</code> . Constraints: This parameter must be used with boot_file . Range: N/A Default Value: N/A
boot_file	No	String	Definition: Code boot file of the algorithm, which must be stored in the code directory, for example, <code>/usr/app/boot.py</code> . Constraints: This parameter must be used with code_dir . Range: N/A Default Value: N/A
command	No	String	Definition: Container boot command of a custom image algorithm. Constraints: N/A Range: N/A Default Value: N/A
parameters	No	Array of Parameters objects	Definition: Running parameters of an algorithm. Constraints: N/A
inputs	No	Array of AlgorithmCreateInput objects	Definition: Data input of an algorithm. Constraints: N/A
outputs	No	Array of AlgorithmCreateOutput objects	Definition: Data output of an algorithm. Constraints: N/A
engine	No	AlgorithmCreateEngine object	Definition: Algorithm engine. Constraints: N/A

Parameter	Mandatory	Type	Description
parameters_customization	No	Boolean	Definition: Specifies whether the algorithm allows hyperparameter customization during training job creation. Constraints: N/A Range: • true: allowed • false: not allowed Default Value: N/A

Table 5-5 Parameters

Parameter	Mandatory	Type	Description
name	No	String	Definition: Parameter name. Constraints: N/A Range: N/A Default Value: N/A
value	No	String	Definition: Parameter value. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Parameter description. Constraints: N/A Range: N/A Default Value: N/A
constraint	No	ParametersConstraint object	Definition: Parameter attribute. Constraints: N/A
internationalization	No	Internationalization object	Definition: Internationalization description. Constraints: N/A

Table 5-6 ParametersConstraint

Parameter	Mandatory	Type	Description
type	No	String	Definition: Parameter type. Constraints: N/A Range: N/A Default Value: N/A
editable	No	Boolean	Definition: Whether the parameter can be edited. Constraints: N/A Range: • true: editable • false: Not uneditable Default Value: N/A
required	No	Boolean	Definition: Whether the parameter is mandatory. Constraints: N/A Range: • true: mandatory • false: optional Default Value: N/A
sensitive	No	Boolean	Definition: Whether the parameter is sensitive. This function is unavailable currently. Constraints: N/A Range: • true: sensitive • false: insensitive Default Value: N/A
valid_type	No	String	Definition: Valid type. Constraints: N/A Range: N/A Default Value: N/A
valid_range	No	Array of strings	Definition: Valid range. Constraints: N/A

Table 5-7 I18nDescription

Parameter	Mandatory	Type	Description
language	No	String	Definition: Internationalization language. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Description. Constraints: N/A Range: N/A Default Value: N/A

Table 5-8 AlgorithmCreateInput

Parameter	Mandatory	Type	Description
name	No	String	Definition: Name of the data input channel. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Description of the data input channel. Constraints: N/A Range: N/A Default Value: N/A
remote_constraints	No	Array of RemoteConstraint objects	Definition: Data input constraint. Constraints: N/A

Table 5-9 RemoteConstraint

Parameter	Mandatory	Type	Description
data_type	No	String	Definition: Data input type, including OBS and ModelArts. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
attributes	No	Array of Map<String,String> objects	Definition: Attributes when the data input type is a dataset. Range: • data_format: data format • data_segmentation: data segmentation method • dataset_type: data labeling type Constraints: N/A

Table 5-10 AlgorithmCreateOutput

Parameter	Mandatory	Type	Description
name	Yes	String	Definition: Name of the data output channel. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Description of the data output channel. Constraints: N/A Range: N/A Default Value: N/A

Table 5-11 AlgorithmCreateEngine

Parameter	Mandatory	Type	Description
engine_id	No	String	Definition: Engine ID selected for an algorithm. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
engine_name	No	String	Definition: Engine version name selected for an algorithm. Constraints: If engine_id is specified, leave this parameter blank. Range: N/A Default Value: N/A
engine_version	No	String	Definition: Engine version name selected for an algorithm. Constraints: If engine_id is specified, leave this parameter blank. Range: N/A Default Value: N/A
image_url	No	String	Definition: Custom image URL selected for an algorithm. Constraints: N/A Range: N/A Default Value: N/A

Table 5-12 ResourceRequirement

Parameter	Mandatory	Type	Description
key	No	String	Definition: Resource constraints. Constraints: N/A Range: • flavor_type: flavor type, which can be CPU, Ascend, or GPU. • device_distributed_mode: whether to support multi-card training. The value can be multiple (supported) or singular (not supported). • host_distributed_mode: whether to support distributed training. The value can be multiple (supported) or singular (not supported). Default Value: N/A
values	No	Array of strings	Definition: Value of the resource constraint key. Constraints: N/A
operator	No	String	Definition: Key-value relationship. Constraints: Only the in operation is supported. For example, flavor_type in [CPU,GPU] . Range: N/A Default Value: N/A

Table 5-13 AlgorithmAdvancedConfig

Parameter	Mandatory	Type	Description
auto_search	No	AutoSearch object	Definition: Hyperparameter search policy. Constraints: N/A

Table 5-14 AutoSearch

Parameter	Mandatory	Type	Description
skip_search_params	No	String	Definition: Hyperparameter parameters that need to be skipped. Constraints: N/A Range: N/A Default Value: N/A
reward_attrs	No	Array of RewardAttrs objects	Definition: Search metrics. Constraints: N/A
search_params	No	Array of SearchParams objects	Definition: Search parameters. Constraints: N/A
algo_configs	No	Array of AlgoConfigs objects	Definition: Search algorithm configurations. Constraints: N/A

Table 5-15 RewardAttrs

Parameter	Mandatory	Type	Description
name	No	String	Definition: Metric name. Constraints: N/A Range: N/A Default Value: N/A
mode	No	String	Definition: Search mode. Constraints: N/A Range: • max: A larger metric value is preferred. • min: A smaller metric value is preferred. Default Value: N/A
regex	No	String	Definition: Regular expression of a metric. Constraints: N/A Range: N/A Default Value: N/A

Table 5-16 SearchParams

Parameter	Mandatory	Type	Description
name	No	String	Definition: Hyperparameter name. Constraints: N/A Range: N/A Default Value: N/A
param_type	No	String	Definition: Parameter type. Constraints: N/A Range: • continuous: The hyperparameter is of the continuous type. When an algorithm is used in a training job, continuous hyperparameters are displayed as text boxes on the console. • discrete: The hyperparameter is of the discrete type. When an algorithm is used in a training job, discrete hyperparameters are displayed as drop-down lists on the console. Default Value: N/A
lower_bound	No	String	Definition: Lower bound of the hyperparameter. Constraints: N/A Range: N/A Default Value: N/A
upper_bound	No	String	Definition: Upper bound of the hyperparameter. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
discrete_points_num	No	String	Definition: Number of discrete points of a hyperparameter with continuous values. Constraints: N/A Range: N/A Default Value: N/A
discrete_values	No	Array of strings	Definition: Discrete hyperparameter values. Constraints: N/A

Table 5-17 AlgoConfigs

Parameter	Mandatory	Type	Description
name	No	String	Definition: Search algorithm name. Constraints: N/A Range: N/A Default Value: N/A
params	No	Array of AutoSearchAlgoConfigParameter objects	Definition: Search algorithm parameters. Constraints: N/A

Table 5-18 AutoSearchAlgoConfigParameter

Parameter	Mandatory	Type	Description
key	No	String	Definition: Parameter key. Constraints: N/A Range: N/A Default Value: N/A
value	No	String	Definition: Parameter value. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
type	No	String	Definition: parameter type. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 201

Table 5-19 Response body parameters

Parameter	Type	Description
metadata	metadata object	Definition: Algorithm metadata, which describes basic algorithm information.
job_config	job_config object	Definition: Algorithm configuration, such as the boot file.
resource_requirements	Array of resource_requirements objects	Definition: Algorithm resource constraints. This parameter is optional. After this parameter is set, the console filters available public resource pools when the algorithm is used in training jobs.
advanced_config	advanced_config object	Definition: Advanced algorithm policy. • auto_search

Table 5-20 metadata

Parameter	Type	Description
id	Integer	Definition: Algorithm ID. You do not need to set this parameter when creating an algorithm. Range: N/A
name	String	Definition: Algorithm name. The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-). Range: N/A

Parameter	Type	Description
description	String	Definition: Algorithm description, which consists of 0 to 256 characters. The default value is NULL . Range: N/A
workspace_id	String	Definition: Workspace where a specified algorithm is located. The default value is 0 . 0 is the default workspace. Range: N/A
ai_project	String	Definition: AI project to which a specified algorithm belongs. The default value is default-ai-project . The AI project has been brought offline. Ignore it. Range: N/A
user_name	String	• Definition: Username. Range: N/A
domain_id	String	Definition: Domain ID of a user. Range: N/A
source	String	Definition: Algorithm source type. Range: N/A
api_version	String	Definition: Algorithm API version, which shows whether it is new or old. Range: N/A
is_valid	String	Definition: Algorithm availability. Range: N/A
state	String	Definition: Algorithm status. Range: N/A
tags	Array of Map<String,String> objects	Definition: Algorithm tag.
attr_list	Array of strings	Definition: Algorithm attributes.
version_num	Integer	Definition: Number of algorithm versions. The default value is 0 . Range: N/A
size	Integer	Definition: Algorithm size. Range: N/A

Parameter	Type	Description
create_time	Long	Definition: Algorithm creation timestamp. Range: N/A
update_time	Long	Definition: Algorithm update timestamp. Range: N/A

Table 5-21 job_config

Parameter	Type	Description
code_dir	String	Definition: Algorithm code directory, for example, <code>/usr/app/</code> . This parameter must be used together with boot_file . Range: N/A
boot_file	String	Definition: Code boot file of the algorithm, which must be stored in the code directory, for example, <code>/usr/app/boot.py</code> . This parameter must be used with code_dir . Range: N/A
command	String	Definition: Container boot command of a custom image algorithm. Range: N/A
parameters	Array of ParameterResp objects	Definition: Running parameters of an algorithm.
inputs	Array of inputs objects	Definition: Data input of an algorithm.
outputs	Array of outputs objects	Definition: Data output of an algorithm.
engine	engine object	Definition: Algorithm engine.
code_tree	Array of code_tree objects	Definition: Algorithm directory tree.

Parameter	Type	Description
parameters_customization	Boolean	Definition: Specifies whether the algorithm allows hyperparameter customization during training job creation. Range: • true: allowed • false: not allowed

Table 5-22 ParameterResp

Parameter	Type	Description
name	String	Definition: Parameter name. Range: N/A
value	String	Definition: Parameter value. Range: N/A
description	String	Definition: Parameter description. Range: N/A
constraint	constraint object	Definition: Parameter attribute.
i18n_description	i18n_description object	Definition: Internationalization description.

Table 5-23 constraint

Parameter	Type	Description
type	String	Definition: Parameter type. Range: N/A
editable	Boolean	Definition: Whether the parameter can be edited. Range: • true: editable • false: Not uneditable
required	Boolean	Definition: Whether the parameter is mandatory. Range: • true: mandatory • false: optional

Parameter	Type	Description
sensitive	Boolean	Definition: Whether the parameter is sensitive. This function is unavailable currently. Range: • true: sensitive • false: insensitive
valid_type	String	Definition: Valid type. Range: N/A
valid_range	Array of strings	Definition: Valid range.

Table 5-24 i18n_description

Parameter	Type	Description
language	String	Definition: Internationalization language. The options are as follows: • zh-cn: Chinese • en-us: English](tag:hc,hk) Range: N/A
description	String	Definition: Internationalization language description. Range: N/A

Table 5-25 inputs

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
description	String	Definition: Description of the data input channel. Range: N/A
remote_constraints	Array of remote_constraints objects	Definition: Data input constraint.

Table 5-26 remote_constraints

Parameter	Type	Description
data_type	String	Definition: Data input type, including the data storage location and dataset. Range: N/A
attributes	Array of Map<String,String> objects	Definition: Attributes when the data input type is a dataset. The value can be: • data_format: data format • data_segmentation: data segmentation method • dataset_type: data labeling type

Table 5-27 outputs

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A
description	String	Definition: Description of the data output channel. Range: N/A

Table 5-28 engine

Parameter	Type	Description
engine_id	String	Definition: Engine ID selected for an algorithm. Range: N/A
engine_name	String	Definition: Engine version name selected for an algorithm. If engine_id is specified, leave this parameter blank. Range: N/A
engine_version	String	Definition: Engine version name selected for an algorithm. If engine_id is specified, leave this parameter blank. Range: N/A

Parameter	Type	Description
image_url	String	Definition: Custom image URL selected for an algorithm. Range: N/A

Table 5-29 code_tree

Parameter	Type	Description
name	String	Definition: Name of the current directory in the algorithm directory tree. Range: N/A
children	Object	Definition: Subfiles and subdirectories in the current directory of the algorithm directory tree.

Table 5-30 resource_requirements

Parameter	Type	Description
key	String	Definition: Resource constraints. Range: • flavor_type: Flavor type, which can be CPU, Ascend, or GPU. • device_distributed_mode: Specifies whether to support multi-card training. The value can be multiple (supported) or singular (not supported). • host_distributed_mode: Specifies whether to support distributed training. The value can be multiple (supported) or singular (not supported).
value	Array of strings	Definition: Value of the resource constraint key.
operator	String	Definition: Relationship between keys and values. Currently, only in is supported. For example, flavor_type in [CPU,GPU] . Range: N/A

Table 5-31 advanced_config

Parameter	Type	Description
auto_search	auto_search object	Definition: Hyperparameter search policy.

Table 5-32 auto_search

Parameter	Type	Description
skip_search_params	String	Definition: Hyperparameter parameters that need to be skipped. Range: N/A
reward_attrs	Array of reward_attrs objects	Definition: Search metrics.
search_params	Array of search_params objects	Definition: Search parameters.
algo_configs	Array of algo_configs objects	Definition: Search algorithm configurations.

Table 5-33 reward_attrs

Parameter	Type	Description
name	String	Definition: Metric name. Range: N/A
mode	String	Definition: Search mode. Range: • max: A larger metric value is preferred. • min: A smaller metric value is preferred.
regex	String	Definition: Regular expression of a metric. Range: N/A

Table 5-34 search_params

Parameter	Type	Description
name	String	Definition: Hyperparameter name. Range: N/A
param_type	String	Definition: Parameter type. Range: • continuous: The hyperparameter is of the continuous type. When an algorithm is used in a training job, continuous hyperparameters are displayed as text boxes on the console. • discrete: The hyperparameter is of the discrete type. When an algorithm is used in a training job, discrete hyperparameters are displayed as drop-down lists on the console.
lower_bound	String	Definition: Lower bound of the hyperparameter. Range: N/A
upper_bound	String	Definition: Upper bound of the hyperparameter. Range: N/A
discrete_points_num	String	Definition: Number of discrete points of a hyperparameter with continuous values. Range: N/A
discrete_values	String	Definition: Discrete hyperparameter values. Range: N/A

Table 5-35 algo_configs

Parameter	Type	Description
name	String	Definition: Search algorithm name. Range: N/A
params	Array of AutoSearchAlgorithmConfigParameterResp objects	Definition: Search algorithm parameters.

Table 5-36 AutoSearchAlgoConfigParameterResp

Parameter	Type	Description
key	String	Definition: Parameter key. Range: N/A
value	String	Definition: Parameter value. Range: N/A
type	String	Definition: Parameter type. Range: N/A

Example Requests

The following is an example of how to create an algorithm whose name is **TestModelArtsalgorithm** and description is **This is a ModelArts algorithm**.

POST https://endpoint/v2/{project_id}/algorithms

```
{
  "metadata": {
    "name": "TestModelArtsalgorithm",
    "description": "This is a ModelArts algorithm"
  },
  "advanced_config": {
    "auto_search": {
      "algo_configs": [ {
        "name": "bayes_opt_search",
        "params": [ {
          "key": "kind",
          "value": "ucb",
          "type": "String"
        }, {
          "key": "kappa",
          "value": "2.5",
          "type": "Float"
        }, {
          "key": "xi",
          "value": "0.0",
          "type": "Float"
        }, {
          "key": "num_samples",
          "value": "20",
          "type": "Integer"
        }, {
          "key": "seed",
          "value": "1",
          "type": "Integer"
        }
      ]
    },
    "reward_attrs": [ {
      "name": "max_search",
      "mode": "max",
      "regex": "10.0"
    } ],
    "search_params": [ {
      "name": "test_search",
      "lower_bound": "1",
      "upper_bound": "10"
    } ]
  }
}
```

```
"job_config" : {
  "code_dir" : "/algo-test/pytorch/work1/code/",
  "boot_file" : "/algo-test/pytorch/work1/code/test-pytorch.py",
  "parameters" : [ {
    "name" : "test-parameter",
    "value" : "10",
    "constraint" : {
      "type" : "String",
      "editable" : true,
      "required" : false,
      "sensitive" : false,
      "valid_type" : "None",
      "valid_range" : [ ]
    }
  } ],
  "parameters_customization" : true,
  "inputs" : [ {
    "name" : "data_url",
    "description" : "data source."
  } ],
  "outputs" : [ {
    "name" : "train_url",
    "description" : "model output."
  } ],
  "engine" : {
    "engine_name" : "PyTorch",
    "engine_version" : "PyTorch-1.3.0-python3.6"
  }
}
```

Example Responses

Status code: 201

ok

```
{
  "metadata" : {
    "id" : "2e5451fe-913f-4492-821a-2981031382f7",
    "name" : "TestModelArtsalgorithm",
    "description" : "This is a ModelArts algorithm",
    "create_time" : 1636600721742,
    "workspace_id" : "0",
    "ai_project" : "default-ai-project",
    "user_name" : "",
    "domain_id" : "xxxxxxxxxxxxxxxxxxxxxxxxxxxx",
    "source" : "custom",
    "api_version" : "",
    "is_valid" : true,
    "state" : "",
    "size" : 4791,
    "tags" : null,
    "attr_list" : null,
    "version_num" : 0,
    "update_time" : 0
  },
  "job_config" : {
    "code_dir" : "/algo-test/pytorch/work1/code/",
    "boot_file" : "/algo-test/pytorch/work1/code/test-pytorch.py",
    "command" : "",
    "parameters" : [ {
      "name" : "test-parameter",
      "description" : "",
      "i18n_description" : null,
      "value" : "10",
      "constraint" : {
        "type" : "String",
        "editable" : true,

```

```
{
  "required" : false,
  "sensitive" : false,
  "valid_type" : "None",
  "valid_range" : [ ]
},
{
  "parameters_customization" : true,
  "inputs" : [ {
    "name" : "data_url",
    "description" : "name to translate"
  } ],
  "outputs" : [ {
    "name" : "train_url",
    "description" : "name to translate"
  } ],
  "engine" : {
    "engine_id" : "pytorch-cp36-1.3.0",
    "engine_name" : "PyTorch",
    "engine_version" : "PyTorch-1.3.0-python3.6"
  },
  "code_tree" : {
    "name" : "code/",
    "children" : [ {
      "name" : "test-pytorch.py"
    } ]
  }
},
{
  "resource_requirements" : null,
  "advanced_config" : { }
}
```

Status Codes

Status Code	Description
201	ok

Error Codes

See [Error Codes](#).

5.2 Querying the Algorithm List

Function

This API is used to obtain the list of all algorithms on ModelArts.

This API applies to the following scenarios: When you need to view all available algorithms on the platform, you can call this API to obtain the algorithm list. Before using this API, ensure that you have the permission to view the algorithm list. After the query is complete, the platform returns an algorithm list. Information such as the algorithm name and ID is displayed. If you do not have the permission to perform operations, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/algorithms

Table 5-37 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 5-38 Query Parameters

Parameter	Mandatory	Type	Description
offset	No	Integer	Definition: Offset for querying algorithms Constraints: The minimum value is 0 . For example, if this parameter is set to 1 , the query starts from the second one. Range: N/A Default Value: N/A
limit	No	Integer	Definition: Limit of algorithms to be queried Constraints: The value ranges from 1 to 50. Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
sort_by	No	String	Definition: Metric for sorting algorithms to be queried Constraints: N/A Range: N/A Default Value: <code>create_time</code> is used for sorting by default.
order	No	String	Definition: Order of queried algorithms Constraints: N/A Range: • asc: The queried algorithms are sorted in ascending order. • desc: The queried algorithms are sorted in descending order. Default Value: <code>desc</code>
group_by	No	String	Definition: Condition for grouping the algorithms to be queried Constraints: N/A Range: N/A Default Value: N/A
searches	No	String	Definition: Filter criteria for querying algorithms, for example, fuzzy match by the algorithm name Constraints: N/A Range: N/A Default Value: N/A
workspace_id	No	String	Definition: Workspace ID. Constraints: If no workspaces are available, the default value is <code>0</code> . If a workspace is created and used, use the actual value. For details about how to obtain the ID, see Querying the Workspace List . Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 5-39 Response body parameters

Parameter	Type	Description
total	Integer	Definition: Total number of algorithms of the current user. Range: N/A
count	Integer	Definition: Total number of algorithms that meet the search criteria of the current user. Range: N/A
limit	Integer	Definition: Maximum number of obtained algorithms of the current user. Range: N/A
offset	Integer	Definition: Offset of all algorithm obtained of the current user. Range: N/A
sort_by	String	Definition: Fields used to sort obtained algorithms of the current user. Range: N/A
order	String	Definition: Order of queried algorithms of the current user. Range: • asc: ascending order • desc: descending order.
group_by	String	Definition: Grouping mode of obtained algorithms of the current user. Range: N/A
items	Array of AlgorithmResponse objects	Definition: Details of the algorithms that meet the search criteria of the current user.

Table 5-40 AlgorithmResponse

Parameter	Type	Description
metadata	metadata object	Definition: Algorithm metadata, which describes basic algorithm information.
job_config	job_config object	Definition: Algorithm configuration, such as the boot file.
resource_requirements	Array of resource_requirements objects	Definition: Algorithm resource constraints. This parameter is optional. After this parameter is set, the console filters available public resource pools when the algorithm is used in training jobs.
advanced_config	advanced_config object	Definition: Advanced algorithm policy. • auto_search

Table 5-41 metadata

Parameter	Type	Description
id	Integer	Definition: Algorithm ID. You do not need to set this parameter when creating an algorithm. Range: N/A
name	String	Definition: Algorithm name. The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-). Range: N/A
description	String	Definition: Algorithm description, which consists of 0 to 256 characters. The default value is NULL . Range: N/A
workspace_id	String	Definition: Workspace where a specified algorithm is located. The default value is 0 . 0 is the default workspace. Range: N/A
ai_project	String	Definition: AI project to which a specified algorithm belongs. The default value is default-ai-project . The AI project has been brought offline. Ignore it. Range: N/A

Parameter	Type	Description
user_name	String	Definition: Username. Range: N/A
domain_id	String	Definition: Domain ID of a user. Range: N/A
source	String	Definition: Algorithm source type. Range: N/A
api_version	String	Definition: Algorithm API version, which shows whether it is new or old. Range: N/A
is_valid	String	Definition: Algorithm availability. Range: N/A
state	String	Definition: Algorithm status. Range: N/A
tags	Array of Map<String,String> objects	Definition: Algorithm tag.
attr_list	Array of strings	Definition: Algorithm attributes.
version_num	Integer	Definition: Number of algorithm versions. The default value is 0 . Range: N/A
size	Integer	Definition: Algorithm size. Range: N/A
create_time	Long	Definition: Algorithm creation timestamp. Range: N/A
update_time	Long	Definition: Algorithm update timestamp. Range: N/A

Table 5-42 job_config

Parameter	Type	Description
code_dir	String	Definition: Algorithm code directory, for example, /usr/app/ . This parameter must be used together with boot_file . Range: N/A

Parameter	Type	Description
boot_file	String	Definition: Code boot file of the algorithm, which must be stored in the code directory, for example, <code>/usr/app/boot.py</code> . This parameter must be used with <code>code_dir</code> . Range: N/A
command	String	Definition: Container boot command of a custom image algorithm. Range: N/A
parameters	Array of ParameterResp objects	Definition: Running parameters of an algorithm.
inputs	Array of inputs objects	Definition: Data input of an algorithm.
outputs	Array of outputs objects	Definition: Data output of an algorithm.
engine	engine object	Definition: Algorithm engine.
code_tree	Array of code_tree objects	Definition: Algorithm directory tree.
parameters_customization	Boolean	Definition: Specifies whether the algorithm allows hyperparameter customization during training job creation. Range: • true: allowed • false: not allowed

Table 5-43 ParameterResp

Parameter	Type	Description
name	String	Definition: Parameter name. Range: N/A
value	String	Definition: Parameter value. Range: N/A
description	String	Definition: Parameter description. Range: N/A
constraint	constraint object	Definition: Parameter attribute.

Parameter	Type	Description
i18n_description	i18n_description object	Definition: Internationalization description.

Table 5-44 constraint

Parameter	Type	Description
type	String	Definition: Parameter type. Range: N/A
editable	Boolean	Definition: Whether the parameter can be edited. Range: • true: editable • false: Not uneditable
required	Boolean	Definition: Whether the parameter is mandatory. Range: • true: mandatory • false: optional
sensitive	Boolean	Definition: Whether the parameter is sensitive. This function is unavailable currently. Range: • true: sensitive • false: insensitive
valid_type	String	Definition: Valid type. Range: N/A
valid_range	Array of strings	Definition: Valid range.

Table 5-45 i18n_description

Parameter	Type	Description
language	String	Definition: Internationalization language. The options are as follows: • zh-cn: Chinese • en-us: English](tag:hc,hk) Range: N/A

Parameter	Type	Description
description	String	Definition: Internationalization language description. Range: N/A

Table 5-46 inputs

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
description	String	Definition: Description of the data input channel. Range: N/A
remote_constraints	Array of remote_constraints objects	Definition: Data input constraint.

Table 5-47 remote_constraints

Parameter	Type	Description
data_type	String	Definition: Data input type, including the data storage location and dataset. Range: N/A
attributes	Array of Map<String,String> objects	Definition: Attributes when the data input type is a dataset. The value can be: • data_format: data format • data_segmentation: data segmentation method • dataset_type: data labeling type

Table 5-48 outputs

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A

Parameter	Type	Description
description	String	Definition: Description of the data output channel. Range: N/A

Table 5-49 engine

Parameter	Type	Description
engine_id	String	Definition: Engine ID selected for an algorithm. Range: N/A
engine_name	String	Definition: Engine version name selected for an algorithm. If engine_id is specified, leave this parameter blank. Range: N/A
engine_version	String	Definition: Engine version name selected for an algorithm. If engine_id is specified, leave this parameter blank. Range: N/A
image_url	String	Definition: Custom image URL selected for an algorithm. Range: N/A

Table 5-50 code_tree

Parameter	Type	Description
name	String	Definition: Name of the current directory in the algorithm directory tree. Range: N/A
children	Object	Definition: Subfiles and subdirectories in the current directory of the algorithm directory tree.

Table 5-51 resource_requirements

Parameter	Type	Description
key	String	Definition: Resource constraints. Range: • flavor_type: Flavor type, which can be CPU, Ascend, or GPU. • device_distributed_mode: Specifies whether to support multi-card training. The value can be multiple (supported) or singular (not supported). • host_distributed_mode: Specifies whether to support distributed training. The value can be multiple (supported) or singular (not supported).
value	Array of strings	Definition: Value of the resource constraint key.
operator	String	Definition: Relationship between keys and values. Currently, only in is supported. For example, flavor_type in [CPU,GPU] . Range: N/A

Table 5-52 advanced_config

Parameter	Type	Description
auto_search	auto_search object	Definition: Hyperparameter search policy.

Table 5-53 auto_search

Parameter	Type	Description
skip_search_params	String	Definition: Hyperparameter parameters that need to be skipped. Range: N/A
reward_attrs	Array of reward_attrs objects	Definition: Search metrics.

Parameter	Type	Description
search_params	Array of search_params objects	Definition: Search parameters.
algo_configs	Array of algo_configs objects	Definition: Search algorithm configurations.

Table 5-54 reward_attrs

Parameter	Type	Description
name	String	Definition: Metric name. Range: N/A
mode	String	Definition: Search mode. Range: • max: A larger metric value is preferred. • min: A smaller metric value is preferred.
regex	String	Definition: Regular expression of a metric. Range: N/A

Table 5-55 search_params

Parameter	Type	Description
name	String	Definition: Hyperparameter name. Range: N/A

Parameter	Type	Description
param_type	String	Definition: Parameter type. Range: • continuous: The hyperparameter is of the continuous type. When an algorithm is used in a training job, continuous hyperparameters are displayed as text boxes on the console. • discrete: The hyperparameter is of the discrete type. When an algorithm is used in a training job, discrete hyperparameters are displayed as drop-down lists on the console.
lower_bound	String	Definition: Lower bound of the hyperparameter. Range: N/A
upper_bound	String	Definition: Upper bound of the hyperparameter. Range: N/A
discrete_points_num	String	Definition: Number of discrete points of a hyperparameter with continuous values. Range: N/A
discrete_values	String	Definition: Discrete hyperparameter values. Range: N/A

Table 5-56 algo_configs

Parameter	Type	Description
name	String	Definition: Search algorithm name. Range: N/A
params	Array of AutoSearchAlgoConfigParameterResp objects	Definition: Search algorithm parameters.

Table 5-57 AutoSearchAlgoConfigParameterResp

Parameter	Type	Description
key	String	Definition: Parameter key. Range: N/A
value	String	Definition: Parameter value. Range: N/A
type	String	Definition: Parameter type. Range: N/A

Example Requests

The following shows how to query all algorithms in jobs whose names contain **TestModelArtsalgorithm** and maximum number of algorithms is set to **1**.

GET https://endpoint/v2/{project_id}/algorithms?limit=1&searches=name%3ATestModelArtsalgorithm

Example Responses

Status code: 200

ok

```
{
  "total": 1,
  "count": 1,
  "limit": 1,
  "offset": 0,
  "sort_by": "create_time",
  "order": "desc",
  "group_by": "",
  "items": [ {
    "metadata": {
      "id": "2e5451fe-913f-4492-821a-2981031382f7",
      "name": "TestModelArtsalgorithm",
      "description": "This is a ModelArts algorithm",
      "create_time": 1636600721742,
      "workspace_id": "0",
      "ai_project": "default-ai-project",
      "user_name": "",
      "domain_id": "xxxxxxxxxxxxxxxxxxxxxxxxxxxx",
      "source": "custom",
      "api_version": "",
      "is_valid": true,
      "state": "",
      "size": 4791,
      "tags": null,
      "attr_list": null,
      "version_num": 0,
      "update_time": 0
    },
    "job_config": {
      "code_dir": "/algo-test/pytorch/work1/code/",
      "boot_file": "/algo-test/pytorch/work1/code/test-pytorch.py",
      "command": "",
      "parameters": [ {
        "name": "test-parameter",
        "description": ""
      }
    ]
  }
]
```



```
"i18n_description" : null,
"value" : "10",
"constraint" : {
  "type" : "String",
  "editable" : true,
  "required" : false,
  "sensitive" : false,
  "valid_type" : "None",
  "valid_range" : [ ]
}
}],
"parameters_customization" : true,
"inputs" : [ {
  "name" : "data_url",
  "description" : "name to translate"
} ],
"outputs" : [ {
  "name" : "train_url",
  "description" : "name to translate"
} ],
"engine" : {
  "engine_id" : "pytorch-cp36-1.3.0",
  "engine_name" : "PyTorch",
  "engine_version" : "PyTorch-1.3.0-python3.6"
},
"code_tree" : {
  "name" : "code/",
  "children" : [ {
    "name" : "test-pytorch.py"
  } ]
}
},
"resource_requirements" : null,
"advanced_config" : { }
} ]
}
```

Status Codes

Status Code	Description
200	ok

Error Codes

See [Error Codes](#).

5.3 Querying Algorithm Details

Function

This API is used to obtain the details of a specified algorithm on ModelArts.

This API applies to the following scenario: When you need to view the detailed configuration and attributes of a specific algorithm, you can use this API to obtain the algorithm details. Before using this API, ensure that you have obtained the algorithm ID and have the permission to view algorithm details. After the query is complete, the platform returns the details, including the algorithm name,

description, and version. If the algorithm ID does not exist or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/algorithms/{algorithm_id}

Table 5-58 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
algorithm_id	Yes	String	Definition: Algorithm ID Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 5-59 Response body parameters

Parameter	Type	Description
metadata	metadata object	Definition: Algorithm metadata, which describes basic algorithm information.
job_config	job_config object	Definition: Algorithm configuration, such as the boot file.

Parameter	Type	Description
resource_requirements	Array of resource_requirements objects	Definition: Algorithm resource constraints. This parameter is optional. After this parameter is set, the console filters available public resource pools when the algorithm is used in training jobs.
advanced_config	advanced_config object	Definition: Advanced algorithm policy. • auto_search

Table 5-60 metadata

Parameter	Type	Description
id	Integer	Definition: Algorithm ID. You do not need to set this parameter when creating an algorithm. Range: N/A
name	String	Definition: Algorithm name. The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-). Range: N/A
description	String	Definition: Algorithm description, which consists of 0 to 256 characters. The default value is NULL . Range: N/A
workspace_id	String	Definition: Workspace where a specified algorithm is located. The default value is 0 . 0 is the default workspace. Range: N/A
ai_project	String	Definition: AI project to which a specified algorithm belongs. The default value is default-ai-project . The AI project has been brought offline. Ignore it. Range: N/A
user_name	String	• Definition: Username. Range: N/A
domain_id	String	Definition: Domain ID of a user. Range: N/A

Parameter	Type	Description
source	String	Definition: Algorithm source type. Range: N/A
api_version	String	Definition: Algorithm API version, which shows whether it is new or old. Range: N/A
is_valid	String	Definition: Algorithm availability. Range: N/A
state	String	Definition: Algorithm status. Range: N/A
tags	Array of Map<String,String> objects	Definition: Algorithm tag.
attr_list	Array of strings	Definition: Algorithm attributes.
version_num	Integer	Definition: Number of algorithm versions. The default value is 0 . Range: N/A
size	Integer	Definition: Algorithm size. Range: N/A
create_time	Long	Definition: Algorithm creation timestamp. Range: N/A
update_time	Long	Definition: Algorithm update timestamp. Range: N/A

Table 5-61 job_config

Parameter	Type	Description
code_dir	String	Definition: Algorithm code directory, for example, /usr/app/ . This parameter must be used together with boot_file . Range: N/A

Parameter	Type	Description
boot_file	String	Definition: Code boot file of the algorithm, which must be stored in the code directory, for example, <code>/usr/app/boot.py</code> . This parameter must be used with <code>code_dir</code> . Range: N/A
command	String	Definition: Container boot command of a custom image algorithm. Range: N/A
parameters	Array of ParameterResp objects	Definition: Running parameters of an algorithm.
inputs	Array of inputs objects	Definition: Data input of an algorithm.
outputs	Array of outputs objects	Definition: Data output of an algorithm.
engine	engine object	Definition: Algorithm engine.
code_tree	Array of code_tree objects	Definition: Algorithm directory tree.
parameters_customization	Boolean	Definition: Specifies whether the algorithm allows hyperparameter customization during training job creation. Range: • true: allowed • false: not allowed

Table 5-62 ParameterResp

Parameter	Type	Description
name	String	Definition: Parameter name. Range: N/A
value	String	Definition: Parameter value. Range: N/A
description	String	Definition: Parameter description. Range: N/A
constraint	constraint object	Definition: Parameter attribute.

Parameter	Type	Description
i18n_description	i18n_description object	Definition: Internationalization description.

Table 5-63 constraint

Parameter	Type	Description
type	String	Definition: Parameter type. Range: N/A
editable	Boolean	Definition: Whether the parameter can be edited. Range: • true: editable • false: Not uneditable
required	Boolean	Definition: Whether the parameter is mandatory. Range: • true: mandatory • false: optional
sensitive	Boolean	Definition: Whether the parameter is sensitive. This function is unavailable currently. Range: • true: sensitive • false: insensitive
valid_type	String	Definition: Valid type. Range: N/A
valid_range	Array of strings	Definition: Valid range.

Table 5-64 i18n_description

Parameter	Type	Description
language	String	Definition: Internationalization language. The options are as follows: • zh-cn: Chinese • en-us: English](tag:hc,hk) Range: N/A

Parameter	Type	Description
description	String	Definition: Internationalization language description. Range: N/A

Table 5-65 inputs

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
description	String	Definition: Description of the data input channel. Range: N/A
remote_constraints	Array of remote_constraints objects	Definition: Data input constraint.

Table 5-66 remote_constraints

Parameter	Type	Description
data_type	String	Definition: Data input type, including the data storage location and dataset. Range: N/A
attributes	Array of Map<String,String> objects	Definition: Attributes when the data input type is a dataset. The value can be: • data_format: data format • data_segmentation: data segmentation method • dataset_type: data labeling type

Table 5-67 outputs

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A

Parameter	Type	Description
description	String	Definition: Description of the data output channel. Range: N/A

Table 5-68 engine

Parameter	Type	Description
engine_id	String	Definition: Engine ID selected for an algorithm. Range: N/A
engine_name	String	Definition: Engine version name selected for an algorithm. If engine_id is specified, leave this parameter blank. Range: N/A
engine_version	String	Definition: Engine version name selected for an algorithm. If engine_id is specified, leave this parameter blank. Range: N/A
image_url	String	Definition: Custom image URL selected for an algorithm. Range: N/A

Table 5-69 code_tree

Parameter	Type	Description
name	String	Definition: Name of the current directory in the algorithm directory tree. Range: N/A
children	Object	Definition: Subfiles and subdirectories in the current directory of the algorithm directory tree.

Table 5-70 resource_requirements

Parameter	Type	Description
key	String	Definition: Resource constraints. Range: • flavor_type: Flavor type, which can be CPU, Ascend, or GPU. • device_distributed_mode: Specifies whether to support multi-card training. The value can be multiple (supported) or singular (not supported). • host_distributed_mode: Specifies whether to support distributed training. The value can be multiple (supported) or singular (not supported).
value	Array of strings	Definition: Value of the resource constraint key.
operator	String	Definition: Relationship between keys and values. Currently, only in is supported. For example, flavor_type in [CPU,GPU] . Range: N/A

Table 5-71 advanced_config

Parameter	Type	Description
auto_search	auto_search object	Definition: Hyperparameter search policy.

Table 5-72 auto_search

Parameter	Type	Description
skip_search_parameters	String	Definition: Hyperparameter parameters that need to be skipped. Range: N/A
reward_attrs	Array of reward_attrs objects	Definition: Search metrics.

Parameter	Type	Description
search_params	Array of search_params objects	Definition: Search parameters.
algo_configs	Array of algo_configs objects	Definition: Search algorithm configurations.

Table 5-73 reward_attr

Parameter	Type	Description
name	String	Definition: Metric name. Range: N/A
mode	String	Definition: Search mode. Range: • max: A larger metric value is preferred. • min: A smaller metric value is preferred.
regex	String	Definition: Regular expression of a metric. Range: N/A

Table 5-74 search_params

Parameter	Type	Description
name	String	Definition: Hyperparameter name. Range: N/A

Parameter	Type	Description
param_type	String	Definition: Parameter type. Range: • continuous: The hyperparameter is of the continuous type. When an algorithm is used in a training job, continuous hyperparameters are displayed as text boxes on the console. • discrete: The hyperparameter is of the discrete type. When an algorithm is used in a training job, discrete hyperparameters are displayed as drop-down lists on the console.
lower_bound	String	Definition: Lower bound of the hyperparameter. Range: N/A
upper_bound	String	Definition: Upper bound of the hyperparameter. Range: N/A
discrete_points_num	String	Definition: Number of discrete points of a hyperparameter with continuous values. Range: N/A
discrete_values	String	Definition: Discrete hyperparameter values. Range: N/A

Table 5-75 algo_configs

Parameter	Type	Description
name	String	Definition: Search algorithm name. Range: N/A
params	Array of AutoSearchAlgoConfigParameterResp objects	Definition: Search algorithm parameters.

Table 5-76 AutoSearchAlgoConfigParameterResp

Parameter	Type	Description
key	String	Definition: Parameter key. Range: N/A
value	String	Definition: Parameter value. Range: N/A
type	String	Definition: Parameter type. Range: N/A

Example Requests

The following shows how to query the algorithm whose UUID is **2e5451fe-913f-4492-821a-2981031382f7**.

```
GET https://endpoint/v2/{project_id}/algorithms/2e5451fe-913f-4492-821a-2981031382f7
```

Example Responses

Status code: 200

ok

```
{
  "metadata": {
    "id": "2e5451fe-913f-4492-821a-2981031382f7",
    "name": "TestModelArtsalgorithm",
    "description": "This is a ModelArts algorithm",
    "create_time": 1636600721742,
    "workspace_id": "0",
    "ai_project": "default-ai-project",
    "user_name": "",
    "domain_id": "xxxxxxxxxxxxxxxxxxxxxxxxxxxx",
    "source": "custom",
    "api_version": "",
    "is_valid": true,
    "state": "",
    "size": 4791,
    "tags": null,
    "attr_list": null,
    "version_num": 0,
    "update_time": 0
  },
  "job_config": {
    "code_dir": "/algo-test/pytorch/work1/code/",
    "boot_file": "/algo-test/pytorch/work1/code/test-pytorch.py",
    "command": "",
    "parameters": [ {
      "name": "test-parameter",
      "description": "",
      "i18n_description": null,
      "value": "10",
      "constraint": {
        "type": "String",
        "editable": true,
        "required": false,
        "sensitive": false,
        "valid_type": "None",
```

```
    "valid_range" : [ ]
  },
  },
  "parameters_customization" : true,
  "inputs" : [ {
    "name" : "data_url",
    "description" : "name to translate"
  } ],
  "outputs" : [ {
    "name" : "train_url",
    "description" : "name to translate"
  } ],
  "engine" : {
    "engine_id" : "pytorch-cp36-1.3.0",
    "engine_name" : "PyTorch",
    "engine_version" : "PyTorch-1.3.0-python3.6"
  },
  "code_tree" : {
    "name" : "code/",
    "children" : [ {
      "name" : "test-pytorch.py"
    } ]
  }
},
"resource_requirements" : null,
"advanced_config" : { }
}
```

Status Codes

Status Code	Description
200	ok

Error Codes

See [Error Codes](#).

5.4 Modifying an Algorithm

Function

This API is used to modify the information of an existing algorithm.

This API is used when you need to update the description, tags, and model files of an algorithm. Before using this API, ensure that the algorithm exists and you have the required permission. After the update, the algorithm information is updated, and the related configurations are modified accordingly. If the algorithm does not exist or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v2/{project_id}/algorithms/{algorithm_id}

Table 5-77 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
algorithm_id	Yes	String	Definition: Algorithm ID Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 5-78 Request body parameters

Parameter	Mandatory	Type	Description
metadata	No	AlgorithmMetadata object	Definition: Algorithm metadata, which describes basic algorithm information. Constraints: N/A
job_config	No	AlgorithmJobConfig object	Definition: Algorithm configuration, such as the boot file. Constraints: N/A
resource_requirements	No	Array of ResourceRequirement objects	Definition: Algorithm resource constraints. This parameter is optional. After this parameter is set, the console filters available public resource pools when the algorithm is used in training jobs. Constraints: N/A

Parameter	Mandatory	Type	Description
advanced_config	No	AlgorithmAdvancedConfig object	Definition: Advanced algorithm policy. • auto_search Constraints: N/A

Table 5-79 AlgorithmMetadata

Parameter	Mandatory	Type	Description
id	No	Integer	Definition: Algorithm ID. You do not need to set this parameter when creating an algorithm. Constraints: N/A Range: N/A Default Value: N/A
name	Yes	String	Definition: Algorithm name. Constraints: The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-). Range: N/A Default Value: N/A
description	No	String	Definition: Algorithm description. Constraints: The value must contain 0 to 256 characters. Range: N/A Default Value: NULL
workspace_id	No	String	Definition: Workspace where a specified algorithm is located. Constraints: N/A Range: N/A Default Value: 0, which is the default workspace.

Parameter	Mandatory	Type	Description
ai_project	No	String	Definition: AI project to which a specified algorithm belongs. The AI project has been brought offline. Ignore it. Constraints: N/A Range: N/A Default Value: default-ai-project

Table 5-80 AlgorithmJobConfig

Parameter	Mandatory	Type	Description
code_dir	No	String	Definition: Algorithm code directory, for example, <code>/usr/app/</code> . Constraints: This parameter must be used with boot_file . Range: N/A Default Value: N/A
boot_file	No	String	Definition: Code boot file of the algorithm, which must be stored in the code directory, for example, <code>/usr/app/boot.py</code> . Constraints: This parameter must be used with code_dir . Range: N/A Default Value: N/A
command	No	String	Definition: Container boot command of a custom image algorithm. Constraints: N/A Range: N/A Default Value: N/A
parameters	No	Array of Parameters objects	Definition: Running parameters of an algorithm. Constraints: N/A
inputs	No	Array of AlgorithmCreateInput objects	Definition: Data input of an algorithm. Constraints: N/A

Parameter	Mandatory	Type	Description
outputs	No	Array of AlgorithmCreateOutput objects	Definition: Data output of an algorithm. Constraints: N/A
engine	No	AlgorithmCreateEngine object	Definition: Algorithm engine. Constraints: N/A
parameters_customization	No	Boolean	Definition: Specifies whether the algorithm allows hyperparameter customization during training job creation. Constraints: N/A Range: • true: allowed • false: not allowed Default Value: N/A

Table 5-81 Parameters

Parameter	Mandatory	Type	Description
name	No	String	Definition: Parameter name. Constraints: N/A Range: N/A Default Value: N/A
value	No	String	Definition: Parameter value. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Parameter description. Constraints: N/A Range: N/A Default Value: N/A
constraint	No	ParametersConstraint object	Definition: Parameter attribute. Constraints: N/A
internationalization_description	No	InternationalizationDescription object	Definition: Internationalization description. Constraints: N/A

Table 5-82 ParametersConstraint

Parameter	Mandatory	Type	Description
type	No	String	Definition: Parameter type. Constraints: N/A Range: N/A Default Value: N/A
editable	No	Boolean	Definition: Whether the parameter can be edited. Constraints: N/A Range: • true: editable • false: Not uneditable Default Value: N/A
required	No	Boolean	Definition: Whether the parameter is mandatory. Constraints: N/A Range: • true: mandatory • false: optional Default Value: N/A
sensitive	No	Boolean	Definition: Whether the parameter is sensitive. This function is unavailable currently. Constraints: N/A Range: • true: sensitive • false: insensitive Default Value: N/A
valid_type	No	String	Definition: Valid type. Constraints: N/A Range: N/A Default Value: N/A
valid_range	No	Array of strings	Definition: Valid range. Constraints: N/A

Table 5-83 I18nDescription

Parameter	Mandatory	Type	Description
language	No	String	Definition: Internationalization language. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Description. Constraints: N/A Range: N/A Default Value: N/A

Table 5-84 AlgorithmCreateInput

Parameter	Mandatory	Type	Description
name	No	String	Definition: Name of the data input channel. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Description of the data input channel. Constraints: N/A Range: N/A Default Value: N/A
remote_constraints	No	Array of RemoteConstraint objects	Definition: Data input constraint. Constraints: N/A

Table 5-85 RemoteConstraint

Parameter	Mandatory	Type	Description
data_type	No	String	Definition: Data input type, including OBS and ModelArts. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
attributes	No	Array of Map<String,String> objects	Definition: Attributes when the data input type is a dataset. Range: • data_format: data format • data_segmentation: data segmentation method • dataset_type: data labeling type Constraints: N/A

Table 5-86 AlgorithmCreateOutput

Parameter	Mandatory	Type	Description
name	Yes	String	Definition: Name of the data output channel. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Description of the data output channel. Constraints: N/A Range: N/A Default Value: N/A

Table 5-87 AlgorithmCreateEngine

Parameter	Mandatory	Type	Description
engine_id	No	String	Definition: Engine ID selected for an algorithm. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
engine_name	No	String	Definition: Engine version name selected for an algorithm. Constraints: If engine_id is specified, leave this parameter blank. Range: N/A Default Value: N/A
engine_version	No	String	Definition: Engine version name selected for an algorithm. Constraints: If engine_id is specified, leave this parameter blank. Range: N/A Default Value: N/A
image_url	No	String	Definition: Custom image URL selected for an algorithm. Constraints: N/A Range: N/A Default Value: N/A

Table 5-88 ResourceRequirement

Parameter	Mandatory	Type	Description
key	No	String	Definition: Resource constraints. Constraints: N/A Range: • flavor_type: flavor type, which can be CPU, Ascend, or GPU. • device_distributed_mode: whether to support multi-card training. The value can be multiple (supported) or singular (not supported). • host_distributed_mode: whether to support distributed training. The value can be multiple (supported) or singular (not supported). Default Value: N/A
values	No	Array of strings	Definition: Value of the resource constraint key. Constraints: N/A
operator	No	String	Definition: Key-value relationship. Constraints: Only the in operation is supported. For example, flavor_type in [CPU,GPU] . Range: N/A Default Value: N/A

Table 5-89 AlgorithmAdvancedConfig

Parameter	Mandatory	Type	Description
auto_search	No	AutoSearch object	Definition: Hyperparameter search policy. Constraints: N/A

Table 5-90 AutoSearch

Parameter	Mandatory	Type	Description
skip_search_params	No	String	Definition: Hyperparameter parameters that need to be skipped. Constraints: N/A Range: N/A Default Value: N/A
reward_attrs	No	Array of RewardAttrs objects	Definition: Search metrics. Constraints: N/A
search_params	No	Array of SearchParams objects	Definition: Search parameters. Constraints: N/A
algo_configs	No	Array of AlgoConfigs objects	Definition: Search algorithm configurations. Constraints: N/A

Table 5-91 RewardAttrs

Parameter	Mandatory	Type	Description
name	No	String	Definition: Metric name. Constraints: N/A Range: N/A Default Value: N/A
mode	No	String	Definition: Search mode. Constraints: N/A Range: • max: A larger metric value is preferred. • min: A smaller metric value is preferred. Default Value: N/A
regex	No	String	Definition: Regular expression of a metric. Constraints: N/A Range: N/A Default Value: N/A

Table 5-92 SearchParams

Parameter	Mandatory	Type	Description
name	No	String	Definition: Hyperparameter name. Constraints: N/A Range: N/A Default Value: N/A
param_type	No	String	Definition: Parameter type. Constraints: N/A Range: • continuous: The hyperparameter is of the continuous type. When an algorithm is used in a training job, continuous hyperparameters are displayed as text boxes on the console. • discrete: The hyperparameter is of the discrete type. When an algorithm is used in a training job, discrete hyperparameters are displayed as drop-down lists on the console. Default Value: N/A
lower_bound	No	String	Definition: Lower bound of the hyperparameter. Constraints: N/A Range: N/A Default Value: N/A
upper_bound	No	String	Definition: Upper bound of the hyperparameter. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
discrete_points_num	No	String	Definition: Number of discrete points of a hyperparameter with continuous values. Constraints: N/A Range: N/A Default Value: N/A
discrete_values	No	Array of strings	Definition: Discrete hyperparameter values. Constraints: N/A

Table 5-93 AlgoConfigs

Parameter	Mandatory	Type	Description
name	No	String	Definition: Search algorithm name. Constraints: N/A Range: N/A Default Value: N/A
params	No	Array of AutoSearchAlgoConfigParameter objects	Definition: Search algorithm parameters. Constraints: N/A

Table 5-94 AutoSearchAlgoConfigParameter

Parameter	Mandatory	Type	Description
key	No	String	Definition: Parameter key. Constraints: N/A Range: N/A Default Value: N/A
value	No	String	Definition: Parameter value. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
type	No	String	Definition: parameter type. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 201

Table 5-95 Response body parameters

Parameter	Type	Description
metadata	metadata object	Definition: Algorithm metadata, which describes basic algorithm information.
job_config	job_config object	Definition: Algorithm configuration, such as the boot file.
resource_requirements	Array of resource_requirements objects	Definition: Algorithm resource constraints. This parameter is optional. After this parameter is set, the console filters available public resource pools when the algorithm is used in training jobs.
advanced_config	advanced_config object	Definition: Advanced algorithm policy. • auto_search

Table 5-96 metadata

Parameter	Type	Description
id	Integer	Definition: Algorithm ID. You do not need to set this parameter when creating an algorithm. Range: N/A
name	String	Definition: Algorithm name. The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-). Range: N/A

Parameter	Type	Description
description	String	Definition: Algorithm description, which consists of 0 to 256 characters. The default value is NULL . Range: N/A
workspace_id	String	Definition: Workspace where a specified algorithm is located. The default value is 0 . 0 is the default workspace. Range: N/A
ai_project	String	Definition: AI project to which a specified algorithm belongs. The default value is default-ai-project . The AI project has been brought offline. Ignore it. Range: N/A
user_name	String	• Definition: Username. Range: N/A
domain_id	String	Definition: Domain ID of a user. Range: N/A
source	String	Definition: Algorithm source type. Range: N/A
api_version	String	Definition: Algorithm API version, which shows whether it is new or old. Range: N/A
is_valid	String	Definition: Algorithm availability. Range: N/A
state	String	Definition: Algorithm status. Range: N/A
tags	Array of Map<String,String> objects	Definition: Algorithm tag.
attr_list	Array of strings	Definition: Algorithm attributes.
version_num	Integer	Definition: Number of algorithm versions. The default value is 0 . Range: N/A
size	Integer	Definition: Algorithm size. Range: N/A

Parameter	Type	Description
create_time	Long	Definition: Algorithm creation timestamp. Range: N/A
update_time	Long	Definition: Algorithm update timestamp. Range: N/A

Table 5-97 job_config

Parameter	Type	Description
code_dir	String	Definition: Algorithm code directory, for example, <code>/usr/app/</code> . This parameter must be used together with boot_file . Range: N/A
boot_file	String	Definition: Code boot file of the algorithm, which must be stored in the code directory, for example, <code>/usr/app/boot.py</code> . This parameter must be used with code_dir . Range: N/A
command	String	Definition: Container boot command of a custom image algorithm. Range: N/A
parameters	Array of ParameterResp objects	Definition: Running parameters of an algorithm.
inputs	Array of inputs objects	Definition: Data input of an algorithm.
outputs	Array of outputs objects	Definition: Data output of an algorithm.
engine	engine object	Definition: Algorithm engine.
code_tree	Array of code_tree objects	Definition: Algorithm directory tree.

Parameter	Type	Description
parameters_customization	Boolean	Definition: Specifies whether the algorithm allows hyperparameter customization during training job creation. Range: • true: allowed • false: not allowed

Table 5-98 ParameterResp

Parameter	Type	Description
name	String	Definition: Parameter name. Range: N/A
value	String	Definition: Parameter value. Range: N/A
description	String	Definition: Parameter description. Range: N/A
constraint	constraint object	Definition: Parameter attribute.
i18n_description	i18n_description object	Definition: Internationalization description.

Table 5-99 constraint

Parameter	Type	Description
type	String	Definition: Parameter type. Range: N/A
editable	Boolean	Definition: Whether the parameter can be edited. Range: • true: editable • false: Not uneditable
required	Boolean	Definition: Whether the parameter is mandatory. Range: • true: mandatory • false: optional

Parameter	Type	Description
sensitive	Boolean	Definition: Whether the parameter is sensitive. This function is unavailable currently. Range: • true: sensitive • false: insensitive
valid_type	String	Definition: Valid type. Range: N/A
valid_range	Array of strings	Definition: Valid range.

Table 5-100 i18n_description

Parameter	Type	Description
language	String	Definition: Internationalization language. The options are as follows: • zh-cn: Chinese • en-us: English](tag:hc,hk) Range: N/A
description	String	Definition: Internationalization language description. Range: N/A

Table 5-101 inputs

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
description	String	Definition: Description of the data input channel. Range: N/A
remote_constraints	Array of remote_constraints objects	Definition: Data input constraint.

Table 5-102 remote_constraints

Parameter	Type	Description
data_type	String	Definition: Data input type, including the data storage location and dataset. Range: N/A
attributes	Array of Map<String,String> objects	Definition: Attributes when the data input type is a dataset. The value can be: • data_format: data format • data_segmentation: data segmentation method • dataset_type: data labeling type

Table 5-103 outputs

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A
description	String	Definition: Description of the data output channel. Range: N/A

Table 5-104 engine

Parameter	Type	Description
engine_id	String	Definition: Engine ID selected for an algorithm. Range: N/A
engine_name	String	Definition: Engine version name selected for an algorithm. If engine_id is specified, leave this parameter blank. Range: N/A
engine_version	String	Definition: Engine version name selected for an algorithm. If engine_id is specified, leave this parameter blank. Range: N/A

Parameter	Type	Description
image_url	String	Definition: Custom image URL selected for an algorithm. Range: N/A

Table 5-105 code_tree

Parameter	Type	Description
name	String	Definition: Name of the current directory in the algorithm directory tree. Range: N/A
children	Object	Definition: Subfiles and subdirectories in the current directory of the algorithm directory tree.

Table 5-106 resource_requirements

Parameter	Type	Description
key	String	Definition: Resource constraints. Range: • flavor_type: Flavor type, which can be CPU, Ascend, or GPU. • device_distributed_mode: Specifies whether to support multi-card training. The value can be multiple (supported) or singular (not supported). • host_distributed_mode: Specifies whether to support distributed training. The value can be multiple (supported) or singular (not supported).
value	Array of strings	Definition: Value of the resource constraint key.
operator	String	Definition: Relationship between keys and values. Currently, only in is supported. For example, flavor_type in [CPU,GPU] . Range: N/A

Table 5-107 advanced_config

Parameter	Type	Description
auto_search	auto_search object	Definition: Hyperparameter search policy.

Table 5-108 auto_search

Parameter	Type	Description
skip_search_params	String	Definition: Hyperparameter parameters that need to be skipped. Range: N/A
reward_attrs	Array of reward_attrs objects	Definition: Search metrics.
search_params	Array of search_params objects	Definition: Search parameters.
algo_configs	Array of algo_configs objects	Definition: Search algorithm configurations.

Table 5-109 reward_attrs

Parameter	Type	Description
name	String	Definition: Metric name. Range: N/A
mode	String	Definition: Search mode. Range: • max: A larger metric value is preferred. • min: A smaller metric value is preferred.
regex	String	Definition: Regular expression of a metric. Range: N/A

Table 5-110 search_params

Parameter	Type	Description
name	String	Definition: Hyperparameter name. Range: N/A
param_type	String	Definition: Parameter type. Range: • continuous: The hyperparameter is of the continuous type. When an algorithm is used in a training job, continuous hyperparameters are displayed as text boxes on the console. • discrete: The hyperparameter is of the discrete type. When an algorithm is used in a training job, discrete hyperparameters are displayed as drop-down lists on the console.
lower_bound	String	Definition: Lower bound of the hyperparameter. Range: N/A
upper_bound	String	Definition: Upper bound of the hyperparameter. Range: N/A
discrete_points_num	String	Definition: Number of discrete points of a hyperparameter with continuous values. Range: N/A
discrete_values	String	Definition: Discrete hyperparameter values. Range: N/A

Table 5-111 algo_configs

Parameter	Type	Description
name	String	Definition: Search algorithm name. Range: N/A
params	Array of AutoSearchAlgorithmConfigParameterResp objects	Definition: Search algorithm parameters.

Table 5-112 AutoSearchAlgoConfigParameterResp

Parameter	Type	Description
key	String	Definition: Parameter key. Range: N/A
value	String	Definition: Parameter value. Range: N/A
type	String	Definition: Parameter type. Range: N/A

Example Requests

The following shows how to modify the algorithm whose UUID is **2e5451fe-913f-4492-821a-2981031382f7**.

PUT https://endpoint/v2/{project_id}/algorithms/2e5451fe-913f-4492-821a-2981031382f7

```
{
  "metadata": {
    "name": "TestModelArtsalgorithm",
    "description": "This is a ModelArts algorithm modified"
  },
  "job_config": {
    "code_dir": "/algo-test/pytorch/work1/code/",
    "boot_file": "/algo-test/pytorch/work1/code/test-pytorch.py",
    "parameters": [ {
      "name": "test-parameter",
      "value": "10",
      "constraint": {
        "type": "String",
        "editable": true,
        "required": false,
        "sensitive": false,
        "valid_type": "None",
        "valid_range": [ ]
      }
    } ],
    "parameters_customization": true,
    "inputs": [ {
      "name": "data_url",
      "description": "data source."
    } ],
    "outputs": [ {
      "name": "train_url",
      "description": "model output."
    } ],
    "engine": {
      "engine_name": "PyTorch",
      "engine_version": "PyTorch-1.3.0-python3.6"
    }
  }
}
```

Example Responses

Status code: 201

ok

```
{
  "metadata": {
    "id": "2e5451fe-913f-4492-821a-2981031382f7",
    "name": "TestModelArtsalgorithm",
    "description": "This is a ModelArts algorithm modified",
    "create_time": 1636600721742,
    "workspace_id": "0",
    "ai_project": "default-ai-project",
    "user_name": "",
    "domain_id": "xxxxxxxxxxxxxxxxxxxxxxxx",
    "source": "custom",
    "api_version": "",
    "is_valid": true,
    "state": "",
    "size": 4791,
    "tags": null,
    "attr_list": null,
    "version_num": 0,
    "update_time": 0
  },
  "job_config": {
    "code_dir": "/algo-test/pytorch/work1/code/",
    "boot_file": "/algo-test/pytorch/work1/code/test-pytorch.py",
    "command": "",
    "parameters": [ {
      "name": "test-parameter",
      "description": "",
      "i18n_description": null,
      "value": "10",
      "constraint": {
        "type": "String",
        "editable": true,
        "required": false,
        "sensitive": false,
        "valid_type": "None",
        "valid_range": [ ]
      }
    } ],
    "parameters_customization": true,
    "inputs": [ {
      "name": "data_url",
      "description": "name to translate"
    } ],
    "outputs": [ {
      "name": "train_url",
      "description": "name to translate"
    } ],
    "engine": {
      "engine_id": "pytorch-cp36-1.3.0",
      "engine_name": "PyTorch",
      "engine_version": "PyTorch-1.3.0-python3.6"
    },
    "code_tree": {
      "name": "code/",
      "children": [ {
        "name": "test-pytorch.py"
      } ]
    }
  },
  "resource_requirements": null,
  "advanced_config": { }
}
```

Status Codes

Status Code	Description
201	ok

Error Codes

See [Error Codes](#).

5.5 Deleting an Algorithm

Function

This API is used to remove a registered algorithm from ModelArts.

This API applies to the following scenarios: When you need to delete an algorithm that is no longer used, you can use this API to do so. Before using this API, ensure that the algorithm exists and you have the permission to delete it. After the deletion is complete, the algorithm is permanently removed from the platform. If the algorithm ID does not exist or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v2/{project_id}/algorithms/{algorithm_id}

Table 5-113 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
algorithm_id	Yes	String	Definition: Algorithm ID Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 202

No Content

None

Example Requests

The following shows how to modify the algorithm whose UUID is **2e5451fe-913f-4492-821a-2981031382f7**.

```
DELETE https://endpoint/v2/{project_id}/algorithms/2e5451fe-913f-4492-821a-2981031382f7
```

Example Responses

Status code: 202

No Content

```
null
```

Status Codes

Status Code	Description
202	No Content

Error Codes

See [Error Codes](#).

5.6 Creating a Training Job

Function

This API is used to create a training job on ModelArts.

This API applies to the following scenarios: When you need to perform machine learning training based on specific datasets and algorithm models, you can use this API to create and configure a training job. Before using this API, ensure that you have uploaded datasets and model code to ModelArts and have the permission to create training jobs. After a training job is created, the platform starts the training job based on the configured resource specifications. You can monitor the training progress and status by using the job ID. If the dataset or model code does not exist, the resource specifications are incorrectly configured, or you do not have the required permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/training-jobs

Table 5-114 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 5-115 Request body parameters

Parameter	Mandatory	Type	Description
kind	Yes	String	Definition: Type of a training job. Constraints: N/A Range • job: common job • federated_pool_job: resource pool federated job • edge_job: edge job • hetero_job: heterogeneous job • mrs_job: MRS job • autosearch_job: auto search job • diag_job: diagnosis job • visualization_job: visualization job Default Value: job
metadata	Yes	JobMetadata object	Definition: Training job metadata. Constraints: N/A
algorithm	No	JobAlgorithm object	Definition: Training job algorithm. Constraints: The options are as follows. • id: Only the algorithm ID is used. • subscription_id+item_version_id: The subscription ID and version ID of the algorithm are used. • code_dir+boot_file: The code directory and boot file of the training job are used.
tasks	No	Array of Task objects	Definition: Task list. This function is not implemented. Constraints: N/A

Parameter	Mandatory	Type	Description
spec	No	Spec object	Definition: Training job specifications. If this parameter is specified, leave the tasks parameter blank. Constraints: N/A
endpoints	No	JobEndpointsReq object	Definition: Configurations required for remotely accessing a training job. Constraints: N/A

Table 5-116 JobMetadata

Parameter	Mandatory	Type	Description
name	Yes	String	Definition: Name of a training job. Constraints: N/A Range: The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-). Default Value: N/A
workspace_id	No	String	Definition: Workspace where a specified job is located. Constraints: N/A Range: N/A Default Value: 0
description	No	String	Definition: Definition of a training job. Constraints: The value must contain 0 to 256 characters. Range: N/A Default Value: NULL

Parameter	Mandatory	Type	Description
annotations	No	Map<String,String>	Definition: Advanced functions of a training job. Constraints: The value can be: • job_template: Template RL (heterogeneous job) • fault-tolerance/job-retry-num: 3 (number of retries upon a fault) • fault-tolerance/job-unconditional-retry: true (unconditional restart) • fault-tolerance/hang-retry: true (restart upon suspension) • jupyter-lab/enable: true (JupyterLab training application) • tensorboard/enable: true (TensorBoard training application) • mindstudio-insight/enable: true (MindStudio Insight training application) • fault-tolerance/hccl_op_retry: true (operator retry)

Table 5-117 JobAlgorithm

Parameter	Mandatory	Type	Description
id	No	String	Definition: Algorithm ID in algorithm management. Constraints: N/A Range: N/A Default Value: N/A
name	No	String	Definition: Algorithm name. Leave it blank. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
subscription_id	No	String	Definition: Subscription ID of a subscription algorithm. Constraints: This parameter must be used with item_version_id . Range: N/A Default Value: N/A
item_version_id	No	String	Definition: Version of a subscription algorithm. Constraints: This parameter must be used with subscription_id . Range: N/A Default Value: N/A
code_dir	No	String	Definition: Code directory of a training job, for example, /usr/app/ . Constraints: This parameter must be used with boot_file . Leave this parameter blank if id , or subscription_id and item_version_id are specified. Range: N/A Default Value: N/A
boot_file	No	String	Definition: Boot file of a training job, which must be stored in the code directory, for example, /usr/app/boot.py . Constraints: This parameter must be used with code_dir . Leave this parameter blank if id , or subscription_id and item_version_id are specified. Range: N/A Default Value: N/A
autosearch_config_path	No	String	Definition: YAML configuration path of an auto search job. An OBS URL is required. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
autosearch_framework_path	No	String	Definition: Framework code directory of an auto search job. An OBS URL is required. Constraints: N/A Range: N/A Default Value: N/A
command	No	String	Definition: Command for starting the custom image container of a training job. Constraints: N/A Range: N/A Default Value: N/A
parameters	No	Array of Parameters objects	Definition: Running parameters of the training job. Constraints: N/A
policies	No	JobPolicies object	Definition: Policies supported by jobs, which are used for hyperparameter search. Constraints: N/A
inputs	No	Array of Input objects	Definition: Data input of a training job. Constraints: N/A
outputs	No	Array of Output objects	Definition: Output of the training job. Constraints: N/A
engine	No	JobEngine object	Definition: Engine of a training job. Constraints: Leave this parameter blank if the job is created using id of the algorithm in algorithm management, or subscription_id +item_version_id of the subscribed algorithm.

Parameter	Mandatory	Type	Description
local_code_dir	No	String	Definition: Local directory of the training container to which the algorithm code directory is downloaded. Constraints • The directory must be under /home. • In v1 compatibility mode, the current field does not take effect. • When code_dir is prefixed with file://, the current field does not take effect. • The directory cannot be set to /home/ma-user/modelarts, /home/ma-user/modelarts-dev, /home/ma-user/infer, or their subdirectories, and cannot be set to /home/ma-user. Range: N/A Default Value: N/A
working_dir	No	String	Definition: Work directory where an algorithm is executed. Constraints: In v1 compatibility mode, the current field does not take effect. Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
environments	No	Map<String,String>	Definition: Environment variables of a training job. Format: "key":"value" Constraints: The key can contain a maximum of 8,192 characters, and the value can contain a maximum of 4,096 characters. A maximum of 100 key-value pairs are allowed. The variable name can contain only letters, digits, and underscores (<code>_</code>), and must start with a letter or underscore (<code>_</code>). Note: Variables cannot contain \$.
summary	No	Summary object	Definition: Visualization log summary. Constraints: N/A

Table 5-118 Parameters

Parameter	Mandatory	Type	Description
name	No	String	Definition: Parameter name. Constraints: N/A Range: N/A Default Value: N/A
value	No	String	Definition: Parameter value. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Parameter description. Constraints: N/A Range: N/A Default Value: N/A
constraint	No	ParametersConstraint object	Definition: Parameter attribute. Constraints: N/A

Parameter	Mandatory	Type	Description
i18n_description	No	I18nDescription object	Definition: Internationalization description. Constraints: N/A

Table 5-119 ParametersConstraint

Parameter	Mandatory	Type	Description
type	No	String	Definition: Parameter type. Constraints: N/A Range: N/A Default Value: N/A
editable	No	Boolean	Definition: Whether the parameter can be edited. Constraints: N/A Range: • true: editable • false: Not uneditable Default Value: N/A
required	No	Boolean	Definition: Whether the parameter is mandatory. Constraints: N/A Range: • true: mandatory • false: optional Default Value: N/A
sensitive	No	Boolean	Definition: Whether the parameter is sensitive. This function is unavailable currently. Constraints: N/A Range: • true: sensitive • false: insensitive Default Value: N/A
valid_type	No	String	Definition: Valid type. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
valid_range	No	Array of strings	Definition: Valid range. Constraints: N/A

Table 5-120 I18nDescription

Parameter	Mandatory	Type	Description
language	No	String	Definition: Internationalization language. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Description. Constraints: N/A Range: N/A Default Value: N/A

Table 5-121 JobPolicies

Parameter	Mandatory	Type	Description
auto_search	No	AutoSearch object	Definition: Hyperparameter search configuration. Constraints: N/A

Table 5-122 AutoSearch

Parameter	Mandatory	Type	Description
skip_search_params	No	String	Definition: Hyperparameter parameters that need to be skipped. Constraints: N/A Range: N/A Default Value: N/A
reward_attrs	No	Array of RewardAttrs objects	Definition: Search metrics. Constraints: N/A

Parameter	Mandatory	Type	Description
search_parameters	No	Array of SearchParameters objects	Definition: Search parameters. Constraints: N/A
algo_configs	No	Array of AlgoConfigs objects	Definition: Search algorithm configurations. Constraints: N/A

Table 5-123 RewardAttrs

Parameter	Mandatory	Type	Description
name	No	String	Definition: Metric name. Constraints: N/A Range: N/A Default Value: N/A
mode	No	String	Definition: Search mode. Constraints: N/A Range: • max: A larger metric value is preferred. • min: A smaller metric value is preferred. Default Value: N/A
regex	No	String	Definition: Regular expression of a metric. Constraints: N/A Range: N/A Default Value: N/A

Table 5-124 SearchParams

Parameter	Mandatory	Type	Description
name	No	String	Definition: Hyperparameter name. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
param_type	No	String	Definition: Parameter type. Constraints: N/A Range: • continuous: The hyperparameter is of the continuous type. When an algorithm is used in a training job, continuous hyperparameters are displayed as text boxes on the console. • discrete: The hyperparameter is of the discrete type. When an algorithm is used in a training job, discrete hyperparameters are displayed as drop-down lists on the console. Default Value: N/A
lower_bound	No	String	Definition: Lower bound of the hyperparameter. Constraints: N/A Range: N/A Default Value: N/A
upper_bound	No	String	Definition: Upper bound of the hyperparameter. Constraints: N/A Range: N/A Default Value: N/A
discrete_points_num	No	String	Definition: Number of discrete points of a hyperparameter with continuous values. Constraints: N/A Range: N/A Default Value: N/A
discrete_values	No	Array of strings	Definition: Discrete hyperparameter values. Constraints: N/A

Table 5-125 AlgoConfigs

Parameter	Mandatory	Type	Description
name	No	String	Definition: Search algorithm name. Constraints: N/A Range: N/A Default Value: N/A
params	No	Array of AutoSearchAlgoConfigParameter objects	Definition: Search algorithm parameters. Constraints: N/A

Table 5-126 AutoSearchAlgoConfigParameter

Parameter	Mandatory	Type	Description
key	No	String	Definition: Parameter key. Constraints: N/A Range: N/A Default Value: N/A
value	No	String	Definition: Parameter value. Constraints: N/A Range: N/A Default Value: N/A
type	No	String	Definition: parameter type. Constraints: N/A Range: N/A Default Value: N/A

Table 5-127 JobEngine

Parameter	Mandatory	Type	Description
engine_id	No	String	Definition: Engine ID selected for a training job. Constraints: The value can be engine_id , engine_name + engine_version , or image_url . Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
engine_name	No	String	Definition: Engine name selected for a training job. Constraints: If engine_id has been set, you do not need to set this parameter. If you use a preset framework and custom image to create a training job, you must set both this parameter and image_url . Range: N/A Default Value: N/A
engine_version	No	String	Definition: Engine version selected for a training job. Constraints: If engine_id has been set, you do not need to set this parameter. Range: N/A Default Value: N/A
image_url	No	String	Definition: Custom image URL selected for a training job. The URL is obtained from SWR. Constraints: The format is organization_name/image_name:tag. Range: N/A Default Value: N/A
install_sys_packages	No	Boolean	Definition: Specifies whether to install the MoXing version specified by the training platform. Constraints: This parameter is available only when engine_name , engine_version , and image_url are set. Range: • true: yes • false: no Default Value: N/A

Table 5-128 Summary

Parameter	Mandatory	Type	Description
log_type	No	String	Definition: Visualization log type of a training job. After this parameter is configured, the training job can be used as the data source of a visualization job. Constraints: N/A Range: • tensorboard: TensorBoard • mindstudio-insight: MindStudio Insight Default Value: N/A
log_dir	No	LogDir object	Definition: Visualization log output of a training job. Constraints: This parameter is mandatory when log_type is not left empty.
data_sources	No	Array of DataSource objects	Definition: Visualization log input of the visualization job or training job debugging mode. Constraints: This parameter is mandatory when the advanced function " tensorboard/enable ": " true " or " mindstudio-insight/enable ": " true " is enabled for the training job.

Table 5-129 LogDir

Parameter	Mandatory	Type	Description
pfs	Yes	PFSSummary object	Definition: Output of an OBS parallel file system. Constraints: N/A

Table 5-130 PFSSummary

Parameter	Mandatory	Type	Description
pfs_path	Yes	String	Definition: URL of the OBS parallel file system. Constraints: N/A Range: N/A Default Value: N/A

Table 5-131 DataSource

Parameter	Mandatory	Type	Description
job	Yes	JobSummary object	Definition: Job data source. Constraints: N/A

Table 5-132 JobSummary

Parameter	Mandatory	Type	Description
job_id	Yes	String	Definition: ID of a training job. Constraints: N/A Range: N/A Default Value: N/A

Table 5-133 Task

Parameter	Mandatory	Type	Description
role	No	String	Definition: Task role. This function is not supported currently. Constraints: N/A Range: N/A Default Value: N/A
algorithm	No	algorithm object	Definition: Algorithm configurations for algorithm management. Constraints: N/A

Parameter	Mandatory	Type	Description
task_resource	No	task_resource object	Definition: Resource flavor of a training job. Constraints: N/A
log_export_path	No	log_export_path object	Definition: Saved information about training job logs. Constraints: N/A

Table 5-134 algorithm

Parameter	Mandatory	Type	Description
job_config	No	job_config object	Definition: Algorithm configuration, such as the boot file. Constraints: N/A
code_dir	No	String	Definition: Algorithm code directory, for example, <code>/usr/app/</code> . Constraints: This parameter must be used with boot_file . Range: N/A Default Value: N/A
boot_file	No	String	Definition: Code boot file of the algorithm, which must be stored in the code directory, for example, <code>/usr/app/boot.py</code> . Constraints: This parameter must be used with code_dir . Range: N/A Default Value: N/A
engine	No	engine object	Definition: Algorithm engine of a heterogeneous job. Constraints: N/A
inputs	No	Array of inputs objects	Definition: Data input of an algorithm. Constraints: N/A
outputs	No	Array of outputs objects	Definition: Data output of an algorithm. Constraints: N/A

Parameter	Mandatory	Type	Description
local_code_dir	No	String	Definition: Local directory of the training container to which the algorithm code directory is downloaded. Constraints: • The directory must be under /home. • In v1 compatibility mode, the current field does not take effect. • When code_dir is prefixed with file://, the current field does not take effect. Range: N/A Default Value: N/A
working_dir	No	String	Definition: Work directory where an algorithm is executed. Constraints: In v1 compatibility mode, the current field does not take effect. Range: N/A Default Value: N/A
environments	No	Map<String,String>	Definition: Environment variables of a training job. Constraints: N/A Range: N/A Default Value: N/A

Table 5-135 job_config

Parameter	Mandatory	Type	Description
parameters	No	Array of Parameter objects	Definition: Running parameters of an algorithm. Constraints: N/A
inputs	No	Array of Input objects	Definition: Data input of an algorithm. Constraints: N/A

Parameter	Mandatory	Type	Description
outputs	No	Array of Output objects	Definition: Data output of an algorithm. Constraints: N/A
engine	No	engine object	Definition: Algorithm engine. Constraints: N/A

Table 5-136 Parameter

Parameter	Mandatory	Type	Description
name	No	String	Definition: Parameter name. Constraints: N/A Range: N/A Default Value: N/A
value	No	String	Definition: Parameter value. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Parameter description. Constraints: N/A Range: N/A Default Value: N/A
constraint	No	constraint object	Definition: Parameter attribute. Constraints: N/A
i18n_description	No	i18n_description object	Definition: Internationalization description. Constraints: N/A

Table 5-137 constraint

Parameter	Mandatory	Type	Description
type	No	String	Definition: Parameter type. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
editable	No	Boolean	Definition: Whether the parameter can be edited. Constraints: N/A Range: • true: editable • false: Not uneditable Default Value: N/A
required	No	Boolean	Definition: Whether the parameter is mandatory. Constraints: N/A Range: • true: mandatory • false: optional Default Value: N/A
sensitive	No	Boolean	Definition: Whether the parameter is sensitive. Constraints: This function is unavailable currently. Range: • true: sensitive • false: insensitive Default Value: N/A
valid_type	No	String	Definition: Valid type. Constraints: N/A Range: N/A Default Value: N/A
valid_range	No	Array of strings	Definition: Valid range. Constraints: N/A

Table 5-138 i18n_description

Parameter	Mandatory	Type	Description
language	No	String	Definition: Internationalization language. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
description	No	String	Definition: Internationalization language description. Constraints: N/A Range: N/A Default Value: N/A

Table 5-139 Input

Parameter	Mandatory	Type	Description
name	Yes	String	Definition: Name of the data input channel. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Description of the data input channel. Constraints: N/A Range: N/A Default Value: N/A
local_dir	No	String	Definition: Local path of the container to which the data input channels are mapped. Example: <code>/home/ma-user/modelarts/inputs/data_url_0</code> Constraints: N/A Range: N/A Default Value: N/A
access_method	No	String	Definition: Access method of the input data channel path (<code>local_dir</code>). Constraints: N/A Range: • parameter: hyperparameters • env: environment variables Default Value: <code>parameter</code>

Parameter	Mandatory	Type	Description
remote	Yes	InputDataInfo object	Definition: Description of the actual data input. Constraints: The options are as follows. • dataset: The data input is a dataset. • obs: The data input is an OBS path.
remote_constraint	No	Array of remote_constraint objects	Definition: Data input constraint. Constraints: N/A

Table 5-140 InputDataInfo

Parameter	Mandatory	Type	Description
dataset	No	dataset object	Definition: The input is a dataset. Constraints: N/A
obs	No	obs object	Definition: OBS in which data input and output are stored. Constraints: N/A

Table 5-141 dataset

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: Dataset ID of a training job. Constraints: N/A Range: N/A Default Value: N/A
version_id	Yes	String	Definition: Dataset version ID of a training job. Constraints: N/A Range: N/A Default Value: N/A

Table 5-142 obs

Parameter	Mandatory	Type	Description
obs_url	Yes	String	Definition: OBS URL of the dataset for a training job, For example, <code>/usr/data/</code> . Constraints: N/A Range: N/A Default Value: N/A

Table 5-143 remote_constraint

Parameter	Mandatory	Type	Description
data_type	No	String	Definition: Data input type, including the data storage location and dataset. Constraints: N/A Range: N/A Default Value: N/A
attributes	No	String	Definition: Related attributes. Constraints: N/A Range: If the input is a dataset: • data_format: data format • data_segmentation: data segmentation method • dataset_type: data labeling type Default Value: N/A

Table 5-144 Output

Parameter	Mandatory	Type	Description
name	Yes	String	Definition: Name of the data output channel. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
description	No	String	Definition: Description of the data output channel. Constraints: N/A Range: N/A Default Value: N/A
local_dir	No	String	Definition: Local path of the container to which the data output channels are mapped. Constraints: N/A Range: N/A Default Value: N/A
access_method	No	String	Definition: Access method of the output data channel path (local_dir). Constraints: N/A Range: • parameter: hyperparameters • env: environment variables Default Value: parameter
remote	Yes	Remote object	Definition: Description of the actual data output. Constraints: N/A

Table 5-145 Remote

Parameter	Mandatory	Type	Description
obs	Yes	RemoteObs object	Definition: Data actually output to OBS. Constraints: N/A

Table 5-146 RemoteObs

Parameter	Mandatory	Type	Description
obs_url	Yes	String	Definition: Path of the data output to OBS. Constraints: N/A Range: N/A Default Value: N/A

Table 5-147 engine

Parameter	Mandatory	Type	Description
engine_id	No	String	Definition: Engine ID selected for an algorithm. Constraints: N/A Range: N/A Default Value: N/A
engine_name	No	String	Definition: Engine name selected for an algorithm. Constraints: If engine_id is specified, leave this parameter blank. Range: N/A Default Value: N/A
engine_version	No	String	Definition: Engine version selected for an algorithm. Constraints: If engine_id is specified, leave this parameter blank. Range: N/A Default Value: N/A
image_url	No	String	Definition: Custom image URL selected for an algorithm. Constraints: N/A Range: N/A Default Value: N/A

Table 5-148 engine

Parameter	Mandatory	Type	Description
engine_id	No	String	Definition: ID of the engine flavor of a heterogeneous job, for example, caffe-1.0.0-python2.7 . Constraints: N/A Range: N/A Default Value: N/A
engine_name	No	String	Definition: Name of the engine flavor of a heterogeneous job, for example, Caffe . Constraints: N/A Range: N/A Default Value: N/A
engine_version	No	String	Definition: Version of the engine flavor of a heterogeneous job. Constraints: N/A Range: N/A Default Value: N/A
image_url	No	String	Definition: Custom image URL selected for an algorithm. Constraints: N/A Range: N/A Default Value: N/A
run_user	No	String	Definition: Container image startup user. The default value is 1000. This parameter can be configured only when a custom image is used. Constraints: N/A Range: N/A Default Value: N/A

Table 5-149 inputs

Parameter	Mandatory	Type	Description
name	Yes	String	Definition: Name of the data input channel. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Description of the data input channel. Constraints: N/A Range: N/A Default Value: N/A
local_dir	No	String	Definition: Local path of the container to which the data input channels are mapped. Constraints: N/A Range: N/A Default Value: N/A
remote	Yes	remote object	Definition: Description of the actual data input. Constraints: The options are as follows: • dataset: The data input is a dataset. • obs: The data input is an OBS path.

Table 5-150 remote

Parameter	Mandatory	Type	Description
obs	No	obs object	Definition: OBS in which data input and output are stored. Constraints: N/A

Table 5-151 obs

Parameter	Mandatory	Type	Description
obs_url	Yes	String	Definition: OBS URL of the dataset for a training job, For example, <code>/usr/data/</code> . Constraints: N/A Range: N/A Default Value: N/A

Table 5-152 outputs

Parameter	Mandatory	Type	Description
name	Yes	String	Definition: Name of the data output channel. Constraints: N/A Range: N/A Default Value: N/A
description	No	String	Definition: Description of the data output channel. Constraints: N/A Range: N/A Default Value: N/A
local_dir	No	String	Definition: Local path of the container to which the data output channels are mapped. Constraints: N/A Range: N/A Default Value: N/A
remote	Yes	remote object	Definition: Description of the actual data output. Constraints: N/A

Table 5-153 remote

Parameter	Mandatory	Type	Description
obs	Yes	obs object	Definition: Data actually output to OBS. Constraints: N/A

Table 5-154 obs

Parameter	Mandatory	Type	Description
obs_url	Yes	String	Definition: Path of the data output to OBS. Constraints: N/A Range: N/A Default Value: N/A

Table 5-155 task_resource

Parameter	Mandatory	Type	Description
flavor_id	No	String	Definition: ID of the resource flavor selected for a training job. Constraints: N/A Range: N/A Default Value: N/A
node_count	Yes	Integer	Definition: Number of resource replicas selected for a training job. Constraints: N/A Range: N/A Default Value: N/A
pool_id	No	String	Definition: ID of the resource pool selected for a training task. Constraints: N/A Range: N/A Default Value: N/A

Table 5-156 log_export_path

Parameter	Mandatory	Type	Description
obs_url	No	String	Definition: OBS path for storing training job logs. Constraints: N/A

Table 5-157 Spec

Parameter	Mandatory	Type	Description
resource	No	SpecResource object	Definition: Resource flavor of a training job. Constraints: Select either flavor_id or pool_id or flavor_id . - If you select a public resource pool, only flavor_id is needed. Select the number of PUs and memory your training job needs. If the public resource pool has enough idle resources, your job will be scheduled. - If you select a dedicated resource pool, both pool_id and flavor_id are needed. Select the smallest number of PUs that meet your training needs to save resources and boost efficiency.
volumes	No	Array of SpecVolumes objects	Definition: Mounting volume information of a training job. Constraints: N/A
log_export_path	No	LogExportPath object	Definition: Log output of a training job. Constraints: N/A
auto_stop	No	AutoStop object	Definition: Auto stop configuration of a training job. Constraints: N/A
schedule_policy	No	SchedulePolicy object	Definition: Scheduling policy of a training job. Constraints: N/A
notification	No	Notification object	Definition: Message notification of a training event. Constraints: N/A
custom_metrics	No	Array of CustomMetrics objects	Definition: Metric collection configuration.

Table 5-158 SpecResource

Parameter	Mandatory	Type	Description
flavor_id	No	String	Definition: ID of the resource flavor of a training job. Constraints: N/A Range: The flavor_id parameter cannot be specified for a dedicated resource pool of CPU specifications. The options for dedicated resource pools with GPU/Ascend specifications are as follows: • modelarts.pool.visual.xlarge (1 PU) • modelarts.pool.visual.2xlarge (2 PUs) • modelarts.pool.visual.4xlarge (4 PUs) • modelarts.pool.visual.8xlarge (8 PUs) • modelarts.pool.visual.16xlarge (16 cards, only for the Snt9b23 supernode resource pool) Default Value: N/A
node_count	No	Integer	Definition: Number of nodes used to create a training job in a resource pool. Constraints: N/A Range: N/A Default Value: single node
pool_id	No	String	Definition: Dedicated resource pool ID. Constraints: N/A Range: N/A Default Value: N/A
pool_group_id	No	String	Definition: Resource pool federation ID. Constraints: This parameter is mandatory when kind is set to federated_pool_job . Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
main_container_customized_flavor	No	MainContainerCustomizedFlavor object	Definition: Custom flavor. Constraints: N/A Range: The number of CPU cores and memory size must be greater than 0, and the number of accelerator PUs must be greater than or equal to 0. Default Value: N/A

Table 5-159 MainContainerCustomizedFlavor

Parameter	Mandatory	Type	Description
cpu_core_num	No	Float	Definition: Number of CPU cores. Range: greater than 0
mem_size	No	Float	Definition: Memory size. Range: greater than 0
accelerator_num	No	Float	Definition: Number of accelerator cards. Range: greater than or equal to 0

Table 5-160 SpecVolumes

Parameter	Mandatory	Type	Description
nfs	No	Nfs object	Definition: NFS mounting volume information of a training job. Constraints: N/A
pfs	No	Pfs object	Definition: obsfs mounting volume information of a training job. Constraints: N/A
obs	No	Obs object	Definition: OBS mounting volume information of a training job. Constraints: N/A

Table 5-161 Nfs

Parameter	Mandatory	Type	Description
nfs_server_path	No	String	Definition: NFS server path, for example, 10.10.10.10:/example/path . Constraints: N/A Range: N/A Default Value: N/A
local_path	No	String	Definition: Path for attaching volumes to the training container, for example, /example/path . Constraints: N/A Range: N/A Default Value: N/A
read_only	No	Boolean	Definition: Specifies whether the disks attached to the container in NFS mode are read-only. Constraints: N/A Range: • true: read only • false: non-read-only Default Value: N/A

Table 5-162 Pfs

Parameter	Mandatory	Type	Description
pfs_path	No	String	Definition: Address of obsfs. For example, /test-bucket/path . Constraints: N/A Range: N/A Default Value: N/A
local_path	No	String	Definition: Path for attaching volumes to the training container, for example, /example/path . Constraints: N/A Range: N/A Default Value: N/A

Table 5-163 Obs

Parameter	Mandatory	Type	Description
obs_path	No	String	Definition: OBS path to be mounted. For example, /test-bucket/path . Constraints: N/A Range: N/A Default Value: N/A
local_path	No	String	Definition: Path for attaching volumes to the training container, for example, /example/path . Constraints: N/A Range: N/A Default Value: N/A

Table 5-164 LogExportPath

Parameter	Mandatory	Type	Description
obs_url	No	String	Definition: OBS path for storing training job logs, for example, obs://example/path . Constraints: N/A Range: N/A Default Value: N/A
host_path	No	String	Definition: Path of the host where training job logs are stored, for example, /example/path . Constraints: N/A Range: N/A Default Value: N/A

Table 5-165 AutoStop

Parameter	Mandatory	Type	Description
time_unit	Yes	String	Definition: Time unit. Constraints: N/A Range: • HOURS: hour Default Value: N/A
duration	Yes	Integer	Definition: Runtime. Constraints: N/A • Range: The minimum value is 1. Default Value: N/A

Table 5-166 SchedulePolicy

Parameter	Mandatory	Type	Description
required_affinity	No	RequiredAffinity object	Definition: Affinity requirements of a training job. Constraints: N/A
priority	No	Integer	Definition: Priority of a training job. Constraints: • The priority can be set for a training job only when a dedicated resource pool is used. • The value ranges from 1 to 3. The default priority is 1, and the highest priority is 3. By default, the job priority can be set to 1 or 2. After the permission to set the highest job priority is configured, the priority can be set to 1 to 3. Range: 0 to 3 Default Value: N/A

Parameter	Mandatory	Type	Description
preemptible	No	Boolean	Definition: Whether the resource can be preempted. Constraints: N/A Range: • true: The resource can be preempted. • false: The resource cannot be preempted. Default Value: N/A

Table 5-167 RequiredAffinity

Parameter	Mandatory	Type	Description
affinity_type	No	String	Definition: Affinity scheduling policy. Constraints: N/A Range: • cabinet: strong cabinet scheduling • hyperinstance: supernode affinity scheduling Default Value: N/A
affinity_group_size	No	Integer	Definition: Size of an affinity group. Constraints: This parameter is mandatory when affinity_type is set to hyperinstance . In this case, the system schedules tasks specified by affinity_group_size to a supernode to form an affinity group. When a user delivers a training job to the supernode resource pool, if the affinity group size is not set, the system sets the value to 1 by default. Range: N/A Default Value: 1

Table 5-168 Notification

Parameter	Mandatory	Type	Description
topic_urn	No	String	Definition: URN of the selected topic in SMN. Constraints: N/A Range: N/A Default Value: N/A
events	No	Array of strings	Definition: Training event that triggers a notification. Constraints: The options are as follows: • JobStarted: The job is started. • JobCompleted: The job is completed. • JobFailed: The job is failed. • JobTerminated: The job is terminated. • JobRestarted: The job is restarted. • JobHanged: The job is suspended. • JobPreempted: The job is preempted.

Table 5-169 CustomMetrics

Parameter	Mandatory	Type	Description
exec	No	Exec object	Definition: Metrics are collected in CLI mode.
http_get	No	HttpGet object	Definition: Metrics are collected in HTTP mode.

Table 5-170 Exec

Parameter	Mandatory	Type	Description
command	No	Array of strings	Definition: Metrics are collected in CLI mode.

Table 5-171 HttpGet

Parameter	Mandatory	Type	Description
path	No	String	Definition: URL for obtaining metrics over HTTP. Both the URL and the port below must either be configured together or remain empty. Range: N/A
port	No	Integer	Definition: Port for obtaining metrics over HTTP. This parameter and the URL above must be set or left blank at the same time. Range: N/A

Table 5-172 JobEndpointsReq

Parameter	Mandatory	Type	Description
ssh	No	SSHReq object	Definition: SSH connection information. Constraints: N/A

Table 5-173 SSHReq

Parameter	Mandatory	Type	Description
key_pair_names	No	Array of strings	Definition: Name of the SSH key pair, which can be created and viewed on the Key Pair page of the Elastic Cloud Server (ECS) console. Constraints: N/A

Response Parameters

Status code: 201

Table 5-174 Response body parameters

Parameter	Type	Description
kind	String	Definition: Type of a training job. Range • job: common job • federated_pool_job: resource pool federated job • edge_job: edge job • hetero_job: heterogeneous job • mrs_job: MRS job • autosearch_job: auto search job • diag_job: diagnosis job • visualization_job: visualization job
metadata	JobMetadataResponse object	Definition: Training job metadata.
status	Status object	Definition: Training job status information.
algorithm	JobAlgorithmResponse object	Definition: Training job algorithm.
tasks	Array of TaskResponse objects	Definition: Heterogeneous training tasks.
spec	SpecResponse object	Definition: Training job specifications.
endpoints	JobEndpointsResponse object	Definition: Configurations required for remotely accessing a training job.

Table 5-175 JobMetadataResponse

Parameter	Type	Description
id	String	Definition: Training job ID, which is generated and returned by ModelArts after a training job is created. Range: N/A
name	String	Definition: Name of a training job. Range: The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-).

Parameter	Type	Description
workspace_id	String	Definition: Workspace where a specified job is located. Range: N/A
description	String	Definition: Definition of a training job. Range: N/A
create_time	Long	Definition: Time when a training job was created, in milliseconds. The value is generated and returned by ModelArts after a training job is created. Range: N/A
user_name	String	Definition: Username for creating a training job. The username is generated and returned by ModelArts after a training job is created. Range: N/A
annotations	Map<String,String>	Definition: Advanced functions of a training job.

Table 5-176 Status

Parameter	Type	Description
phase	String	Definition: Level-1 status of a training job. Range: • Creating: The job is being created. • Pending: The job is pending. • Running: The job is running. • Failed: The job failed to run. • Completed: The job is complete. • Terminating: The job is being stopped. • Terminated: The job has been stopped. • Abnormal: The job is abnormal.

Parameter	Type	Description
secondary_phase	String	Definition: Level-2 status of a training job. The values are internal detailed statuses and may be added, changed, or deleted. Dependency on the status is not recommended. Range: • Creating: The job is being created. • Queuing: The job is queuing. • Running: The job is running. • Failed: The job failed to run. • Completed: The job is complete. • Terminating: The job is being stopped. • Terminated: The job has been stopped. • CreateFailed: The job fails to be created. • TerminatedFailed: The job fails to be stopped. • Unknown: The job is in an unknown state. • Lost: The job is abnormal.
duration	Long	Definition: Running duration of a training job, in ms. Range: N/A
node_count_metrics	Array<Array<Integer>>	Definition: Node quantity change metric during a training job runtime.
tasks	Array of strings	Definition: Training job subtask name.
start_time	Long	Definition: Timestamp when a training job is started. Range: N/A
task_statuses	Array of TaskStatuses objects	Definition: Status of the first failed subtask of a training job.
running_records	Array of RunningRecord objects	Definition: Running and fault recovery records of a training job.

Table 5-177 TaskStatuses

Parameter	Type	Description
task	String	Definition: Training job subtask name. Range: N/A
exit_code	Integer	Definition: Exit code of a training job subtask. Range: N/A
message	String	Definition: Error message of a training job subtask. Range: N/A

Table 5-178 RunningRecord

Parameter	Type	Description
start_at	Integer	Definition: Unix timestamp of the start time in the current running record, in seconds. Range: N/A
end_at	Integer	Definition: Unix timestamp of the end time in the current running record, in seconds. Range: N/A
xpu_start_at	Integer	Definition: Unix timestamp of the accelerator card startup time in the current running record, in seconds. Range: N/A
start_type	String	Definition: Startup mode of the current execution. Range • init_or_rescheduled: This startup is the first running after scheduling, including the first startup and the running after scheduling recovery. • restarted: This startup is not the first running after scheduling but the running after a process restart.
end_reason	String	Definition: Reason why the running ends. Range: N/A

Parameter	Type	Description
end_related_task	String	Definition: ID of the task worker (for example, worker-0) that ends the running. Range: N/A
end_recover	String	Definition: Fault tolerance policy adopted when the execution ends abnormally. Range • npu_proc_restart: NPU in-place hot recovery • proc_restart: in-place process recovery • npu_step_retry: step recomputation • pod_reschedule: pod-level rescheduling • job_reschedule: job-level rescheduling • job_reschedule_with_taint: isolated job-level rescheduling
end_recover_before_downgrade	String	Definition: There is a downgrade relationship between policies. If a policy fails to be executed, it will be downgraded to another specified policy. end_recover_before_downgrade indicates the tolerance policy used before end_recover is downgraded. Range: same as that of end_recover .
recover_records	Array of RecoverRecord objects	Definition: details about all fault tolerance policies adopted when the execution ends abnormally.

Table 5-179 RecoverRecord

Parameter	Type	Description
recover_start_at	Integer	Unix timestamp of the start time of the fault tolerance policy, in seconds. The timestamp is also the fault occurrence time.
recover_end_at	Integer	Unix timestamp of the end time of the fault tolerance policy, in seconds.

Parameter	Type	Description
recover	String	Fault tolerance policy. Options: • npu_step_retry: step recomputation • npu_proc_restart: NPU in-place hot recovery • proc_restart: in-place process recovery • pod_reschedule: pod-level rescheduling • job_reschedule: job-level rescheduling • job_reschedule_with_taint: isolated job-level rescheduling
fault_scenario	String	Fault scenario. Options: • chip_fault: chip fault • node_fault: node fault • job_failed: job exit upon a failure • job_hanged: job suspension • job_subhealth: job subhealth • error_in_log: log exception
reason	String	Cause of the fault.
related_task	String	ID of the task worker that causes the end of the current running record, for example, worker-0 .
recover_result	String	Execution result of the fault. Options: • recovering: executing • success: successful • failed: failed • downgrade: policy downgrade

Table 5-180 JobAlgorithmResponse

Parameter	Type	Description
id	String	Definition: Training job algorithm. Range: • id: Only the algorithm ID is used. • subscription_id+item_version_id: The subscription ID and version ID of the algorithm are used. • code_dir+boot_file: The code directory and boot file of the training job are used.
name	String	Definition: Algorithm name. Range: N/A
subscription_id	String	Definition: Subscription ID of a subscription algorithm, which must be used with item_version_id . Range: N/A
item_version_id	String	Definition: Version of a subscription algorithm, which must be used with subscription_id . Range: N/A
code_dir	String	Definition: Code directory of a training job, for example, /usr/app/ . This parameter must be used with boot_file . Leave this parameter blank if id , or subscription_id and item_version_id are specified. Range: N/A
boot_file	String	Definition: Boot file of a training job, which must be stored in the code directory, for example, /usr/app/boot.py . This parameter must be used with code_dir . Leave this parameter blank if id , or subscription_id and item_version_id are specified. Range: N/A
autosearch_config_path	String	Definition: YAML configuration path of an auto search job. An OBS URL is required. For example, obs://bucket/file.yaml . Range: N/A

Parameter	Type	Description
autosearch_framework_path	String	Definition: Framework code directory of an auto search job. An OBS URL is required. For example, obs://bucket/files/ . Range: N/A
command	String	Definition: Boot command for starting the container of a custom image for a training job. For example, python train.py . Range: N/A
parameters	Array of ParameterResp objects	Definition: Running parameters of the training job.
policies	policies object	Definition: Policy supported by a job.
inputs	Array of InputResp objects	Definition: Data input of a training job.
outputs	Array of OutputResp objects	Definition: Output of the training job.
engine	JobEngineResp object	Definition: Engine of a training job. Leave this parameter blank if the job is created using id of the algorithm in algorithm management, or subscription_id+item_version_id of the subscribed algorithm.
local_code_dir	String	Definition: Local directory of the training container to which the algorithm code directory is downloaded. The rules are as follows: • The directory must be under /home. • In v1 compatibility mode, the current field does not take effect. • When code_dir is prefixed with file://, the current field does not take effect. Range: N/A
working_dir	String	Definition: Work directory where an algorithm is executed. Rules: In v1 compatibility mode, this parameter does not take effect. Range: N/A

Parameter	Type	Description
environments	Array of Map<String,String> objects	Definition: Environment variables of a training job. The format is key:value . Leave this parameter blank.
summary	SummaryResp object	Definition: Visualization log summary.

Table 5-181 ParameterResp

Parameter	Type	Description
name	String	Definition: Parameter name. Range: N/A
value	String	Definition: Parameter value. Range: N/A
description	String	Definition: Parameter description. Range: N/A
constraint	constraint object	Definition: Parameter attribute.
i18n_description	i18n_description object	Definition: Internationalization description.

Table 5-182 constraint

Parameter	Type	Description
type	String	Definition: Parameter type. Range: N/A
editable	Boolean	Definition: Whether the parameter can be edited. Range: true: editable false: Not uneditable
required	Boolean	Definition: Whether the parameter is mandatory. Range: true: mandatory false: optional

Parameter	Type	Description
sensitive	Boolean	Definition: Whether the parameter is sensitive. This function is unavailable currently. Range: • true: sensitive • false: insensitive
valid_type	String	Definition: Valid type. Range: N/A
valid_range	Array of strings	Definition: Valid range.

Table 5-183 i18n_description

Parameter	Type	Description
language	String	Definition: Internationalization language. The options are as follows: • zh-cn: Chinese • en-us: English](tag:hc,hk) Range: N/A
description	String	Definition: Internationalization language description. Range: N/A

Table 5-184 policies

Parameter	Type	Description
auto_search	auto_search object	Definition: Hyperparameter search configuration.

Table 5-185 auto_search

Parameter	Type	Description
skip_search_params	String	Definition: Hyperparameter parameters that need to be skipped. Range: N/A
reward_attrs	Array of reward_attrs objects	Definition: Search metrics.

Parameter	Type	Description
search_params	Array of search_params objects	Definition: Search parameters.
algo_configs	Array of algo_configs objects	Definition: Search algorithm configurations.

Table 5-186 reward_attrs

Parameter	Type	Description
name	String	Definition: Metric name. Range: N/A
mode	String	Definition: Search mode. Range: • max: A larger metric value is preferred. • min: A smaller metric value is preferred.
regex	String	Definition: Regular expression of a metric. Range: N/A

Table 5-187 search_params

Parameter	Type	Description
name	String	Definition: Hyperparameter name. Range: N/A

Parameter	Type	Description
param_type	String	Definition: Parameter type. Range: • continuous: The hyperparameter is of the continuous type. When an algorithm is used in a training job, continuous hyperparameters are displayed as text boxes on the console. • discrete: The hyperparameter is of the discrete type. When an algorithm is used in a training job, discrete hyperparameters are displayed as drop-down lists on the console.
lower_bound	String	Definition: Lower bound of the hyperparameter. Range: N/A
upper_bound	String	Definition: Upper bound of the hyperparameter. Range: N/A
discrete_points_num	String	Definition: Number of discrete points of a hyperparameter with continuous values. Range: N/A
discrete_values	Array of strings	Definition: Discrete hyperparameter values.

Table 5-188 algo_configs

Parameter	Type	Description
name	String	Definition: Search algorithm name. Range: N/A
params	Array of AutoSearchAlgoConfigParameterResp objects	Definition: Search algorithm parameters.

Table 5-189 AutoSearchAlgoConfigParameterResp

Parameter	Type	Description
key	String	Definition: Parameter key. Range: N/A
value	String	Definition: Parameter value. Range: N/A
type	String	Definition: Parameter type. Range: N/A

Table 5-190 InputResp

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
description	String	Definition: Description of the data input channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data input channels are mapped. Example: /home/ma-user/modelarts/inputs/data_url_0 Range: N/A
access_method	String	Definition: Access method of the input data channel path (local_dir). Range: • parameter: hyperparameters • env: environment variables
remote	InputDataInfoResp object	Definition: Description of the actual data input.
remote_constraint	Array of remote_constraint objects	Definition: Data input constraint.

Table 5-191 InputDataInfoResp

Parameter	Type	Description
dataset	dataset object	Definition: The input is a dataset.

Parameter	Type	Description
obs	obs object	Definition: OBS in which data input and output are stored.

Table 5-192 dataset

Parameter	Type	Description
id	String	Definition: Dataset ID of a training job. Range: N/A
version_id	String	Definition: Dataset version ID of a training job. Range: N/A
obs_url	String	Definition: OBS URL of the dataset for a training job. It is automatically parsed by ModelArts based on the dataset ID and dataset version ID. For example, /usr/data/ . Range: N/A

Table 5-193 obs

Parameter	Type	Description
obs_url	String	Definition: OBS URL of the dataset for a training job, For example, /usr/data/ . Range: N/A

Table 5-194 remote_constraint

Parameter	Type	Description
data_type	String	Definition: Data input type, including the data storage location and dataset. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
attributes	String	Definition: Related attributes. Constraints: N/A Range: If the input is a dataset: • data_format: data format • data_segmentation: data segmentation method • dataset_type: data labeling type Default Value: N/A

Table 5-195 OutputResp

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A
description	String	Definition: Description of the data output channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data output channels are mapped. Range: N/A
access_method	String	Definition: Access method of the input data channel path (local_dir). Range: • parameter: hyperparameters • env: environment variables
remote	RemoteResp object	Definition: Description of the actual data output.

Table 5-196 JobEngineResp

Parameter	Type	Description
engine_id	String	Definition: Engine ID selected for a training job. Range: N/A

Parameter	Type	Description
engine_name	String	Definition: Engine name selected for a training job. Range: N/A
engine_version	String	Definition: Engine version selected for a training job. Range: N/A
image_url	String	Definition: Custom image URL selected for a training job. The URL is obtained from SWR. Range: N/A
install_sys_packages	Boolean	Definition: Specifies whether to install the MoXing version specified by the training platform. Range: • true: yes • false: no

Table 5-197 SummaryResp

Parameter	Type	Description
log_type	String	Definition: Visualization log type of a training job. After this parameter is configured, the training job can be used as the data source of a visualization job. Range: • tensorboard: TensorBoard • mindstudio-insight: MindStudio Insight
log_dir	LogDirResp object	Definition: Visualization log output of a training job.
data_sources	Array of DataSourceResp objects	Definition: Visualization log input of the visualization job or training job debugging mode.

Table 5-198 LogDirResp

Parameter	Type	Description
pfs	PFSSummaryResp object	Definition: Output of an OBS parallel file system.

Table 5-199 PFSSummaryResp

Parameter	Type	Description
pfs_path	String	Definition: URL of the OBS parallel file system. Range: N/A

Table 5-200 DataSourceResp

Parameter	Type	Description
job	JobSummaryResp object	Definition: Job data source.

Table 5-201 JobSummaryResp

Parameter	Type	Description
job_id	String	Definition: ID of a training job. Range: N/A

Table 5-202 TaskResponse

Parameter	Type	Description
role	String	Definition: Task role. This function is not supported currently. Range: N/A
algorithm	TaskResponseAlgorithm object	Definition: Algorithm configurations for algorithm management.
task_resource	FlavorResponse object	Definition: Specifications of a training job or algorithm.
log_export_path	log_export_path object	Definition: Saved information about training job logs.

Table 5-203 TaskResponseAlgorithm

Parameter	Type	Description
code_dir	String	Definition: Absolute path of the directory where the algorithm boot file is stored. Range: N/A
boot_file	String	Definition: Absolute path of an algorithm boot file. Range: N/A
inputs	AlgorithmInput object	Definition: Information about the algorithm input channel.
outputs	AlgorithmOutput object	Definition: Information about the algorithm output channel.
engine	AlgorithmEngine object	Definition: Engine that a heterogeneous job depends on.
local_code_dir	String	Definition: Local directory of the training container to which the algorithm code directory is downloaded. The rules are as follows: • The directory must be under / home. • In v1 compatibility mode, the current field does not take effect. • When code_dir is prefixed with file://, the current field does not take effect. Range: N/A
working_dir	String	Definition: Work directory where an algorithm is executed. Note that this parameter does not take effect in v1 compatibility mode. Range: N/A
environments	Map<String,String>	Definition: Environment variables related to a training job. Range: N/A

Table 5-204 AlgorithmInput

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data input and output channels are mapped. Range: N/A
remote	AlgorithmRemote object	Definition: Actual data input, which can only be OBS for heterogeneous jobs.

Table 5-205 AlgorithmRemote

Parameter	Type	Description
obs	RemoteObsResp object	Definition: OBS in which data input and output are stored.

Table 5-206 AlgorithmOutput

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data output channels are mapped. Range: N/A
remote	RemoteResp object	Definition: Description of the actual data output.
mode	String	Definition: Data transmission mode. The default value is upload_periodically . Range: N/A
period	String	Definition: Data transmission period. The default value is 30s . Range: N/A

Table 5-207 RemoteResp

Parameter	Type	Description
obs	RemoteObsResp object	Definition: Data actually output to OBS.

Table 5-208 RemoteObsResp

Parameter	Type	Description
obs_url	String	Definition: Path of the data output to OBS. Range: N/A

Table 5-209 AlgorithmEngine

Parameter	Type	Description
engine_id	String	Definition: Engine flavor ID, for example, caffe-1.0.0-python2.7 . Range: N/A
engine_name	String	Definition: Engine flavor name, for example, Caffe . Range: N/A
engine_version	String	Definition: Engine flavor version. Engines with the same name have multiple versions, for example, Caffe-1.0.0-python2.7 of Python 2.7. Range: N/A
v1_compatible	Boolean	Definition: Specifies whether the v1 compatibility mode is used. Range: • true: The v1 compatibility mode is used. • false: The v1 compatibility mode is not used.
run_user	String	Definition: Default UID for the engine startup. Range: N/A
image_url	String	Definition: Custom image URL selected for an algorithm. Range: N/A

Table 5-210 FlavorResponse

Parameter	Type	Description
pool_id	String	Definition: ID of the resource pool selected for a training job. Range: N/A
flavor_id	String	Definition: Resource flavor ID. Range: N/A
flavor_name	String	Definition: Resource flavor name. Range: N/A
max_num	Integer	Definition: Maximum number of nodes supported by a flavor. Range: N/A
flavor_type	String	Definition: Resource flavor type. Range: • CPU • GPU • Ascend
billing	BillingInfo object	Definition: Billing information of a resource flavor.
flavor_info	FlavorInfoResponse object	Definition: Resource flavor details.
attributes	Map<String,String>	Definition: Other flavor attributes. Range: N/A

Table 5-211 FlavorInfoResponse

Parameter	Type	Description
max_num	Integer	Definition: Maximum number of nodes that can be selected. The value 1 indicates that the distributed mode is not supported. Range: N/A
cpu	Cpu object	Definition: CPU specifications.
gpu	Gpu object	Definition: GPU specifications.
npu	Npu object	Definition: Ascend specifications.
memory	Memory object	Definition: Memory information.

Parameter	Type	Description
disk	DiskResponse object	Definition: Disk information.

Table 5-212 DiskResponse

Parameter	Type	Description
size	Integer	Definition: Disk size. Range: N/A
unit	String	Definition: Unit of the disk size. Range: N/A

Table 5-213 log_export_path

Parameter	Type	Description
obs_url	String	Definition: OBS path for storing training job logs.

Table 5-214 SpecResponse

Parameter	Type	Description
resource	Resource object	Definition: Resource flavor of a training job. Select either flavor_id or pool_id and flavor_id .
volumes	Array of JobVolumeResp objects	Definition: Mounting volume information of a training job.
log_export_path	LogExportPathResp object	Definition: Log output of a training job.
schedule_policy	SchedulePolicyResp object	Definition: Scheduling policy of a training job.
custom_metrics	Array of CustomMetrics objects	Definition: Metric collection configuration.

Table 5-215 Resource

Parameter	Type	Description
policy	String	Definition: Resource flavor mode of a training job. Range: • regular: standard mode
flavor_id	String	Definition: ID of the resource flavor of a training job. Range: The flavor_id parameter cannot be specified for a dedicated resource pool of CPU specifications. The options for dedicated resource pools with GPU/Ascend specifications are as follows: • modelarts.pool.visual.xlarge (1 PU) • modelarts.pool.visual.2xlarge (2 PUs) • modelarts.pool.visual.4xlarge (4 PUs) • modelarts.pool.visual.8xlarge (8 PUs)
flavor_name	String	Definition: Read-only flavor name returned by ModelArts when flavor_id is used. Range: N/A
node_count	Integer	Definition: Number of resource replicas selected for a training job. Range: N/A
pool_id	String	Definition: ID of the resource pool selected for a training job. Range: N/A
pool_group_id	String	Definition: ID of the resource pool federation selected for a training job. Range: N/A
flavor_detail	FlavorDetail object	Definition: Flavor details of a training job or algorithm. This parameter is available only for public resource pools.
main_container_allocated_resources	MainContainerAllocatedResources object	Definition: Resource specifications actually obtained by the training container of a training job.

Parameter	Type	Description
main_container_customized_flavor	MainContainerCustomizedFlavor object	Definition: Custom flavor of a training job. Range: The number of CPU cores and memory size must be greater than 0, and the number of accelerator PUs must be greater than or equal to 0.

Table 5-216 FlavorDetail

Parameter	Type	Description
flavor_type	String	Definition: Resource flavor type. Range: • CPU • GPU • Ascend
billing	BillingInfo object	Definition: Billing information of a resource flavor.
flavor_info	FlavorInfo object	Definition: Resource flavor details.

Table 5-217 BillingInfo

Parameter	Type	Description
code	String	Definition: Billing code. Range: N/A
unit_num	Integer	Definition: Billing unit. Range: N/A

Table 5-218 FlavorInfo

Parameter	Type	Description
max_num	Integer	Definition: Maximum number of nodes that can be selected. The value 1 indicates that the distributed mode is not supported. Range: N/A
cpu	Cpu object	Definition: CPU specifications.
gpu	Gpu object	Definition: GPU specifications.

Parameter	Type	Description
npu	Npu object	Definition: Ascend specifications.
memory	Memory object	Definition: Memory information.
disk	Disk object	Definition: Disk information.

Table 5-219 Cpu

Parameter	Type	Description
arch	String	Definition: CPU architecture. Range: N/A
core_num	Integer	Definition: Number of cores. Range: N/A

Table 5-220 Gpu

Parameter	Type	Description
unit_num	Integer	Definition: Number of GPUs. Range: N/A
product_name	String	Definition: Product name. Range: N/A
memory	String	Definition: Memory. Range: N/A

Table 5-221 Npu

Parameter	Type	Description
unit_num	String	Definition: Number of NPUs. Range: N/A
product_name	String	Definition: Product name. Range: N/A
memory	String	Definition: Memory. Range: N/A

Table 5-222 Memory

Parameter	Type	Description
size	Integer	Definition: Memory size. Range: N/A
unit	String	Definition: Number of memory units. Range: N/A

Table 5-223 Disk

Parameter	Type	Description
size	String	Definition: Disk size. Range: N/A
unit	String	Definition: Unit of the disk size. Generally, the unit is GB. Range: N/A

Table 5-224 MainContainerAllocatedResources

Parameter	Type	Description
cpu_arch	String	Definition: CPU architecture. Range: N/A
cpu_core_num	Float	Definition: Number of cores. Range: N/A
mem_size	Float	Definition: Memory information. Range: N/A
accelerator_num	Float	Definition: Number of accelerator cards. Range: N/A
accelerator_type	String	Definition: Type of accelerator cards. Range: N/A

Table 5-225 MainContainerCustomizedFlavor

Parameter	Type	Description
cpu_core_num	Float	Definition: Number of CPU cores. Range: greater than 0

Parameter	Type	Description
mem_size	Float	Definition: Memory size. Range: greater than 0
accelerator_num	Float	Definition: Number of accelerator cards. Range: greater than or equal to 0

Table 5-226 JobVolumeResp

Parameter	Type	Description
nfs	NfsResp object	Definition: Volumes attached in NFS mode.

Table 5-227 NfsResp

Parameter	Type	Description
nfs_server_path	String	Definition: NFS server path, for example, 10.10.10.10:/example/path . Range: N/A
local_path	String	Definition: Path for attaching volumes to the training container, for example, /example/path . Range: N/A
read_only	Boolean	Definition: Specifies whether the disks attached to the container in NFS mode are read-only. Range: • true: read only • false: non-read-only

Table 5-228 LogExportPathResp

Parameter	Type	Description
obs_url	String	Definition: OBS path for storing training job logs, for example, obs://example/path . Range: N/A

Parameter	Type	Description
host_path	String	Definition: Path of the host where training job logs are stored, for example, <code>/example/path</code> . Range: N/A

Table 5-229 SchedulePolicyResp

Parameter	Type	Description
required_affinity	RequiredAffinityResp object	Definition: Affinity requirements of a training job.
priority	Integer	Definition: Priority of a training job. Range: 0 to 3
preemptible	Boolean	Definition: Whether the resource can be preempted. Range: • true: The resource can be preempted. • false: The resource cannot be preempted.

Table 5-230 RequiredAffinityResp

Parameter	Type	Description
affinity_type	String	Definition: Affinity scheduling policy. Range: • cabinet: strong cabinet scheduling • hyperinstance: supernode affinity scheduling
affinity_group_size	Integer	Definition: Size of an affinity group. Range: N/A

Table 5-231 CustomMetrics

Parameter	Type	Description
exec	Exec object	Definition: Metrics are collected in CLI mode.

Parameter	Type	Description
http_get	HttpGet object	Definition: Metrics are collected in HTTP mode.

Table 5-232 Exec

Parameter	Type	Description
command	Array of strings	Definition: Metrics are collected in CLI mode.

Table 5-233 HttpGet

Parameter	Type	Description
path	String	Definition: URL for obtaining metrics over HTTP. Both the URL and the port below must either be configured together or remain empty. Range: N/A
port	Integer	Definition: Port for obtaining metrics over HTTP. This parameter and the URL above must be set or left blank at the same time. Range: N/A

Table 5-234 JobEndpointsResp

Parameter	Type	Description
ssh	SSHResp object	Definition: SSH connection information.
jupyter_lab	JupyterLab object	Definition: JupyterLab connection information.
tensorboard	Tensorboard object	Definition: TensorBoard connection information.
mindstudio_insight	MindStudioInsight object	Definition: MindStudio Insight connection information.

Table 5-235 SSHResp

Parameter	Type	Description
key_pair_names	Array of strings	Definition: Name of the SSH key pair, which can be created and viewed on the Key Pair page of the Elastic Cloud Server (ECS) console. Range: N/A
task_urls	Array of TaskUrls objects	Definition: SSH connection address.

Table 5-236 TaskUrls

Parameter	Type	Description
task	String	Definition: Task ID of a training job. Range: N/A
url	String	Definition: SSH connection address of a training job. Range: N/A

Table 5-237 JupyterLab

Parameter	Type	Description
url	String	Definition: JupyterLab address of a training job. Range: N/A
token	String	Definition: JupyterLab token of a training job. Range: N/A

Table 5-238 Tensorboard

Parameter	Type	Description
url	String	Definition: TensorBoard address of a training job. Range: N/A
token	String	Definition: TensorBoard token of a training job. Range: N/A

Table 5-239 MindStudioInsight

Parameter	Type	Description
url	String	Definition: MindStudio Insight address of a training job. Range: N/A
token	String	Definition: MindStudio Insight token of a training job. Range: N/A

Status code: 400**Table 5-240** Response body parameters

Parameter	Type	Description
error_msg	String	Error message
error_code	String	Error code
error_solution	String	Solution

Example Requests

- The following is an example of how to create a training job with free specifications. The job name has been set to **TestModelArtsJob** and the description has been set to **This is a ModelArts job**. The required algorithm's ID is **3f5d6706-7b67-408d-8ba0-ec08048c45ed**. The inputs and outputs have not been defined for the algorithm.

POST https://endpoint/v2/{project_id}/training-jobs

```
{
  "kind": "job",
  "metadata": {
    "id": "425b7087-83de-49ed-9e40-5bb642be956f",
    "name": "TestModelArtsJob",
    "description": "This is a ModelArts job",
    "create_time": 1637045545982,
    "workspace_id": "0",
    "user_name": ""
  },
  "algorithm": {
    "id": "3f5d6706-7b67-408d-8ba0-ec08048c45ed",
    "name": "ttt-obs-gpu",
    "code_dir": "/cn-north-4-rse/test/moxingtest-code/",
    "boot_file": "/cn-north-4-rse/test/moxingtest-code/test_obs_gpu.py",
    "parameters": [ {
      "name": "input_dir",
      "description": "",
      "i18n_description": null,
      "value": "s://cn-north-4-rse/test/moxingtest-dir/",
      "constraint": {
        "type": "String",
        "editable": true,
        "required": true,

```

```
    "sensitive" : false,
    "valid_type" : "None",
    "valid_range" : [ ]
  }
}, {
  "name" : "input_file",
  "description" : "",
  "i18n_description" : null,
  "value" : "obs://cn-north-4-rse/test/moxingtest/",
  "constraint" : {
    "type" : "String",
    "editable" : true,
    "required" : true,
    "sensitive" : false,
    "valid_type" : "None",
    "valid_range" : [ ]
  }
}, {
  "name" : "large_file_method",
  "description" : "",
  "i18n_description" : null,
  "value" : "1",
  "constraint" : {
    "type" : "Integer",
    "editable" : true,
    "required" : true,
    "sensitive" : false,
    "valid_type" : "None",
    "valid_range" : [ ]
  }
} ],
"engine" : {
  "engine_id" : "horovod-cp36-tf-1.16.2",
  "engine_name" : "Horovod",
  "engine_version" : "0.16.2-TF-1.13.1-python3.6"
},
"policies" : { }
},
"spec" : {
  "resource" : {
    "flavor_id" : "modelarts.p3.large.public.free",
    "node_count" : 1
  },
  "log_export_path" : { },
  "custom_metrics" : [ {
    "http_get" : {
      "path" : "/raw_text",
      "port" : 10001
    }
  }
]
}
}
```

- The following is an example of how to use a custom image to create a training job whose name is **TestModelArtsJob2** and description is **This is a ModelArts job2**. A dedicated resource pool and NFS mounting are used.

POST https://endpoint/v2/{project_id}/training-jobs

```
{
  "kind" : "job",
  "metadata" : {
    "name" : "TestModelArtsJob2",
    "description" : "This is a ModelArts job2"
  },
  "algorithm" : {
    "engine" : {
      "image_url" : "xxxxxxx/fastseq:1.2"
    },
    "command" : "cd /home/ma-user/ddp_demo && sh run_ddp.sh",
  }
}
```

```
"parameters" : [ ],
"policies" : {
  "auto_search" : null
},
"environments" : {
  "NCCL_DEBUG" : "INFO",
  "NCCL_IB_DISABLE" : "0"
},
"spec" : {
  "resource" : {
    "flavor_id" : "modelarts.pool.visual.xlarge",
    "node_count" : 1,
    "pool_id" : "poolfaf38d76"
  },
  "log_export_path" : {
    "obs_url" : "/cn-north-4-training-test/limou/ddp-demo-log/"
  },
  "volumes" : [ {
    "nfs" : {
      "nfs_server_path" : "192.168.0.82:/",
      "local_path" : "/home/ma-user/nfs/",
      "read_only" : false
    }
  }
]
}
```

Example Responses

Status code: 201

ok

```
{
  "kind" : "job",
  "metadata" : {
    "id" : "425b7087-83de-49ed-9e40-5bb642be956f",
    "name" : "TestModelArtsJob",
    "description" : "This is a ModelArts job",
    "create_time" : 1637045545982,
    "workspace_id" : "0",
    "user_name" : ""
  },
  "status" : {
    "phase" : "Creating",
    "secondary_phase" : "Creating",
    "duration" : 0,
    "start_time" : 0,
    "node_count_metrics" : null,
    "tasks" : [ "worker-0", "server-0" ]
  },
  "algorithm" : {
    "id" : "3f5d6706-7b67-408d-8ba0-ec08048c45ed",
    "name" : "ttt-obs-gpu",
    "code_dir" : "/cn-north-4-rse/test/moxingtest-code/",
    "boot_file" : "/cn-north-4-rse/test/moxingtest-code/test_obs_gpu.py",
    "parameters" : [ {
      "name" : "input_dir",
      "description" : "",
      "i18n_description" : null,
      "value" : "s://cn-north-4-rse/test/moxingtest-dir/",
      "constraint" : {
        "type" : "String",
        "editable" : true,
        "required" : true,
        "sensitive" : false,
        "valid_type" : "None",
        "valid_range" : [ ]
      }
    }
  ]
}
```

```
    }, {
      "name": "input_file",
      "description": "",
      "i18n_description": null,
      "value": "obs://cn-north-4-rse/test/moxingtest/",
      "constraint": {
        "type": "String",
        "editable": true,
        "required": true,
        "sensitive": false,
        "valid_type": "None",
        "valid_range": [ ]
      }
    }, {
      "name": "large_file_method",
      "description": "",
      "i18n_description": null,
      "value": "1",
      "constraint": {
        "type": "Integer",
        "editable": true,
        "required": true,
        "sensitive": false,
        "valid_type": "None",
        "valid_range": [ ]
      }
    }
  ],
  "engine": {
    "engine_id": "horovod-cp36-tf-1.16.2",
    "engine_name": "Horovod",
    "engine_version": "0.16.2-TF-1.13.1-python3.6"
  },
  "policies": { }
},
"spec": {
  "resource": {
    "policy": "regular",
    "flavor_id": "modelarts.p3.large.public.free",
    "flavor_name": "Computing GPU(Vnt1) instance",
    "node_count": 1,
    "flavor_detail": {
      "flavor_type": "GPU",
      "billing": {
        "code": "modelarts.vm.gpu.free",
        "unit_num": 1
      }
    },
    "flavor_info": {
      "cpu": {
        "arch": "x86",
        "core_num": 8
      },
      "gpu": {
        "unit_num": 1,
        "product_name": "GP-Vnt1",
        "memory": "32GB"
      },
      "memory": {
        "size": 64,
        "unit": "GB"
      }
    }
  },
  "main_container_allocated_resources": {
    "cpu_arch": "x86",
    "cpu_core_num": 5,
    "mem_size": 44,
    "accelerator_num": 1,
    "accelerator_type": "nvidia-v100-pcie32"
```

```
}
},
"log_export_path" : { },
"custom_metrics" : [ {
  "exec" : {
    "command" : [ "cat", "/a/b/c.porm" ]
  }, {
    "http_get" : {
      "path" : "/raw_text",
      "port" : 10001
    }
  }
}
}]
}
```

Status code: 400

Format of the body for a common error response. The following shows the returned information when an algorithm with ID 3f5d6706-7b67-408d-8ba0-ec08048c45ee is not found.

```
{
  "error_msg" : "algorithm not found.",
  "error_code" : "ModelArts.2755",
  "error_solution" : "Check whether the training project information in the request is valid."
}
```

Status Codes

Status Code	Description
201	ok
400	Format of the body for a common error response. The following shows the returned information when an algorithm with ID 3f5d6706-7b67-408d-8ba0-ec08048c45ee is not found.

Error Codes

See [Error Codes](#).

5.7 Querying the Details About a Training Job

Function

This API is used to query the details about a training job on ModelArts.

This API applies to the following scenario: When you need to view the running status and configuration information of a specific training job, you can use this API to obtain the job details. Before using this API, ensure that you have obtained the training job ID and have the permission to view job details. After the query is complete, the platform returns the details about the training job, including the job status, configuration, and logs. If the training job ID does not exist or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/training-jobs/{training_job_id}

Table 5-241 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
training_job_id	Yes	String	Definition: Training job ID. For details, see Obtaining Training Jobs . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 5-242 Response body parameters

Parameter	Type	Description
kind	String	Definition: Type of a training job. Range • job: common job • federated_pool_job: resource pool federated job • edge_job: edge job • hetero_job: heterogeneous job • mrs_job: MRS job • autosearch_job: auto search job • diag_job: diagnosis job • visualization_job: visualization job
metadata	JobMetadataResponse object	Definition: Training job metadata.
status	Status object	Definition: Training job status information.
algorithm	JobAlgorithmResponse object	Definition: Training job algorithm.
tasks	Array of TaskResponse objects	Definition: Heterogeneous training tasks.
spec	SpecResponse object	Definition: Training job specifications.
endpoints	JobEndpointsResponse object	Definition: Configurations required for remotely accessing a training job.

Table 5-243 JobMetadataResponse

Parameter	Type	Description
id	String	Definition: Training job ID, which is generated and returned by ModelArts after a training job is created. Range: N/A
name	String	Definition: Name of a training job. Range: The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-).

Parameter	Type	Description
workspace_id	String	Definition: Workspace where a specified job is located. Range: N/A
description	String	Definition: Definition of a training job. Range: N/A
create_time	Long	Definition: Time when a training job was created, in milliseconds. The value is generated and returned by ModelArts after a training job is created. Range: N/A
user_name	String	Definition: Username for creating a training job. The username is generated and returned by ModelArts after a training job is created. Range: N/A
annotations	Map<String,String>	Definition: Advanced functions of a training job.

Table 5-244 Status

Parameter	Type	Description
phase	String	Definition: Level-1 status of a training job. Range: • Creating: The job is being created. • Pending: The job is pending. • Running: The job is running. • Failed: The job failed to run. • Completed: The job is complete. • Terminating: The job is being stopped. • Terminated: The job has been stopped. • Abnormal: The job is abnormal.

Parameter	Type	Description
secondary_phase	String	Definition: Level-2 status of a training job. The values are internal detailed statuses and may be added, changed, or deleted. Dependency on the status is not recommended. Range: • Creating: The job is being created. • Queuing: The job is queuing. • Running: The job is running. • Failed: The job failed to run. • Completed: The job is complete. • Terminating: The job is being stopped. • Terminated: The job has been stopped. • CreateFailed: The job fails to be created. • TerminatedFailed: The job fails to be stopped. • Unknown: The job is in an unknown state. • Lost: The job is abnormal.
duration	Long	Definition: Running duration of a training job, in ms. Range: N/A
node_count_metrics	Array<Array<Integer>>	Definition: Node quantity change metric during a training job runtime.
tasks	Array of strings	Definition: Training job subtask name.
start_time	Long	Definition: Timestamp when a training job is started. Range: N/A
task_statuses	Array of TaskStatuses objects	Definition: Status of the first failed subtask of a training job.
running_records	Array of RunningRecord objects	Definition: Running and fault recovery records of a training job.

Table 5-245 TaskStatuses

Parameter	Type	Description
task	String	Definition: Training job subtask name. Range: N/A
exit_code	Integer	Definition: Exit code of a training job subtask. Range: N/A
message	String	Definition: Error message of a training job subtask. Range: N/A

Table 5-246 RunningRecord

Parameter	Type	Description
start_at	Integer	Definition: Unix timestamp of the start time in the current running record, in seconds. Range: N/A
end_at	Integer	Definition: Unix timestamp of the end time in the current running record, in seconds. Range: N/A
xpu_start_at	Integer	Definition: Unix timestamp of the accelerator card startup time in the current running record, in seconds. Range: N/A
start_type	String	Definition: Startup mode of the current execution. Range • init_or_rescheduled: This startup is the first running after scheduling, including the first startup and the running after scheduling recovery. • restarted: This startup is not the first running after scheduling but the running after a process restart.
end_reason	String	Definition: Reason why the running ends. Range: N/A

Parameter	Type	Description
end_related_task	String	Definition: ID of the task worker (for example, worker-0) that ends the running. Range: N/A
end_recover	String	Definition: Fault tolerance policy adopted when the execution ends abnormally. Range • npu_proc_restart: NPU in-place hot recovery • proc_restart: in-place process recovery • npu_step_retry: step recomputation • pod_reschedule: pod-level rescheduling • job_reschedule: job-level rescheduling • job_reschedule_with_taint: isolated job-level rescheduling
end_recover_before_downgrade	String	Definition: There is a downgrade relationship between policies. If a policy fails to be executed, it will be downgraded to another specified policy. end_recover_before_downgrade indicates the tolerance policy used before end_recover is downgraded. Range: same as that of end_recover .
recover_records	Array of RecoverRecord objects	Definition: details about all fault tolerance policies adopted when the execution ends abnormally.

Table 5-247 RecoverRecord

Parameter	Type	Description
recover_start_at	Integer	Unix timestamp of the start time of the fault tolerance policy, in seconds. The timestamp is also the fault occurrence time.
recover_end_at	Integer	Unix timestamp of the end time of the fault tolerance policy, in seconds.

Parameter	Type	Description
recover	String	Fault tolerance policy. Options: • npu_step_retry: step recomputation • npu_proc_restart: NPU in-place hot recovery • proc_restart: in-place process recovery • pod_reschedule: pod-level rescheduling • job_reschedule: job-level rescheduling • job_reschedule_with_taint: isolated job-level rescheduling
fault_scenario	String	Fault scenario. Options: • chip_fault: chip fault • node_fault: node fault • job_failed: job exit upon a failure • job_hanged: job suspension • job_subhealth: job subhealth • error_in_log: log exception
reason	String	Cause of the fault.
related_task	String	ID of the task worker that causes the end of the current running record, for example, worker-0 .
recover_result	String	Execution result of the fault. Options: • recovering: executing • success: successful • failed: failed • downgrade: policy downgrade

Table 5-248 JobAlgorithmResponse

Parameter	Type	Description
id	String	Definition: Training job algorithm. Range: • id: Only the algorithm ID is used. • subscription_id+item_version_id: The subscription ID and version ID of the algorithm are used. • code_dir+boot_file: The code directory and boot file of the training job are used.
name	String	Definition: Algorithm name. Range: N/A
subscription_id	String	Definition: Subscription ID of a subscription algorithm, which must be used with item_version_id . Range: N/A
item_version_id	String	Definition: Version of a subscription algorithm, which must be used with subscription_id . Range: N/A
code_dir	String	Definition: Code directory of a training job, for example, /usr/app/ . This parameter must be used with boot_file . Leave this parameter blank if id , or subscription_id and item_version_id are specified. Range: N/A
boot_file	String	Definition: Boot file of a training job, which must be stored in the code directory, for example, /usr/app/boot.py . This parameter must be used with code_dir . Leave this parameter blank if id , or subscription_id and item_version_id are specified. Range: N/A
autosearch_config_path	String	Definition: YAML configuration path of an auto search job. An OBS URL is required. For example, obs://bucket/file.yaml . Range: N/A

Parameter	Type	Description
autosearch_framework_path	String	Definition: Framework code directory of an auto search job. An OBS URL is required. For example, obs://bucket/files/ . Range: N/A
command	String	Definition: Boot command for starting the container of a custom image for a training job. For example, python train.py . Range: N/A
parameters	Array of ParameterResp objects	Definition: Running parameters of the training job.
policies	policies object	Definition: Policy supported by a job.
inputs	Array of InputResp objects	Definition: Data input of a training job.
outputs	Array of OutputResp objects	Definition: Output of the training job.
engine	JobEngineResp object	Definition: Engine of a training job. Leave this parameter blank if the job is created using id of the algorithm in algorithm management, or subscription_id+item_version_id of the subscribed algorithm.
local_code_dir	String	Definition: Local directory of the training container to which the algorithm code directory is downloaded. The rules are as follows: • The directory must be under /home. • In v1 compatibility mode, the current field does not take effect. • When code_dir is prefixed with file://, the current field does not take effect. Range: N/A
working_dir	String	Definition: Work directory where an algorithm is executed. Rules: In v1 compatibility mode, this parameter does not take effect. Range: N/A

Parameter	Type	Description
environments	Array of Map<String,String> objects	Definition: Environment variables of a training job. The format is key:value . Leave this parameter blank.
summary	SummaryResp object	Definition: Visualization log summary.

Table 5-249 ParameterResp

Parameter	Type	Description
name	String	Definition: Parameter name. Range: N/A
value	String	Definition: Parameter value. Range: N/A
description	String	Definition: Parameter description. Range: N/A
constraint	constraint object	Definition: Parameter attribute.
i18n_description	i18n_description object	Definition: Internationalization description.

Table 5-250 constraint

Parameter	Type	Description
type	String	Definition: Parameter type. Range: N/A
editable	Boolean	Definition: Whether the parameter can be edited. Range: • true: editable • false: Not uneditable
required	Boolean	Definition: Whether the parameter is mandatory. Range: • true: mandatory • false: optional

Parameter	Type	Description
sensitive	Boolean	Definition: Whether the parameter is sensitive. This function is unavailable currently. Range: • true: sensitive • false: insensitive
valid_type	String	Definition: Valid type. Range: N/A
valid_range	Array of strings	Definition: Valid range.

Table 5-251 i18n_description

Parameter	Type	Description
language	String	Definition: Internationalization language. The options are as follows: • zh-cn: Chinese • en-us: English](tag:hc,hk) Range: N/A
description	String	Definition: Internationalization language description. Range: N/A

Table 5-252 policies

Parameter	Type	Description
auto_search	auto_search object	Definition: Hyperparameter search configuration.

Table 5-253 auto_search

Parameter	Type	Description
skip_search_params	String	Definition: Hyperparameter parameters that need to be skipped. Range: N/A
reward_attrs	Array of reward_attrs objects	Definition: Search metrics.

Parameter	Type	Description
search_params	Array of search_params objects	Definition: Search parameters.
algo_configs	Array of algo_configs objects	Definition: Search algorithm configurations.

Table 5-254 reward_attrs

Parameter	Type	Description
name	String	Definition: Metric name. Range: N/A
mode	String	Definition: Search mode. Range: • max: A larger metric value is preferred. • min: A smaller metric value is preferred.
regex	String	Definition: Regular expression of a metric. Range: N/A

Table 5-255 search_params

Parameter	Type	Description
name	String	Definition: Hyperparameter name. Range: N/A

Parameter	Type	Description
param_type	String	Definition: Parameter type. Range: • continuous: The hyperparameter is of the continuous type. When an algorithm is used in a training job, continuous hyperparameters are displayed as text boxes on the console. • discrete: The hyperparameter is of the discrete type. When an algorithm is used in a training job, discrete hyperparameters are displayed as drop-down lists on the console.
lower_bound	String	Definition: Lower bound of the hyperparameter. Range: N/A
upper_bound	String	Definition: Upper bound of the hyperparameter. Range: N/A
discrete_points_num	String	Definition: Number of discrete points of a hyperparameter with continuous values. Range: N/A
discrete_values	Array of strings	Definition: Discrete hyperparameter values.

Table 5-256 algo_configs

Parameter	Type	Description
name	String	Definition: Search algorithm name. Range: N/A
params	Array of AutoSearchAlgoConfigParameterResp objects	Definition: Search algorithm parameters.

Table 5-257 AutoSearchAlgoConfigParameterResp

Parameter	Type	Description
key	String	Definition: Parameter key. Range: N/A
value	String	Definition: Parameter value. Range: N/A
type	String	Definition: Parameter type. Range: N/A

Table 5-258 InputResp

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
description	String	Definition: Description of the data input channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data input channels are mapped. Example: /home/ma-user/modelarts/inputs/data_url_0 Range: N/A
access_method	String	Definition: Access method of the input data channel path (local_dir). Range: • parameter: hyperparameters • env: environment variables
remote	InputDataInfoResp object	Definition: Description of the actual data input.
remote_constraint	Array of remote_constraint objects	Definition: Data input constraint.

Table 5-259 InputDataInfoResp

Parameter	Type	Description
dataset	dataset object	Definition: The input is a dataset.

Parameter	Type	Description
obs	obs object	Definition: OBS in which data input and output are stored.

Table 5-260 dataset

Parameter	Type	Description
id	String	Definition: Dataset ID of a training job. Range: N/A
version_id	String	Definition: Dataset version ID of a training job. Range: N/A
obs_url	String	Definition: OBS URL of the dataset for a training job. It is automatically parsed by ModelArts based on the dataset ID and dataset version ID. For example, /usr/data/ . Range: N/A

Table 5-261 obs

Parameter	Type	Description
obs_url	String	Definition: OBS URL of the dataset for a training job, For example, /usr/data/ . Range: N/A

Table 5-262 remote_constraint

Parameter	Type	Description
data_type	String	Definition: Data input type, including the data storage location and dataset. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
attributes	String	Definition: Related attributes. Constraints: N/A Range: If the input is a dataset: • data_format: data format • data_segmentation: data segmentation method • dataset_type: data labeling type Default Value: N/A

Table 5-263 OutputResp

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A
description	String	Definition: Description of the data output channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data output channels are mapped. Range: N/A
access_method	String	Definition: Access method of the input data channel path (local_dir). Range: • parameter: hyperparameters • env: environment variables
remote	RemoteResp object	Definition: Description of the actual data output.

Table 5-264 JobEngineResp

Parameter	Type	Description
engine_id	String	Definition: Engine ID selected for a training job. Range: N/A

Parameter	Type	Description
engine_name	String	Definition: Engine name selected for a training job. Range: N/A
engine_version	String	Definition: Engine version selected for a training job. Range: N/A
image_url	String	Definition: Custom image URL selected for a training job. The URL is obtained from SWR. Range: N/A
install_sys_packages	Boolean	Definition: Specifies whether to install the MoXing version specified by the training platform. Range: • true: yes • false: no

Table 5-265 SummaryResp

Parameter	Type	Description
log_type	String	Definition: Visualization log type of a training job. After this parameter is configured, the training job can be used as the data source of a visualization job. Range: • tensorboard: TensorBoard • mindstudio-insight: MindStudio Insight
log_dir	LogDirResp object	Definition: Visualization log output of a training job.
data_sources	Array of DataSourceResp objects	Definition: Visualization log input of the visualization job or training job debugging mode.

Table 5-266 LogDirResp

Parameter	Type	Description
pfs	PFSSummaryResp object	Definition: Output of an OBS parallel file system.

Table 5-267 PFSSummaryResp

Parameter	Type	Description
pfs_path	String	Definition: URL of the OBS parallel file system. Range: N/A

Table 5-268 DataSourceResp

Parameter	Type	Description
job	JobSummaryResp object	Definition: Job data source.

Table 5-269 JobSummaryResp

Parameter	Type	Description
job_id	String	Definition: ID of a training job. Range: N/A

Table 5-270 TaskResponse

Parameter	Type	Description
role	String	Definition: Task role. This function is not supported currently. Range: N/A
algorithm	TaskResponseAlgorithm object	Definition: Algorithm configurations for algorithm management.
task_resource	FlavorResponse object	Definition: Specifications of a training job or algorithm.
log_export_path	log_export_path object	Definition: Saved information about training job logs.

Table 5-271 TaskResponseAlgorithm

Parameter	Type	Description
code_dir	String	Definition: Absolute path of the directory where the algorithm boot file is stored. Range: N/A
boot_file	String	Definition: Absolute path of an algorithm boot file. Range: N/A
inputs	AlgorithmInput object	Definition: Information about the algorithm input channel.
outputs	AlgorithmOutput object	Definition: Information about the algorithm output channel.
engine	AlgorithmEngine object	Definition: Engine that a heterogeneous job depends on.
local_code_dir	String	Definition: Local directory of the training container to which the algorithm code directory is downloaded. The rules are as follows: • The directory must be under / home. • In v1 compatibility mode, the current field does not take effect. • When code_dir is prefixed with file://, the current field does not take effect. Range: N/A
working_dir	String	Definition: Work directory where an algorithm is executed. Note that this parameter does not take effect in v1 compatibility mode. Range: N/A
environments	Map<String,String>	Definition: Environment variables related to a training job. Range: N/A

Table 5-272 AlgorithmInput

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data input and output channels are mapped. Range: N/A
remote	AlgorithmRemote object	Definition: Actual data input, which can only be OBS for heterogeneous jobs.

Table 5-273 AlgorithmRemote

Parameter	Type	Description
obs	RemoteObsResp object	Definition: OBS in which data input and output are stored.

Table 5-274 AlgorithmOutput

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data output channels are mapped. Range: N/A
remote	RemoteResp object	Definition: Description of the actual data output.
mode	String	Definition: Data transmission mode. The default value is upload_periodically . Range: N/A
period	String	Definition: Data transmission period. The default value is 30s . Range: N/A

Table 5-275 RemoteResp

Parameter	Type	Description
obs	RemoteObsResp object	Definition: Data actually output to OBS.

Table 5-276 RemoteObsResp

Parameter	Type	Description
obs_url	String	Definition: Path of the data output to OBS. Range: N/A

Table 5-277 AlgorithmEngine

Parameter	Type	Description
engine_id	String	Definition: Engine flavor ID, for example, caffe-1.0.0-python2.7 . Range: N/A
engine_name	String	Definition: Engine flavor name, for example, Caffe . Range: N/A
engine_version	String	Definition: Engine flavor version. Engines with the same name have multiple versions, for example, Caffe-1.0.0-python2.7 of Python 2.7. Range: N/A
v1_compatible	Boolean	Definition: Specifies whether the v1 compatibility mode is used. Range: • true: The v1 compatibility mode is used. • false: The v1 compatibility mode is not used.
run_user	String	Definition: Default UID for the engine startup. Range: N/A
image_url	String	Definition: Custom image URL selected for an algorithm. Range: N/A

Table 5-278 FlavorResponse

Parameter	Type	Description
pool_id	String	Definition: ID of the resource pool selected for a training job. Range: N/A
flavor_id	String	Definition: Resource flavor ID. Range: N/A
flavor_name	String	Definition: Resource flavor name. Range: N/A
max_num	Integer	Definition: Maximum number of nodes supported by a flavor. Range: N/A
flavor_type	String	Definition: Resource flavor type. Range: • CPU • GPU • Ascend
billing	BillingInfo object	Definition: Billing information of a resource flavor.
flavor_info	FlavorInfoResponse object	Definition: Resource flavor details.
attributes	Map<String,String>	Definition: Other flavor attributes. Range: N/A

Table 5-279 FlavorInfoResponse

Parameter	Type	Description
max_num	Integer	Definition: Maximum number of nodes that can be selected. The value 1 indicates that the distributed mode is not supported. Range: N/A
cpu	Cpu object	Definition: CPU specifications.
gpu	Gpu object	Definition: GPU specifications.
npu	Npu object	Definition: Ascend specifications.
memory	Memory object	Definition: Memory information.

Parameter	Type	Description
disk	DiskResponse object	Definition: Disk information.

Table 5-280 DiskResponse

Parameter	Type	Description
size	Integer	Definition: Disk size. Range: N/A
unit	String	Definition: Unit of the disk size. Range: N/A

Table 5-281 log_export_path

Parameter	Type	Description
obs_url	String	Definition: OBS path for storing training job logs.

Table 5-282 SpecResponse

Parameter	Type	Description
resource	Resource object	Definition: Resource flavor of a training job. Select either flavor_id or pool_id and flavor_id .
volumes	Array of JobVolumeResp objects	Definition: Mounting volume information of a training job.
log_export_path	LogExportPathResp object	Definition: Log output of a training job.
schedule_policy	SchedulePolicyResp object	Definition: Scheduling policy of a training job.
custom_metrics	Array of CustomMetrics objects	Definition: Metric collection configuration.

Table 5-283 Resource

Parameter	Type	Description
policy	String	Definition: Resource flavor mode of a training job. Range: • regular: standard mode
flavor_id	String	Definition: ID of the resource flavor of a training job. Range: The flavor_id parameter cannot be specified for a dedicated resource pool of CPU specifications. The options for dedicated resource pools with GPU/Ascend specifications are as follows: • modelarts.pool.visual.xlarge (1 PU) • modelarts.pool.visual.2xlarge (2 PUs) • modelarts.pool.visual.4xlarge (4 PUs) • modelarts.pool.visual.8xlarge (8 PUs)
flavor_name	String	Definition: Read-only flavor name returned by ModelArts when flavor_id is used. Range: N/A
node_count	Integer	Definition: Number of resource replicas selected for a training job. Range: N/A
pool_id	String	Definition: ID of the resource pool selected for a training job. Range: N/A
pool_group_id	String	Definition: ID of the resource pool federation selected for a training job. Range: N/A
flavor_detail	FlavorDetail object	Definition: Flavor details of a training job or algorithm. This parameter is available only for public resource pools.
main_container_allocated_resources	MainContainerAllocatedResources object	Definition: Resource specifications actually obtained by the training container of a training job.

Parameter	Type	Description
main_container_customized_flavor	MainContainerCustomizedFlavor object	Definition: Custom flavor of a training job. Range: The number of CPU cores and memory size must be greater than 0, and the number of accelerator PUs must be greater than or equal to 0.

Table 5-284 FlavorDetail

Parameter	Type	Description
flavor_type	String	Definition: Resource flavor type. Range: • CPU • GPU • Ascend
billing	BillingInfo object	Definition: Billing information of a resource flavor.
flavor_info	FlavorInfo object	Definition: Resource flavor details.

Table 5-285 BillingInfo

Parameter	Type	Description
code	String	Definition: Billing code. Range: N/A
unit_num	Integer	Definition: Billing unit. Range: N/A

Table 5-286 FlavorInfo

Parameter	Type	Description
max_num	Integer	Definition: Maximum number of nodes that can be selected. The value 1 indicates that the distributed mode is not supported. Range: N/A
cpu	Cpu object	Definition: CPU specifications.
gpu	Gpu object	Definition: GPU specifications.

Parameter	Type	Description
npu	Npu object	Definition: Ascend specifications.
memory	Memory object	Definition: Memory information.
disk	Disk object	Definition: Disk information.

Table 5-287 Cpu

Parameter	Type	Description
arch	String	Definition: CPU architecture. Range: N/A
core_num	Integer	Definition: Number of cores. Range: N/A

Table 5-288 Gpu

Parameter	Type	Description
unit_num	Integer	Definition: Number of GPUs. Range: N/A
product_name	String	Definition: Product name. Range: N/A
memory	String	Definition: Memory. Range: N/A

Table 5-289 Npu

Parameter	Type	Description
unit_num	String	Definition: Number of NPUs. Range: N/A
product_name	String	Definition: Product name. Range: N/A
memory	String	Definition: Memory. Range: N/A

Table 5-290 Memory

Parameter	Type	Description
size	Integer	Definition: Memory size. Range: N/A
unit	String	Definition: Number of memory units. Range: N/A

Table 5-291 Disk

Parameter	Type	Description
size	String	Definition: Disk size. Range: N/A
unit	String	Definition: Unit of the disk size. Generally, the unit is GB. Range: N/A

Table 5-292 MainContainerAllocatedResources

Parameter	Type	Description
cpu_arch	String	Definition: CPU architecture. Range: N/A
cpu_core_num	Float	Definition: Number of cores. Range: N/A
mem_size	Float	Definition: Memory information. Range: N/A
accelerator_num	Float	Definition: Number of accelerator cards. Range: N/A
accelerator_type	String	Definition: Type of accelerator cards. Range: N/A

Table 5-293 MainContainerCustomizedFlavor

Parameter	Type	Description
cpu_core_num	Float	Definition: Number of CPU cores. Range: greater than 0

Parameter	Type	Description
mem_size	Float	Definition: Memory size. Range: greater than 0
accelerator_num	Float	Definition: Number of accelerator cards. Range: greater than or equal to 0

Table 5-294 JobVolumeResp

Parameter	Type	Description
nfs	NfsResp object	Definition: Volumes attached in NFS mode.

Table 5-295 NfsResp

Parameter	Type	Description
nfs_server_path	String	Definition: NFS server path, for example, 10.10.10.10:/example/path . Range: N/A
local_path	String	Definition: Path for attaching volumes to the training container, for example, /example/path . Range: N/A
read_only	Boolean	Definition: Specifies whether the disks attached to the container in NFS mode are read-only. Range: • true: read only • false: non-read-only

Table 5-296 LogExportPathResp

Parameter	Type	Description
obs_url	String	Definition: OBS path for storing training job logs, for example, obs://example/path . Range: N/A

Parameter	Type	Description
host_path	String	Definition: Path of the host where training job logs are stored, for example, <code>/example/path</code> . Range: N/A

Table 5-297 SchedulePolicyResp

Parameter	Type	Description
required_affinity	RequiredAffinityResp object	Definition: Affinity requirements of a training job.
priority	Integer	Definition: Priority of a training job. Range: 0 to 3
preemptible	Boolean	Definition: Whether the resource can be preempted. Range: • true: The resource can be preempted. • false: The resource cannot be preempted.

Table 5-298 RequiredAffinityResp

Parameter	Type	Description
affinity_type	String	Definition: Affinity scheduling policy. Range: • cabinet: strong cabinet scheduling • hyperinstance: supernode affinity scheduling
affinity_group_size	Integer	Definition: Size of an affinity group. Range: N/A

Table 5-299 CustomMetrics

Parameter	Type	Description
exec	Exec object	Definition: Metrics are collected in CLI mode.

Parameter	Type	Description
http_get	HttpGet object	Definition: Metrics are collected in HTTP mode.

Table 5-300 Exec

Parameter	Type	Description
command	Array of strings	Definition: Metrics are collected in CLI mode.

Table 5-301 HttpGet

Parameter	Type	Description
path	String	Definition: URL for obtaining metrics over HTTP. Both the URL and the port below must either be configured together or remain empty. Range: N/A
port	Integer	Definition: Port for obtaining metrics over HTTP. This parameter and the URL above must be set or left blank at the same time. Range: N/A

Table 5-302 JobEndpointsResp

Parameter	Type	Description
ssh	SSHResp object	Definition: SSH connection information.
jupyter_lab	JupyterLab object	Definition: JupyterLab connection information.
tensorboard	Tensorboard object	Definition: TensorBoard connection information.
mindstudio_insight	MindStudioInsight object	Definition: MindStudio Insight connection information.

Table 5-303 SSHResp

Parameter	Type	Description
key_pair_names	Array of strings	Definition: Name of the SSH key pair, which can be created and viewed on the Key Pair page of the Elastic Cloud Server (ECS) console. Range: N/A
task_urls	Array of TaskUrls objects	Definition: SSH connection address.

Table 5-304 TaskUrls

Parameter	Type	Description
task	String	Definition: Task ID of a training job. Range: N/A
url	String	Definition: SSH connection address of a training job. Range: N/A

Table 5-305 JupyterLab

Parameter	Type	Description
url	String	Definition: JupyterLab address of a training job. Range: N/A
token	String	Definition: JupyterLab token of a training job. Range: N/A

Table 5-306 Tensorboard

Parameter	Type	Description
url	String	Definition: TensorBoard address of a training job. Range: N/A
token	String	Definition: TensorBoard token of a training job. Range: N/A

Table 5-307 MindStudioInsight

Parameter	Type	Description
url	String	Definition: MindStudio Insight address of a training job. Range: N/A
token	String	Definition: MindStudio Insight token of a training job. Range: N/A

Example Requests

The following shows how to query a training job whose UUID is **3faf5c03-aaa1-4cbe-879d-24b05d997347**.

```
GET https://endpoint/v2/{project_id}/training-jobs/3faf5c03-aaa1-4cbe-879d-24b05d997347
```

Example Responses

Status code: 200

ok

```
{
  "kind": "job",
  "metadata": {
    "id": "3faf5c03-aaa1-4cbe-879d-24b05d997347",
    "name": "trainjob--py14_mem06-108",
    "description": "",
    "create_time": 1636447346315,
    "workspace_id": "0",
    "user_name": ""
  },
  "status": {
    "phase": "Abnormal",
    "secondary_phase": "CreateFailed",
    "duration": 0,
    "start_time": 0,
    "node_count_metrics": [ [ 1636447746000, 0 ], [ 1636447755000, 0 ], [ 1636447756000, 0 ] ],
    "tasks": [ "worker-0" ],
    "running_records": [ {
      "start_at": 1701327093,
      "end_at": 1701322341,
      "start_type": "init_or_rescheduled",
      "end_recover": "job_reschedule",
      "end_reason": "exit with 127",
      "end_related_task": "worker-2",
      "end_recover_before_downgrade": "npu_proc_restart"
    }, {
      "start_at": 1701323345,
      "end_at": 1701325432,
      "start_type": "init_or_rescheduled",
      "end_reason": "job completed"
    } ]
  },
  "algorithm": {
    "code_dir": "obs://test/economic_test/py_minist/",
    "boot_file": "obs://test/economic_test/py_minist/minist_common.py",
    "inputs": [ {
      "name": "data_url",
```

```
"local_dir" : "/home/ma-user/modelarts/inputs/data_url_0",
"remote" : {
  "obs" : {
    "obs_url" : "/test/data/py_minist/"
  }
},
}],
"outputs" : [ {
  "name" : "train_url",
  "local_dir" : "/home/ma-user/modelarts/outputs/train_url_0",
  "remote" : {
    "obs" : {
      "obs_url" : "/test/train_output/"
    }
  }
}],
"engine" : {
  "engine_id" : "pytorch-cp36-1.4.0-v2",
  "engine_name" : "PyTorch",
  "engine_version" : "PyTorch-1.4.0-python3.6-v2"
},
"spec" : {
  "resource" : {
    "flavor_id" : "modelarts.vm.pnt1.large.eco",
    "node_count" : 1,
    "flavor_detail" : {
      "flavor_type" : "GPU",
      "billing" : {
        "code" : "modelarts.vm.gpu.pnt1.eco",
        "unit_num" : 1
      }
    },
    "flavor_info" : {
      "cpu" : {
        "arch" : "x86",
        "core_num" : 8
      },
      "gpu" : {
        "unit_num" : 1,
        "memory" : "8GB"
      },
      "memory" : {
        "size" : 64,
        "unit" : "GB"
      }
    }
  },
  "main_container_allocated_resources" : {
    "cpu_arch" : "x86",
    "cpu_core_num" : 5,
    "mem_size" : 44,
    "accelerator_num" : 1,
    "accelerator_type" : "nvidia-v100-pcie32"
  },
  "custom_metrics" : [ {
    "exec" : {
      "command" : [ "cat", "/a/b/c.porm" ]
    }
  }, {
    "http_get" : {
      "path" : "/raw_text",
      "port" : 10001
    }
  }
]
}
```


Status Codes

Status Code	Description
200	ok

Error Codes

See [Error Codes](#).

5.8 Modifying the Description of a Training Job

Function

This API is used to modify the description of an existing training job.

This API is used when you need to update the description of a training job. Before using this API, ensure that the training job exists and you have the required permission. After the update, the description of the training job is updated. If the training job does not exist or you do not have the required permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v2/{project_id}/training-jobs/{training_job_id}

Table 5-308 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
training_job_id	Yes	String	Definition: Training job ID. For details, see Obtaining Training Jobs . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 5-309 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	Definition: Training job description. Constraints: The value can contain at most 256 characters. Range: N/A Default Value: NULL

Response Parameters

Status code: 200

No Content

None

Example Requests

The following shows how to modify a training job with UUID **3faf5c03-aaa1-4cbe-879d-24b05d997347**. After the modification, call the API for obtaining a training job(ListTrainingJobs.xml) to view the modified description.

```
PUT https://endpoint/v2/{project_id}/training-jobs/3faf5c03-aaa1-4cbe-879d-24b05d997347
```

```
{
  "description" : "hahaha"
}
```

Example Responses

Status code: 200

No Content

```
null
```

Status Codes

Status Code	Description
200	No Content

Error Codes

See [Error Codes](#).

5.9 Deleting a Training Job

Function

This API is used to delete a training job from ModelArts.

This API applies to the following scenarios: When you need to delete completed or unnecessary training jobs, you can use this API to delete a specified training job. Before using this API, ensure that the training job exists and you have the permission to delete it. After the deletion is complete, the training job is permanently removed from the platform, and related resources and configurations are cleared. If the training job ID does not exist or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v2/{project_id}/training-jobs/{training_job_id}

Table 5-310 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
training_job_id	Yes	String	Definition: Training job ID. For details, see Obtaining Training Jobs . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 202

No Content

None

Example Requests

The following shows how to delete a training job whose UUID is **3faf5c03-aaa1-4cbe-879d-24b05d997347**.

```
DELETE https://endpoint/v2/{project_id}/training-jobs/3faf5c03-aaa1-4cbe-879d-24b05d997347
```

Example Responses

Status code: 202

No Content

```
""
```

Status Codes

Status Code	Description
202	No Content

Error Codes

See [Error Codes](#).

5.10 Terminating a Training Job

Function

This API is used to terminate a training job on ModelArts. Only jobs in the creating, awaiting, or running state can be terminated.

This API applies to the following scenario: When you need to terminate an ongoing training job, you can use this API to do so. Before using this API, ensure that there is a running training job and you have the permission to terminate the job. After the termination is complete, the training job stops running, and resources are released. If the training job ID does not exist, the job is not in the appropriate running state, or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/training-jobs/{training_job_id}/actions

Table 5-311 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
training_job_id	Yes	String	Definition: Training job ID. For details, see Obtaining Training Jobs . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 5-312 Request body parameters

Parameter	Mandatory	Type	Description
action_type	Yes	String	Definition: Operation request for a training job. Constraints: N/A Range: • terminate: Terminate a training job. Default Value: N/A

Response Parameters

Status code: 202

Table 5-313 Response body parameters

Parameter	Type	Description
kind	String	Definition: Type of a training job. Range • job: common job • federated_pool_job: resource pool federated job • edge_job: edge job • hetero_job: heterogeneous job • mrs_job: MRS job • autosearch_job: auto search job • diag_job: diagnosis job • visualization_job: visualization job
metadata	JobMetadataResponse object	Definition: Training job metadata.
status	Status object	Definition: Training job status information.
algorithm	JobAlgorithmResponse object	Definition: Training job algorithm.
tasks	Array of TaskResponse objects	Definition: Heterogeneous training tasks.

Parameter	Type	Description
spec	SpecResponse object	Definition: Training job specifications.
endpoints	JobEndpointsResponse object	Definition: Configurations required for remotely accessing a training job.

Table 5-314 JobMetadataResponse

Parameter	Type	Description
id	String	Definition: Training job ID, which is generated and returned by ModelArts after a training job is created. Range: N/A
name	String	Definition: Name of a training job. Range: The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-).
workspace_id	String	Definition: Workspace where a specified job is located. Range: N/A
description	String	Definition: Definition of a training job. Range: N/A
create_time	Long	Definition: Time when a training job was created, in milliseconds. The value is generated and returned by ModelArts after a training job is created. Range: N/A
user_name	String	Definition: Username for creating a training job. The username is generated and returned by ModelArts after a training job is created. Range: N/A
annotations	Map<String,String>	Definition: Advanced functions of a training job.

Table 5-315 Status

Parameter	Type	Description
phase	String	Definition: Level-1 status of a training job. Range: • Creating: The job is being created. • Pending: The job is pending. • Running: The job is running. • Failed: The job failed to run. • Completed: The job is complete. • Terminating: The job is being stopped. • Terminated: The job has been stopped. • Abnormal: The job is abnormal.
secondary_phase	String	Definition: Level-2 status of a training job. The values are internal detailed statuses and may be added, changed, or deleted. Dependency on the status is not recommended. Range: • Creating: The job is being created. • Queuing: The job is queuing. • Running: The job is running. • Failed: The job failed to run. • Completed: The job is complete. • Terminating: The job is being stopped. • Terminated: The job has been stopped. • CreateFailed: The job fails to be created. • TerminatedFailed: The job fails to be stopped. • Unknown: The job is in an unknown state. • Lost: The job is abnormal.
duration	Long	Definition: Running duration of a training job, in ms. Range: N/A
node_count_metrics	Array<Array<Integer>>	Definition: Node quantity change metric during a training job runtime.

Parameter	Type	Description
tasks	Array of strings	Definition: Training job subtask name.
start_time	Long	Definition: Timestamp when a training job is started. Range: N/A
task_statuses	Array of TaskStatuses objects	Definition: Status of the first failed subtask of a training job.
running_records	Array of RunningRecord objects	Definition: Running and fault recovery records of a training job.

Table 5-316 TaskStatuses

Parameter	Type	Description
task	String	Definition: Training job subtask name. Range: N/A
exit_code	Integer	Definition: Exit code of a training job subtask. Range: N/A
message	String	Definition: Error message of a training job subtask. Range: N/A

Table 5-317 RunningRecord

Parameter	Type	Description
start_at	Integer	Definition: Unix timestamp of the start time in the current running record, in seconds. Range: N/A
end_at	Integer	Definition: Unix timestamp of the end time in the current running record, in seconds. Range: N/A
xpu_start_at	Integer	Definition: Unix timestamp of the accelerator card startup time in the current running record, in seconds. Range: N/A

Parameter	Type	Description
start_type	String	Definition: Startup mode of the current execution. Range • init_or_rescheduled: This startup is the first running after scheduling, including the first startup and the running after scheduling recovery. • restarted: This startup is not the first running after scheduling but the running after a process restart.
end_reason	String	Definition: Reason why the running ends. Range: N/A
end_related_task	String	Definition: ID of the task worker (for example, worker-0) that ends the running. Range: N/A
end_recover	String	Definition: Fault tolerance policy adopted when the execution ends abnormally. Range • npu_proc_restart: NPU in-place hot recovery • proc_restart: in-place process recovery • npu_step_retry: step recomputation • pod_reschedule: pod-level rescheduling • job_reschedule: job-level rescheduling • job_reschedule_with_taint: isolated job-level rescheduling
end_recover_before_downgrade	String	Definition: There is a downgrade relationship between policies. If a policy fails to be executed, it will be downgraded to another specified policy. end_recover_before_downgrade indicates the tolerance policy used before end_recover is downgraded. Range: same as that of end_recover.

Parameter	Type	Description
recover_records	Array of RecoverRecord objects	Definition: details about all fault tolerance policies adopted when the execution ends abnormally.

Table 5-318 RecoverRecord

Parameter	Type	Description
recover_start_at	Integer	Unix timestamp of the start time of the fault tolerance policy, in seconds. The timestamp is also the fault occurrence time.
recover_end_at	Integer	Unix timestamp of the end time of the fault tolerance policy, in seconds.
recover	String	Fault tolerance policy. Options: • npu_step_retry: step recomputation • npu_proc_restart: NPU in-place hot recovery • proc_restart: in-place process recovery • pod_reschedule: pod-level rescheduling • job_reschedule: job-level rescheduling • job_reschedule_with_taint: isolated job-level rescheduling
fault_scenario	String	Fault scenario. Options: • chip_fault: chip fault • node_fault: node fault • job_failed: job exit upon a failure • job_hanged: job suspension • job_subhealth: job subhealth • error_in_log: log exception
reason	String	Cause of the fault.
related_task	String	ID of the task worker that causes the end of the current running record, for example, worker-0 .

Parameter	Type	Description
recover_result	String	Execution result of the fault. Options: • recovering: executing • success: successful • failed: failed • downgrade: policy downgrade

Table 5-319 JobAlgorithmResponse

Parameter	Type	Description
id	String	Definition: Training job algorithm. Range: • id: Only the algorithm ID is used. • subscription_id+item_version_id: The subscription ID and version ID of the algorithm are used. • code_dir+boot_file: The code directory and boot file of the training job are used.
name	String	Definition: Algorithm name. Range: N/A
subscription_id	String	Definition: Subscription ID of a subscription algorithm, which must be used with item_version_id . Range: N/A
item_version_id	String	Definition: Version of a subscription algorithm, which must be used with subscription_id . Range: N/A
code_dir	String	Definition: Code directory of a training job, for example, /usr/app/ . This parameter must be used with boot_file . Leave this parameter blank if id , or subscription_id and item_version_id are specified. Range: N/A

Parameter	Type	Description
boot_file	String	Definition: Boot file of a training job, which must be stored in the code directory, for example, <code>/usr/app/boot.py</code> . This parameter must be used with <code>code_dir</code> . Leave this parameter blank if <code>id</code> , or <code>subscription_id</code> and <code>item_version_id</code> are specified. Range: N/A
autosearch_config_path	String	Definition: YAML configuration path of an auto search job. An OBS URL is required. For example, <code>obs://bucket/file.yaml</code> . Range: N/A
autosearch_framework_path	String	Definition: Framework code directory of an auto search job. An OBS URL is required. For example, <code>obs://bucket/files/</code> . Range: N/A
command	String	Definition: Boot command for starting the container of a custom image for a training job. For example, <code>python train.py</code> . Range: N/A
parameters	Array of <code>ParameterResp</code> objects	Definition: Running parameters of the training job.
policies	<code>policies</code> object	Definition: Policy supported by a job.
inputs	Array of <code>InputResp</code> objects	Definition: Data input of a training job.
outputs	Array of <code>OutputResp</code> objects	Definition: Output of the training job.
engine	<code>JobEngineResp</code> object	Definition: Engine of a training job. Leave this parameter blank if the job is created using <code>id</code> of the algorithm in algorithm management, or <code>subscription_id+item_version_id</code> of the subscribed algorithm.

Parameter	Type	Description
local_code_dir	String	Definition: Local directory of the training container to which the algorithm code directory is downloaded. The rules are as follows: • The directory must be under / home. • In v1 compatibility mode, the current field does not take effect. • When code_dir is prefixed with file://, the current field does not take effect. Range: N/A
working_dir	String	Definition: Work directory where an algorithm is executed. Rules: In v1 compatibility mode, this parameter does not take effect. Range: N/A
environments	Array of Map<String,String> objects	Definition: Environment variables of a training job. The format is key:value . Leave this parameter blank.
summary	SummaryResp object	Definition: Visualization log summary.

Table 5-320 ParameterResp

Parameter	Type	Description
name	String	Definition: Parameter name. Range: N/A
value	String	Definition: Parameter value. Range: N/A
description	String	Definition: Parameter description. Range: N/A
constraint	constraint object	Definition: Parameter attribute.
i18n_description	i18n_description object	Definition: Internationalization description.

Table 5-321 constraint

Parameter	Type	Description
type	String	Definition: Parameter type. Range: N/A
editable	Boolean	Definition: Whether the parameter can be edited. Range: • true: editable • false: Not uneditable
required	Boolean	Definition: Whether the parameter is mandatory. Range: • true: mandatory • false: optional
sensitive	Boolean	Definition: Whether the parameter is sensitive. This function is unavailable currently. Range: • true: sensitive • false: insensitive
valid_type	String	Definition: Valid type. Range: N/A
valid_range	Array of strings	Definition: Valid range.

Table 5-322 i18n_description

Parameter	Type	Description
language	String	Definition: Internationalization language. The options are as follows: • zh-cn: Chinese • en-us: English](tag:hc,hk) Range: N/A
description	String	Definition: Internationalization language description. Range: N/A

Table 5-323 policies

Parameter	Type	Description
auto_search	auto_search object	Definition: Hyperparameter search configuration.

Table 5-324 auto_search

Parameter	Type	Description
skip_search_params	String	Definition: Hyperparameter parameters that need to be skipped. Range: N/A
reward_attrs	Array of reward_attrs objects	Definition: Search metrics.
search_params	Array of search_params objects	Definition: Search parameters.
algo_configs	Array of algo_configs objects	Definition: Search algorithm configurations.

Table 5-325 reward_attrs

Parameter	Type	Description
name	String	Definition: Metric name. Range: N/A
mode	String	Definition: Search mode. Range: • max: A larger metric value is preferred. • min: A smaller metric value is preferred.
regex	String	Definition: Regular expression of a metric. Range: N/A

Table 5-326 search_params

Parameter	Type	Description
name	String	Definition: Hyperparameter name. Range: N/A
param_type	String	Definition: Parameter type. Range: • continuous: The hyperparameter is of the continuous type. When an algorithm is used in a training job, continuous hyperparameters are displayed as text boxes on the console. • discrete: The hyperparameter is of the discrete type. When an algorithm is used in a training job, discrete hyperparameters are displayed as drop-down lists on the console.
lower_bound	String	Definition: Lower bound of the hyperparameter. Range: N/A
upper_bound	String	Definition: Upper bound of the hyperparameter. Range: N/A
discrete_points_num	String	Definition: Number of discrete points of a hyperparameter with continuous values. Range: N/A
discrete_values	Array of strings	Definition: Discrete hyperparameter values.

Table 5-327 algo_configs

Parameter	Type	Description
name	String	Definition: Search algorithm name. Range: N/A
params	Array of AutoSearchAlgoConfigParameterResp objects	Definition: Search algorithm parameters.

Table 5-328 AutoSearchAlgoConfigParameterResp

Parameter	Type	Description
key	String	Definition: Parameter key. Range: N/A
value	String	Definition: Parameter value. Range: N/A
type	String	Definition: Parameter type. Range: N/A

Table 5-329 InputResp

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
description	String	Definition: Description of the data input channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data input channels are mapped. Example: /home/ma-user/modelarts/inputs/data_url_0 Range: N/A
access_method	String	Definition: Access method of the input data channel path (local_dir). Range: • parameter: hyperparameters • env: environment variables
remote	InputDataInfoResp object	Definition: Description of the actual data input.
remote_constraint	Array of remote_constraint objects	Definition: Data input constraint.

Table 5-330 InputDataInfoResp

Parameter	Type	Description
dataset	dataset object	Definition: The input is a dataset.

Parameter	Type	Description
obs	obs object	Definition: OBS in which data input and output are stored.

Table 5-331 dataset

Parameter	Type	Description
id	String	Definition: Dataset ID of a training job. Range: N/A
version_id	String	Definition: Dataset version ID of a training job. Range: N/A
obs_url	String	Definition: OBS URL of the dataset for a training job. It is automatically parsed by ModelArts based on the dataset ID and dataset version ID. For example, /usr/data/ . Range: N/A

Table 5-332 obs

Parameter	Type	Description
obs_url	String	Definition: OBS URL of the dataset for a training job, For example, /usr/data/ . Range: N/A

Table 5-333 remote_constraint

Parameter	Type	Description
data_type	String	Definition: Data input type, including the data storage location and dataset. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
attributes	String	Definition: Related attributes. Constraints: N/A Range: If the input is a dataset: • data_format: data format • data_segmentation: data segmentation method • dataset_type: data labeling type Default Value: N/A

Table 5-334 OutputResp

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A
description	String	Definition: Description of the data output channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data output channels are mapped. Range: N/A
access_method	String	Definition: Access method of the input data channel path (local_dir). Range: • parameter: hyperparameters • env: environment variables
remote	RemoteResp object	Definition: Description of the actual data output.

Table 5-335 JobEngineResp

Parameter	Type	Description
engine_id	String	Definition: Engine ID selected for a training job. Range: N/A

Parameter	Type	Description
engine_name	String	Definition: Engine name selected for a training job. Range: N/A
engine_version	String	Definition: Engine version selected for a training job. Range: N/A
image_url	String	Definition: Custom image URL selected for a training job. The URL is obtained from SWR. Range: N/A
install_sys_packages	Boolean	Definition: Specifies whether to install the MoXing version specified by the training platform. Range: • true: yes • false: no

Table 5-336 SummaryResp

Parameter	Type	Description
log_type	String	Definition: Visualization log type of a training job. After this parameter is configured, the training job can be used as the data source of a visualization job. Range: • tensorboard: TensorBoard • mindstudio-insight: MindStudio Insight
log_dir	LogDirResp object	Definition: Visualization log output of a training job.
data_sources	Array of DataSourceResp objects	Definition: Visualization log input of the visualization job or training job debugging mode.

Table 5-337 LogDirResp

Parameter	Type	Description
pfs	PFSSummaryResp object	Definition: Output of an OBS parallel file system.

Table 5-338 PFSSummaryResp

Parameter	Type	Description
pfs_path	String	Definition: URL of the OBS parallel file system. Range: N/A

Table 5-339 DataSourceResp

Parameter	Type	Description
job	JobSummaryResp object	Definition: Job data source.

Table 5-340 JobSummaryResp

Parameter	Type	Description
job_id	String	Definition: ID of a training job. Range: N/A

Table 5-341 TaskResponse

Parameter	Type	Description
role	String	Definition: Task role. This function is not supported currently. Range: N/A
algorithm	TaskResponseAlgorithm object	Definition: Algorithm configurations for algorithm management.
task_resource	FlavorResponse object	Definition: Specifications of a training job or algorithm.
log_export_path	log_export_path object	Definition: Saved information about training job logs.

Table 5-342 TaskResponseAlgorithm

Parameter	Type	Description
code_dir	String	Definition: Absolute path of the directory where the algorithm boot file is stored. Range: N/A
boot_file	String	Definition: Absolute path of an algorithm boot file. Range: N/A
inputs	AlgorithmInput object	Definition: Information about the algorithm input channel.
outputs	AlgorithmOutput object	Definition: Information about the algorithm output channel.
engine	AlgorithmEngine object	Definition: Engine that a heterogeneous job depends on.
local_code_dir	String	Definition: Local directory of the training container to which the algorithm code directory is downloaded. The rules are as follows: • The directory must be under / home. • In v1 compatibility mode, the current field does not take effect. • When code_dir is prefixed with file://, the current field does not take effect. Range: N/A
working_dir	String	Definition: Work directory where an algorithm is executed. Note that this parameter does not take effect in v1 compatibility mode. Range: N/A
environments	Map<String,String>	Definition: Environment variables related to a training job. Range: N/A

Table 5-343 AlgorithmInput

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data input and output channels are mapped. Range: N/A
remote	AlgorithmRemote object	Definition: Actual data input, which can only be OBS for heterogeneous jobs.

Table 5-344 AlgorithmRemote

Parameter	Type	Description
obs	RemoteObsResp object	Definition: OBS in which data input and output are stored.

Table 5-345 AlgorithmOutput

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data output channels are mapped. Range: N/A
remote	RemoteResp object	Definition: Description of the actual data output.
mode	String	Definition: Data transmission mode. The default value is upload_periodically . Range: N/A
period	String	Definition: Data transmission period. The default value is 30s . Range: N/A

Table 5-346 RemoteResp

Parameter	Type	Description
obs	RemoteObsResp object	Definition: Data actually output to OBS.

Table 5-347 RemoteObsResp

Parameter	Type	Description
obs_url	String	Definition: Path of the data output to OBS. Range: N/A

Table 5-348 AlgorithmEngine

Parameter	Type	Description
engine_id	String	Definition: Engine flavor ID, for example, caffe-1.0.0-python2.7 . Range: N/A
engine_name	String	Definition: Engine flavor name, for example, Caffe . Range: N/A
engine_version	String	Definition: Engine flavor version. Engines with the same name have multiple versions, for example, Caffe-1.0.0-python2.7 of Python 2.7. Range: N/A
v1_compatible	Boolean	Definition: Specifies whether the v1 compatibility mode is used. Range: • true: The v1 compatibility mode is used. • false: The v1 compatibility mode is not used.
run_user	String	Definition: Default UID for the engine startup. Range: N/A
image_url	String	Definition: Custom image URL selected for an algorithm. Range: N/A

Table 5-349 FlavorResponse

Parameter	Type	Description
pool_id	String	Definition: ID of the resource pool selected for a training job. Range: N/A
flavor_id	String	Definition: Resource flavor ID. Range: N/A
flavor_name	String	Definition: Resource flavor name. Range: N/A
max_num	Integer	Definition: Maximum number of nodes supported by a flavor. Range: N/A
flavor_type	String	Definition: Resource flavor type. Range: • CPU • GPU • Ascend
billing	BillingInfo object	Definition: Billing information of a resource flavor.
flavor_info	FlavorInfoResponse object	Definition: Resource flavor details.
attributes	Map<String,String>	Definition: Other flavor attributes. Range: N/A

Table 5-350 FlavorInfoResponse

Parameter	Type	Description
max_num	Integer	Definition: Maximum number of nodes that can be selected. The value 1 indicates that the distributed mode is not supported. Range: N/A
cpu	Cpu object	Definition: CPU specifications.
gpu	Gpu object	Definition: GPU specifications.
npu	Npu object	Definition: Ascend specifications.
memory	Memory object	Definition: Memory information.

Parameter	Type	Description
disk	DiskResponse object	Definition: Disk information.

Table 5-351 DiskResponse

Parameter	Type	Description
size	Integer	Definition: Disk size. Range: N/A
unit	String	Definition: Unit of the disk size. Range: N/A

Table 5-352 log_export_path

Parameter	Type	Description
obs_url	String	Definition: OBS path for storing training job logs.

Table 5-353 SpecResponse

Parameter	Type	Description
resource	Resource object	Definition: Resource flavor of a training job. Select either flavor_id or pool_id and flavor_id .
volumes	Array of JobVolumeResp objects	Definition: Mounting volume information of a training job.
log_export_path	LogExportPathResp object	Definition: Log output of a training job.
schedule_policy	SchedulePolicyResp object	Definition: Scheduling policy of a training job.
custom_metrics	Array of CustomMetrics objects	Definition: Metric collection configuration.

Table 5-354 Resource

Parameter	Type	Description
policy	String	Definition: Resource flavor mode of a training job. Range: • regular: standard mode
flavor_id	String	Definition: ID of the resource flavor of a training job. Range: The flavor_id parameter cannot be specified for a dedicated resource pool of CPU specifications. The options for dedicated resource pools with GPU/Ascend specifications are as follows: • modelarts.pool.visual.xlarge (1 PU) • modelarts.pool.visual.2xlarge (2 PUs) • modelarts.pool.visual.4xlarge (4 PUs) • modelarts.pool.visual.8xlarge (8 PUs)
flavor_name	String	Definition: Read-only flavor name returned by ModelArts when flavor_id is used. Range: N/A
node_count	Integer	Definition: Number of resource replicas selected for a training job. Range: N/A
pool_id	String	Definition: ID of the resource pool selected for a training job. Range: N/A
pool_group_id	String	Definition: ID of the resource pool federation selected for a training job. Range: N/A
flavor_detail	FlavorDetail object	Definition: Flavor details of a training job or algorithm. This parameter is available only for public resource pools.
main_container_allocated_resources	MainContainerAllocatedResources object	Definition: Resource specifications actually obtained by the training container of a training job.

Parameter	Type	Description
main_container_customized_flavor	MainContainerCustomizedFlavor object	Definition: Custom flavor of a training job. Range: The number of CPU cores and memory size must be greater than 0, and the number of accelerator PUs must be greater than or equal to 0.

Table 5-355 FlavorDetail

Parameter	Type	Description
flavor_type	String	Definition: Resource flavor type. Range: • CPU • GPU • Ascend
billing	BillingInfo object	Definition: Billing information of a resource flavor.
flavor_info	FlavorInfo object	Definition: Resource flavor details.

Table 5-356 BillingInfo

Parameter	Type	Description
code	String	Definition: Billing code. Range: N/A
unit_num	Integer	Definition: Billing unit. Range: N/A

Table 5-357 FlavorInfo

Parameter	Type	Description
max_num	Integer	Definition: Maximum number of nodes that can be selected. The value 1 indicates that the distributed mode is not supported. Range: N/A
cpu	Cpu object	Definition: CPU specifications.
gpu	Gpu object	Definition: GPU specifications.

Parameter	Type	Description
npu	Npu object	Definition: Ascend specifications.
memory	Memory object	Definition: Memory information.
disk	Disk object	Definition: Disk information.

Table 5-358 Cpu

Parameter	Type	Description
arch	String	Definition: CPU architecture. Range: N/A
core_num	Integer	Definition: Number of cores. Range: N/A

Table 5-359 Gpu

Parameter	Type	Description
unit_num	Integer	Definition: Number of GPUs. Range: N/A
product_name	String	Definition: Product name. Range: N/A
memory	String	Definition: Memory. Range: N/A

Table 5-360 Npu

Parameter	Type	Description
unit_num	String	Definition: Number of NPUs. Range: N/A
product_name	String	Definition: Product name. Range: N/A
memory	String	Definition: Memory. Range: N/A

Table 5-361 Memory

Parameter	Type	Description
size	Integer	Definition: Memory size. Range: N/A
unit	String	Definition: Number of memory units. Range: N/A

Table 5-362 Disk

Parameter	Type	Description
size	String	Definition: Disk size. Range: N/A
unit	String	Definition: Unit of the disk size. Generally, the unit is GB. Range: N/A

Table 5-363 MainContainerAllocatedResources

Parameter	Type	Description
cpu_arch	String	Definition: CPU architecture. Range: N/A
cpu_core_num	Float	Definition: Number of cores. Range: N/A
mem_size	Float	Definition: Memory information. Range: N/A
accelerator_num	Float	Definition: Number of accelerator cards. Range: N/A
accelerator_type	String	Definition: Type of accelerator cards. Range: N/A

Table 5-364 MainContainerCustomizedFlavor

Parameter	Type	Description
cpu_core_num	Float	Definition: Number of CPU cores. Range: greater than 0

Parameter	Type	Description
mem_size	Float	Definition: Memory size. Range: greater than 0
accelerator_num	Float	Definition: Number of accelerator cards. Range: greater than or equal to 0

Table 5-365 JobVolumeResp

Parameter	Type	Description
nfs	NfsResp object	Definition: Volumes attached in NFS mode.

Table 5-366 NfsResp

Parameter	Type	Description
nfs_server_path	String	Definition: NFS server path, for example, 10.10.10.10:/example/path . Range: N/A
local_path	String	Definition: Path for attaching volumes to the training container, for example, /example/path . Range: N/A
read_only	Boolean	Definition: Specifies whether the disks attached to the container in NFS mode are read-only. Range: • true: read only • false: non-read-only

Table 5-367 LogExportPathResp

Parameter	Type	Description
obs_url	String	Definition: OBS path for storing training job logs, for example, obs://example/path . Range: N/A

Parameter	Type	Description
host_path	String	Definition: Path of the host where training job logs are stored, for example, /example/path . Range: N/A

Table 5-368 SchedulePolicyResp

Parameter	Type	Description
required_affinity	RequiredAffinityResp object	Definition: Affinity requirements of a training job.
priority	Integer	Definition: Priority of a training job. Range: 0 to 3
preemptible	Boolean	Definition: Whether the resource can be preempted. Range: • true: The resource can be preempted. • false: The resource cannot be preempted.

Table 5-369 RequiredAffinityResp

Parameter	Type	Description
affinity_type	String	Definition: Affinity scheduling policy. Range: • cabinet: strong cabinet scheduling • hyperinstance: supernode affinity scheduling
affinity_group_size	Integer	Definition: Size of an affinity group. Range: N/A

Table 5-370 CustomMetrics

Parameter	Type	Description
exec	Exec object	Definition: Metrics are collected in CLI mode.

Parameter	Type	Description
http_get	HttpGet object	Definition: Metrics are collected in HTTP mode.

Table 5-371 Exec

Parameter	Type	Description
command	Array of strings	Definition: Metrics are collected in CLI mode.

Table 5-372 HttpGet

Parameter	Type	Description
path	String	Definition: URL for obtaining metrics over HTTP. Both the URL and the port below must either be configured together or remain empty. Range: N/A
port	Integer	Definition: Port for obtaining metrics over HTTP. This parameter and the URL above must be set or left blank at the same time. Range: N/A

Table 5-373 JobEndpointsResp

Parameter	Type	Description
ssh	SSHResp object	Definition: SSH connection information.
jupyter_lab	JupyterLab object	Definition: JupyterLab connection information.
tensorboard	Tensorboard object	Definition: TensorBoard connection information.
mindstudio_insight	MindStudioInsight object	Definition: MindStudio Insight connection information.

Table 5-374 SSHResp

Parameter	Type	Description
key_pair_names	Array of strings	Definition: Name of the SSH key pair, which can be created and viewed on the Key Pair page of the Elastic Cloud Server (ECS) console. Range: N/A
task_urls	Array of TaskUrls objects	Definition: SSH connection address.

Table 5-375 TaskUrls

Parameter	Type	Description
task	String	Definition: Task ID of a training job. Range: N/A
url	String	Definition: SSH connection address of a training job. Range: N/A

Table 5-376 JupyterLab

Parameter	Type	Description
url	String	Definition: JupyterLab address of a training job. Range: N/A
token	String	Definition: JupyterLab token of a training job. Range: N/A

Table 5-377 Tensorboard

Parameter	Type	Description
url	String	Definition: TensorBoard address of a training job. Range: N/A
token	String	Definition: TensorBoard token of a training job. Range: N/A

Table 5-378 MindStudioInsight

Parameter	Type	Description
url	String	Definition: MindStudio Insight address of a training job. Range: N/A
token	String	Definition: MindStudio Insight token of a training job. Range: N/A

Example Requests

The following is an example of how to stop the training job whose UUID is **3faf5c03-aaa1-4cbe-879d-24b05d997347**.

```
POST https://endpoint/v2/{project_id}/training-jobs/3faf5c03-aaa1-4cbe-879d-24b05d997347/actions
{
  "action_type": "terminate"
}
```

Example Responses

Status code: 202

ok

```
{
  "kind": "job",
  "metadata": {
    "id": "3faf5c03-aaa1-4cbe-879d-24b05d997347",
    "name": "trainjob--py14_mem06-110",
    "description": "",
    "create_time": 1636515222282,
    "workspace_id": "0",
    "user_name": "ei_modelarts_z00424192_01"
  },
  "status": {
    "phase": "Terminating",
    "secondary_phase": "Terminating",
    "duration": 0,
    "start_time": 0,
    "node_count_metrics": null,
    "tasks": [ "worker-0" ]
  },
  "algorithm": {
    "code_dir": "obs://test/economic_test/py_minist/",
    "boot_file": "obs://test/economic_test/py_minist/minist_common.py",
    "inputs": [ {
      "name": "data_url",
      "local_dir": "/home/ma-user/modelarts/inputs/data_url_0",
      "remote": {
        "obs": {
          "obs_url": "/test/data/py_minist/"
        }
      }
    } ],
    "outputs": [ {
      "name": "train_url",
      "local_dir": "/home/ma-user/modelarts/outputs/train_url_0",
```

```
{
  "remote": {
    "obs": {
      "obs_url": "/test/train_output/"
    }
  },
  "engine": {
    "engine_id": "pytorch-cp36-1.4.0-v2",
    "engine_name": "PyTorch",
    "engine_version": "PyTorch-1.4.0-python3.6-v2"
  },
  "spec": {
    "resource": {
      "policy": "economic",
      "flavor_id": "modelarts.vm.pnt1.large.eco",
      "flavor_name": "Computing GPU(Pnt1) instance",
      "node_count": 1,
      "flavor_detail": {
        "flavor_type": "GPU",
        "billing": {
          "code": "modelarts.vm.gpu.pnt1.eco",
          "unit_num": 1
        },
        "flavor_info": {
          "cpu": {
            "arch": "x86",
            "core_num": 8
          },
          "gpu": {
            "unit_num": 1,
            "product_name": "GP-Pnt1",
            "memory": "8GB"
          },
          "memory": {
            "size": 64,
            "unit": "GB"
          }
        }
      }
    }
  }
}
```

Status Codes

Status Code	Description
202	ok

Error Codes

See [Error Codes](#).

5.11 Querying the Logs of a Specified Task in a Given Training Job (Preview)

Function

This API is used to query the logs of a specified task in a given training job on ModelArts (preview).

This API applies to the following scenario: When you need to view the running logs of a specified task in a training job, you can use this API to preview the logs. Before using this API, ensure that you have obtained the training job ID and task ID and have the permission to view logs. After the query is complete, the platform returns the preview information of the task logs. If the training job ID or task ID does not exist, no task log is generated, or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/training-jobs/{training_job_id}/tasks/{task_id}/logs/preview

Table 5-379 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
training_job_id	Yes	String	Definition: Training job ID. For details, see Obtaining Training Jobs . Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
task_id	Yes	String	Definition: Name of a training job. You can obtain the value from the status.tasks field in the training job details. Constraints: For one node, the default is worker-0 . For multiple nodes, it includes worker-0 , worker-1 , and so on. Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
training_job_id	Yes	String	Definition: Training job ID. For details, see Obtaining Training Jobs . Constraints: N/A Range: N/A Default Value: N/A
task_id	Yes	String	Definition: Name of a training job. You can obtain the value from the status.tasks field in the training job details. Constraints: For one node, the default is worker-0 . For multiple nodes, it includes worker-0 , worker-1 , and so on. Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 5-380 Response body parameters

Parameter	Type	Description
content	String	Definition: Log content. If the size of a log file does not exceed the upper limit (n MB), all the log files are returned. Otherwise, the latest log file (n MB) is returned. After March 1, 2022, 00:00:00 (GMT+08:00), the parameter name is changed from context to content . Range: N/A
current_size	Integer	Definition: Size of the returned log file, in bytes. The maximum value is 5 MB. Range: N/A
full_size	Integer	Definition: Size of the complete log file, in bytes. Range: N/A

Example Requests

The following shows how to obtain the worker-0 logs of the training job whose UUID is **2cd88daa-31a4-40a8-a58f-d186b0e93e4f**.

```
GET https://endpoint/v2/{project_id}/training-jobs/2cd88daa-31a4-40a8-a58f-d186b0e93e4f/tasks/worker-0/logs/preview
```

Example Responses

Status code: 200

ok

```
{
  "content" : "[Modelarts Service Log]collect and upload ascend logs end at
2021-05-18-14:28:13\n[Modelarts Service Log]exiting...\n [Modelarts Service Log]exiting...\n[Modelarts
Service Log]exiting...\n [Modelarts Service Log]exiting...\n[Modelarts Service Log]exit with :\n [Modelarts
Service Log]exit with 0\n[Modelarts Service Log]exit with :\n [Modelarts Service Log]exit with
0\n[ModelArts Service Log][INFO][2021/05/18 14:28:14,207]:\n output-handler finalizing due to: [training
finished]\n[ModelArts Service Log][INFO][2021/05/18 14:28:14,207]:\n output-handler finalized
\n[Modelarts Service Log][sidecar] exiting at 2021-05-18-14:28:14\n[Modelarts Service Log][sidecar] wait
python processes exit...\n [Modelarts Service Log][sidecar] wait python processes exit...\n[Modelarts
Service Log][sidecar] exit with :\n [Modelarts Service Log][sidecar] exit with 0",
  "current_size" : 126548,
  "full_size" : 5242880
}
```


Status Codes

Status Code	Description
200	ok

Error Codes

See [Error Codes](#).

5.12 Querying the Logs of a Specified Task in a Training Job (OBS Link)

Function

This API is used to obtain the OBS link where the log files of a specified training job are stored.

This API is used when you need to view or download the detailed log information of a training job task. Before using this API, ensure that the training job task exists and you have the required permission. After the query, the API returns the OBS link where the log files of the specified task are stored. If the training job task does not exist or you do not have the required permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/training-jobs/{training_job_id}/tasks/{task_id}/logs/url

Table 5-381 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
training_job_id	Yes	String	Definition: Training job ID. For details, see Obtaining Training Jobs . Constraints: N/A Range: N/A Default Value: N/A
task_id	Yes	String	Definition: Name of a training job. You can obtain the value from the status.tasks field in the training job details. Constraints: For one node, the default is worker-0 . For multiple nodes, it includes worker-0 , worker-1 , and so on. Range: N/A Default Value: N/A

Request Parameters

Table 5-382 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	No	String	Definition: Message body type. If this parameter is set to text/plain , the temporary preview link is returned. If this parameter is set to application/octet-stream , the temporary download link is returned. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 5-383 Response body parameters

Parameter	Type	Description
obs_url	String	Definition: Temporary OBS URL of logs. You can copy the URL to the browser to view all logs. Range: N/A

Example Requests

The following shows how to query the temporary OBS URL for the **work-0** tasks of the training job whose UUID is **2cd88daa-31a4-40a8-a58f-d186b0e93e4f**.

```
GET https://endpoint/v2/{project_id}/training-jobs/2cd88daa-31a4-40a8-a58f-d186b0e93e4f/tasks/worker-0/
logs/url?Content-Type=text/plain
```

Example Responses

Status code: 200

ok

```
{
  "obs_url" : "http://10.155.101.248:20000/cnnorth4-test/xk/00chess_test/test11/logs/modelarts-
job-0f2ccdbb-4f34-4d53-afb9-d526f3be8c68-ma-platform-init-worker-0-172.16.24.51-01909681.log?
AWSAccessKeyId=xxxxx"
}
```

Status Codes

Status Code	Description
200	ok

Error Codes

See [Error Codes](#).

5.13 Querying the Running Metrics of a Specified Task in a Training Job

Function

This API is used to query the running metrics of a specified task in a training job on ModelArts.

This API applies to the following scenario: When you need to view the performance metrics of a specified task in a training job, you can call this API to obtain the running metrics. Before using this API, ensure that you have obtained

the training job ID and task ID and have the permission to view running metrics. After the query is complete, the platform returns the performance metrics of the task. If the training job ID or task ID does not exist, no task metric is generated, or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/training-jobs/{training_job_id}/metrics/{task_id}

Table 5-384 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
training_job_id	Yes	String	Definition: Training job ID. For details, see Obtaining Training Jobs . Constraints: N/A Range: N/A Default Value: N/A
task_id	Yes	String	Definition: Name of a training job. You can obtain the value from the status.tasks field in the training job details. Constraints: For one node, the default is worker-0 . For multiple nodes, it includes worker-0 , worker-1 , and so on. Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 5-385 Response body parameters

Parameter	Type	Description
metrics	Array of MetricObject objects	Definition: Running metrics.

Table 5-386 MetricObject

Parameter	Type	Description
metric	String	Definition: Running metrics. Range: • cpuUsage: CPU usage • memUsage: physical memory usage • gpuUtil: GPU usage • gpuMemUsage: GPU memory usage • npuUtil: NPU usage • npuMemUsage: NPU memory usage
value	Array of doubles	Definition: Value of a running metric. An average value is collected every minute.

Example Requests

The following shows how to query the running metrics of the **work-0** task of the training job whose UUID is **2cd88daa-31a4-40a8-a58f-d186b0e93e4f**.

```
GET https://endpoint/v2/{project_id}/training-jobs/2cd88daa-31a4-40a8-a58f-d186b0e93e4f/metrics/worker-0
```

Example Responses

Status code: 200

ok

```
{
  "metrics" : [ {
    "metric" : "cpuUsage",
    "value" : [ -1, -1, 2.43, 4.524, 6.714, 12.422, 9.214, 5.36, 7.5, 10.088, 8.975, 11.423, 11.548, 14.563, 16.833 ]
  }
]
```

```
{, {  
  "metric": "memUsage",  
  "value": [ -1, -1, 0.04, 0.521, 1.652, 4.252, 6.433, 7.384, 7.982, 8.718, 9.365, 9.881, 10.192, 9.994, 9.005 ]  
}, {  
  "metric": "gpuUtil",  
  "value": [ -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1 ]  
}, {  
  "metric": "gpuMemUsage",  
  "value": [ -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1 ]  
}, {  
  "metric": "npuUtil",  
  "value": [ -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1 ]  
}, {  
  "metric": "npuMemUsage",  
  "value": [ -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1, -1 ]  
}  
}
```

Status Codes

Status Code	Description
200	ok

Error Codes

See [Error Codes](#).

5.14 Querying a Training Job List

Function

This API is used to obtain the list of all training jobs on ModelArts.

This API applies to the following scenarios: When you need to view all training jobs on the platform, you can use this API to obtain the job list. Before using this API, ensure that you have the permission to view the training job list. After the query is complete, the platform returns a training job list. Information such as the training job name, ID, and status is displayed. If you do not have the permission to perform operations, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/training-job-searches

Table 5-387 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 5-388 Request body parameters

Parameter	Mandatory	Type	Description
workspace_id	No	String	Definition: Workspace ID. Constraints: N/A. Range: 0 or a string of 32 characters. Default Value: 0
offset	No	Integer	Definition: Number of pages for querying jobs. Constraints: The minimum value is 0. For example, if this parameter is set to 0, the query starts from the first page. Range: N/A Default Value: N/A
limit	No	Integer	Definition: Number of records on each page for querying jobs. Constraints: The value ranges from 1 to 50. Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
sort_by	No	String	Definition: Metric for sorting jobs to be queried create_time is used by default. Constraints: N/A Range: N/A Default Value: N/A
order	No	String	Definition: Order of queried jobs. Constraints: N/A Range: • asc: ascending order • desc: descending order. Default Value: desc
group_by	No	String	Definition: Condition for grouping the jobs to be queried Constraints: N/A Range: N/A Default Value: N/A
filters	No	Array of Filter objects	Definition: Filter criteria for obtaining training jobs. Constraints: N/A

Table 5-389 Filter

Parameter	Mandatory	Type	Description
key	No	String	Definition: Key of the grouping condition. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
operator	No	String	Definition: Grouping condition key operators. Constraints: N/A Range: • between: a range • in: include • not: not like: similar Default Value: N/A
value	No	Array of strings	Definition: Value of the grouping condition key. Constraints: The maximum value of the creation time filter is 31 days.

Response Parameters

Status code: 200

Table 5-390 Response body parameters

Parameter	Type	Description
total	Integer	Definition: Total number of training jobs of the current user. Range: N/A
count	Integer	Definition: Total number of training jobs that meet the search criteria of the current user. Range: N/A
limit	Integer	Definition: Number of records on each page for querying jobs. The value ranges from 1 to 50 . Range: N/A
offset	Integer	Definition: Number of pages for querying jobs. The minimum value is 0 . For example, if this parameter is set to 0 , the query starts from the first page. Range: N/A

Parameter	Type	Description
sort_by	String	Definition: Metric for sorting jobs to be queried create_time is used by default. Range: N/A
order	String	Definition: Order of queried jobs. The default value is desc , indicating the descending order. You can also set this parameter to asc , indicating the ascending order. Range: N/A
group_by	String	Definition: Condition for grouping the jobs to be queried Range: N/A
workspace_id	String	Definition: Workspace where a training job is deployed. The default value is 0. Range: N/A
ai_project	String	Definition: AI project to which a job belongs. The default value is default-ai-project . Range: N/A
items	Array of JobResponse objects	Definition: Details of the training jobs that meet the search criteria of the current user.

Table 5-391 JobResponse

Parameter	Type	Description
kind	String	Definition: Type of a training job. Range • job: common job • federated_pool_job: resource pool federated job • edge_job: edge job • hetero_job: heterogeneous job • mrs_job: MRS job • autosearch_job: auto search job • diag_job: diagnosis job • visualization_job: visualization job

Parameter	Type	Description
metadata	JobMetadataResponse object	Definition: Training job metadata.
status	Status object	Definition: Training job status information.
algorithm	JobAlgorithmResponse object	Definition: Training job algorithm.
tasks	Array of TaskResponse objects	Definition: Heterogeneous training tasks.
spec	SpecResponse object	Definition: Training job specifications.
endpoints	JobEndpointsResponse object	Definition: Configurations required for remotely accessing a training job.

Table 5-392 JobMetadataResponse

Parameter	Type	Description
id	String	Definition: Training job ID, which is generated and returned by ModelArts after a training job is created. Range: N/A
name	String	Definition: Name of a training job. Range: The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-).
workspace_id	String	Definition: Workspace where a specified job is located. Range: N/A
description	String	Definition: Definition of a training job. Range: N/A
create_time	Long	Definition: Time when a training job was created, in milliseconds. The value is generated and returned by ModelArts after a training job is created. Range: N/A

Parameter	Type	Description
user_name	String	Definition: Username for creating a training job. The username is generated and returned by ModelArts after a training job is created. Range: N/A
annotations	Map<String,String>	Definition: Advanced functions of a training job.

Table 5-393 Status

Parameter	Type	Description
phase	String	Definition: Level-1 status of a training job. Range: • Creating: The job is being created. • Pending: The job is pending. • Running: The job is running. • Failed: The job failed to run. • Completed: The job is complete. • Terminating: The job is being stopped. • Terminated: The job has been stopped. • Abnormal: The job is abnormal.

Parameter	Type	Description
secondary_phase	String	Definition: Level-2 status of a training job. The values are internal detailed statuses and may be added, changed, or deleted. Dependency on the status is not recommended. Range: • Creating: The job is being created. • Queuing: The job is queuing. • Running: The job is running. • Failed: The job failed to run. • Completed: The job is complete. • Terminating: The job is being stopped. • Terminated: The job has been stopped. • CreateFailed: The job fails to be created. • TerminatedFailed: The job fails to be stopped. • Unknown: The job is in an unknown state. • Lost: The job is abnormal.
duration	Long	Definition: Running duration of a training job, in ms. Range: N/A
node_count_metrics	Array<Array<Integer>>	Definition: Node quantity change metric during a training job runtime.
tasks	Array of strings	Definition: Training job subtask name.
start_time	Long	Definition: Timestamp when a training job is started. Range: N/A
task_statuses	Array of TaskStatuses objects	Definition: Status of the first failed subtask of a training job.
running_records	Array of RunningRecord objects	Definition: Running and fault recovery records of a training job.

Table 5-394 TaskStatuses

Parameter	Type	Description
task	String	Definition: Training job subtask name. Range: N/A
exit_code	Integer	Definition: Exit code of a training job subtask. Range: N/A
message	String	Definition: Error message of a training job subtask. Range: N/A

Table 5-395 RunningRecord

Parameter	Type	Description
start_at	Integer	Definition: Unix timestamp of the start time in the current running record, in seconds. Range: N/A
end_at	Integer	Definition: Unix timestamp of the end time in the current running record, in seconds. Range: N/A
xpu_start_at	Integer	Definition: Unix timestamp of the accelerator card startup time in the current running record, in seconds. Range: N/A
start_type	String	Definition: Startup mode of the current execution. Range • init_or_rescheduled: This startup is the first running after scheduling, including the first startup and the running after scheduling recovery. • restarted: This startup is not the first running after scheduling but the running after a process restart.
end_reason	String	Definition: Reason why the running ends. Range: N/A

Parameter	Type	Description
end_related_task	String	Definition: ID of the task worker (for example, worker-0) that ends the running. Range: N/A
end_recover	String	Definition: Fault tolerance policy adopted when the execution ends abnormally. Range • npu_proc_restart: NPU in-place hot recovery • proc_restart: in-place process recovery • npu_step_retry: step recomputation • pod_reschedule: pod-level rescheduling • job_reschedule: job-level rescheduling • job_reschedule_with_taint: isolated job-level rescheduling
end_recover_before_downgrade	String	Definition: There is a downgrade relationship between policies. If a policy fails to be executed, it will be downgraded to another specified policy. end_recover_before_downgrade indicates the tolerance policy used before end_recover is downgraded. Range: same as that of end_recover .
recover_records	Array of RecoverRecord objects	Definition: details about all fault tolerance policies adopted when the execution ends abnormally.

Table 5-396 RecoverRecord

Parameter	Type	Description
recover_start_at	Integer	Unix timestamp of the start time of the fault tolerance policy, in seconds. The timestamp is also the fault occurrence time.
recover_end_at	Integer	Unix timestamp of the end time of the fault tolerance policy, in seconds.

Parameter	Type	Description
recover	String	Fault tolerance policy. Options: • npu_step_retry: step recomputation • npu_proc_restart: NPU in-place hot recovery • proc_restart: in-place process recovery • pod_reschedule: pod-level rescheduling • job_reschedule: job-level rescheduling • job_reschedule_with_taint: isolated job-level rescheduling
fault_scenario	String	Fault scenario. Options: • chip_fault: chip fault • node_fault: node fault • job_failed: job exit upon a failure • job_hanged: job suspension • job_subhealth: job subhealth • error_in_log: log exception
reason	String	Cause of the fault.
related_task	String	ID of the task worker that causes the end of the current running record, for example, worker-0 .
recover_result	String	Execution result of the fault. Options: • recovering: executing • success: successful • failed: failed • downgrade: policy downgrade

Table 5-397 JobAlgorithmResponse

Parameter	Type	Description
id	String	Definition: Training job algorithm. Range: • id: Only the algorithm ID is used. • subscription_id+item_version_id: The subscription ID and version ID of the algorithm are used. • code_dir+boot_file: The code directory and boot file of the training job are used.
name	String	Definition: Algorithm name. Range: N/A
subscription_id	String	Definition: Subscription ID of a subscription algorithm, which must be used with item_version_id . Range: N/A
item_version_id	String	Definition: Version of a subscription algorithm, which must be used with subscription_id . Range: N/A
code_dir	String	Definition: Code directory of a training job, for example, /usr/app/ . This parameter must be used with boot_file . Leave this parameter blank if id , or subscription_id and item_version_id are specified. Range: N/A
boot_file	String	Definition: Boot file of a training job, which must be stored in the code directory, for example, /usr/app/boot.py . This parameter must be used with code_dir . Leave this parameter blank if id , or subscription_id and item_version_id are specified. Range: N/A
autosearch_config_path	String	Definition: YAML configuration path of an auto search job. An OBS URL is required. For example, obs://bucket/file.yaml . Range: N/A

Parameter	Type	Description
autosearch_framework_path	String	Definition: Framework code directory of an auto search job. An OBS URL is required. For example, obs://bucket/files/ . Range: N/A
command	String	Definition: Boot command for starting the container of a custom image for a training job. For example, python train.py . Range: N/A
parameters	Array of ParameterResp objects	Definition: Running parameters of the training job.
policies	policies object	Definition: Policy supported by a job.
inputs	Array of InputResp objects	Definition: Data input of a training job.
outputs	Array of OutputResp objects	Definition: Output of the training job.
engine	JobEngineResp object	Definition: Engine of a training job. Leave this parameter blank if the job is created using id of the algorithm in algorithm management, or subscription_id+item_version_id of the subscribed algorithm.
local_code_dir	String	Definition: Local directory of the training container to which the algorithm code directory is downloaded. The rules are as follows: • The directory must be under /home. • In v1 compatibility mode, the current field does not take effect. • When code_dir is prefixed with file://, the current field does not take effect. Range: N/A
working_dir	String	Definition: Work directory where an algorithm is executed. Rules: In v1 compatibility mode, this parameter does not take effect. Range: N/A

Parameter	Type	Description
environments	Array of Map<String,String> objects	Definition: Environment variables of a training job. The format is key:value . Leave this parameter blank.
summary	SummaryResp object	Definition: Visualization log summary.

Table 5-398 ParameterResp

Parameter	Type	Description
name	String	Definition: Parameter name. Range: N/A
value	String	Definition: Parameter value. Range: N/A
description	String	Definition: Parameter description. Range: N/A
constraint	constraint object	Definition: Parameter attribute.
i18n_description	i18n_description object	Definition: Internationalization description.

Table 5-399 constraint

Parameter	Type	Description
type	String	Definition: Parameter type. Range: N/A
editable	Boolean	Definition: Whether the parameter can be edited. Range: • true: editable • false: Not uneditable
required	Boolean	Definition: Whether the parameter is mandatory. Range: • true: mandatory • false: optional

Parameter	Type	Description
sensitive	Boolean	Definition: Whether the parameter is sensitive. This function is unavailable currently. Range: • true: sensitive • false: insensitive
valid_type	String	Definition: Valid type. Range: N/A
valid_range	Array of strings	Definition: Valid range.

Table 5-400 i18n_description

Parameter	Type	Description
language	String	Definition: Internationalization language. The options are as follows: • zh-cn: Chinese • en-us: English](tag:hc,hk) Range: N/A
description	String	Definition: Internationalization language description. Range: N/A

Table 5-401 policies

Parameter	Type	Description
auto_search	auto_search object	Definition: Hyperparameter search configuration.

Table 5-402 auto_search

Parameter	Type	Description
skip_search_params	String	Definition: Hyperparameter parameters that need to be skipped. Range: N/A
reward_attrs	Array of reward_attrs objects	Definition: Search metrics.

Parameter	Type	Description
search_params	Array of search_params objects	Definition: Search parameters.
algo_configs	Array of algo_configs objects	Definition: Search algorithm configurations.

Table 5-403 reward_attrs

Parameter	Type	Description
name	String	Definition: Metric name. Range: N/A
mode	String	Definition: Search mode. Range: • max: A larger metric value is preferred. • min: A smaller metric value is preferred.
regex	String	Definition: Regular expression of a metric. Range: N/A

Table 5-404 search_params

Parameter	Type	Description
name	String	Definition: Hyperparameter name. Range: N/A

Parameter	Type	Description
param_type	String	Definition: Parameter type. Range: • continuous: The hyperparameter is of the continuous type. When an algorithm is used in a training job, continuous hyperparameters are displayed as text boxes on the console. • discrete: The hyperparameter is of the discrete type. When an algorithm is used in a training job, discrete hyperparameters are displayed as drop-down lists on the console.
lower_bound	String	Definition: Lower bound of the hyperparameter. Range: N/A
upper_bound	String	Definition: Upper bound of the hyperparameter. Range: N/A
discrete_points_num	String	Definition: Number of discrete points of a hyperparameter with continuous values. Range: N/A
discrete_values	Array of strings	Definition: Discrete hyperparameter values.

Table 5-405 algo_configs

Parameter	Type	Description
name	String	Definition: Search algorithm name. Range: N/A
params	Array of AutoSearchAlgoConfigParameterResp objects	Definition: Search algorithm parameters.

Table 5-406 AutoSearchAlgoConfigParameterResp

Parameter	Type	Description
key	String	Definition: Parameter key. Range: N/A
value	String	Definition: Parameter value. Range: N/A
type	String	Definition: Parameter type. Range: N/A

Table 5-407 InputResp

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
description	String	Definition: Description of the data input channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data input channels are mapped. Example: /home/ma-user/modelarts/inputs/data_url_0 Range: N/A
access_method	String	Definition: Access method of the input data channel path (local_dir). Range: • parameter: hyperparameters • env: environment variables
remote	InputDataInfoResp object	Definition: Description of the actual data input.
remote_constraint	Array of remote_constraint objects	Definition: Data input constraint.

Table 5-408 InputDataInfoResp

Parameter	Type	Description
dataset	dataset object	Definition: The input is a dataset.

Parameter	Type	Description
obs	obs object	Definition: OBS in which data input and output are stored.

Table 5-409 dataset

Parameter	Type	Description
id	String	Definition: Dataset ID of a training job. Range: N/A
version_id	String	Definition: Dataset version ID of a training job. Range: N/A
obs_url	String	Definition: OBS URL of the dataset for a training job. It is automatically parsed by ModelArts based on the dataset ID and dataset version ID. For example, /usr/data/ . Range: N/A

Table 5-410 obs

Parameter	Type	Description
obs_url	String	Definition: OBS URL of the dataset for a training job, For example, /usr/data/ . Range: N/A

Table 5-411 remote_constraint

Parameter	Type	Description
data_type	String	Definition: Data input type, including the data storage location and dataset. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
attributes	String	Definition: Related attributes. Constraints: N/A Range: If the input is a dataset: • data_format: data format • data_segmentation: data segmentation method • dataset_type: data labeling type Default Value: N/A

Table 5-412 OutputResp

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A
description	String	Definition: Description of the data output channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data output channels are mapped. Range: N/A
access_method	String	Definition: Access method of the input data channel path (local_dir). Range: • parameter: hyperparameters • env: environment variables
remote	RemoteResp object	Definition: Description of the actual data output.

Table 5-413 JobEngineResp

Parameter	Type	Description
engine_id	String	Definition: Engine ID selected for a training job. Range: N/A

Parameter	Type	Description
engine_name	String	Definition: Engine name selected for a training job. Range: N/A
engine_version	String	Definition: Engine version selected for a training job. Range: N/A
image_url	String	Definition: Custom image URL selected for a training job. The URL is obtained from SWR. Range: N/A
install_sys_packages	Boolean	Definition: Specifies whether to install the MoXing version specified by the training platform. Range: • true: yes • false: no

Table 5-414 SummaryResp

Parameter	Type	Description
log_type	String	Definition: Visualization log type of a training job. After this parameter is configured, the training job can be used as the data source of a visualization job. Range: • tensorboard: TensorBoard • mindstudio-insight: MindStudio Insight
log_dir	LogDirResp object	Definition: Visualization log output of a training job.
data_sources	Array of DataSourceResp objects	Definition: Visualization log input of the visualization job or training job debugging mode.

Table 5-415 LogDirResp

Parameter	Type	Description
pfs	PFSSummaryResp object	Definition: Output of an OBS parallel file system.

Table 5-416 PFSSummaryResp

Parameter	Type	Description
pfs_path	String	Definition: URL of the OBS parallel file system. Range: N/A

Table 5-417 DataSourceResp

Parameter	Type	Description
job	JobSummaryResp object	Definition: Job data source.

Table 5-418 JobSummaryResp

Parameter	Type	Description
job_id	String	Definition: ID of a training job. Range: N/A

Table 5-419 TaskResponse

Parameter	Type	Description
role	String	Definition: Task role. This function is not supported currently. Range: N/A
algorithm	TaskResponseAlgorithm object	Definition: Algorithm configurations for algorithm management.
task_resource	FlavorResponse object	Definition: Specifications of a training job or algorithm.
log_export_path	log_export_path object	Definition: Saved information about training job logs.

Table 5-420 TaskResponseAlgorithm

Parameter	Type	Description
code_dir	String	Definition: Absolute path of the directory where the algorithm boot file is stored. Range: N/A
boot_file	String	Definition: Absolute path of an algorithm boot file. Range: N/A
inputs	AlgorithmInput object	Definition: Information about the algorithm input channel.
outputs	AlgorithmOutput object	Definition: Information about the algorithm output channel.
engine	AlgorithmEngine object	Definition: Engine that a heterogeneous job depends on.
local_code_dir	String	Definition: Local directory of the training container to which the algorithm code directory is downloaded. The rules are as follows: • The directory must be under / home. • In v1 compatibility mode, the current field does not take effect. • When code_dir is prefixed with file://, the current field does not take effect. Range: N/A
working_dir	String	Definition: Work directory where an algorithm is executed. Note that this parameter does not take effect in v1 compatibility mode. Range: N/A
environments	Map<String,String>	Definition: Environment variables related to a training job. Range: N/A

Table 5-421 AlgorithmInput

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data input and output channels are mapped. Range: N/A
remote	AlgorithmRemote object	Definition: Actual data input, which can only be OBS for heterogeneous jobs.

Table 5-422 AlgorithmRemote

Parameter	Type	Description
obs	RemoteObsResp object	Definition: OBS in which data input and output are stored.

Table 5-423 AlgorithmOutput

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data output channels are mapped. Range: N/A
remote	RemoteResp object	Definition: Description of the actual data output.
mode	String	Definition: Data transmission mode. The default value is upload_periodically . Range: N/A
period	String	Definition: Data transmission period. The default value is 30s . Range: N/A

Table 5-424 RemoteResp

Parameter	Type	Description
obs	RemoteObsResp object	Definition: Data actually output to OBS.

Table 5-425 RemoteObsResp

Parameter	Type	Description
obs_url	String	Definition: Path of the data output to OBS. Range: N/A

Table 5-426 AlgorithmEngine

Parameter	Type	Description
engine_id	String	Definition: Engine flavor ID, for example, caffe-1.0.0-python2.7 . Range: N/A
engine_name	String	Definition: Engine flavor name, for example, Caffe . Range: N/A
engine_version	String	Definition: Engine flavor version. Engines with the same name have multiple versions, for example, Caffe-1.0.0-python2.7 of Python 2.7. Range: N/A
v1_compatible	Boolean	Definition: Specifies whether the v1 compatibility mode is used. Range: • true: The v1 compatibility mode is used. • false: The v1 compatibility mode is not used.
run_user	String	Definition: Default UID for the engine startup. Range: N/A
image_url	String	Definition: Custom image URL selected for an algorithm. Range: N/A

Table 5-427 FlavorResponse

Parameter	Type	Description
pool_id	String	Definition: ID of the resource pool selected for a training job. Range: N/A
flavor_id	String	Definition: Resource flavor ID. Range: N/A
flavor_name	String	Definition: Resource flavor name. Range: N/A
max_num	Integer	Definition: Maximum number of nodes supported by a flavor. Range: N/A
flavor_type	String	Definition: Resource flavor type. Range: • CPU • GPU • Ascend
billing	BillingInfo object	Definition: Billing information of a resource flavor.
flavor_info	FlavorInfoResponse object	Definition: Resource flavor details.
attributes	Map<String,String>	Definition: Other flavor attributes. Range: N/A

Table 5-428 FlavorInfoResponse

Parameter	Type	Description
max_num	Integer	Definition: Maximum number of nodes that can be selected. The value 1 indicates that the distributed mode is not supported. Range: N/A
cpu	Cpu object	Definition: CPU specifications.
gpu	Gpu object	Definition: GPU specifications.
npu	Npu object	Definition: Ascend specifications.
memory	Memory object	Definition: Memory information.

Parameter	Type	Description
disk	DiskResponse object	Definition: Disk information.

Table 5-429 DiskResponse

Parameter	Type	Description
size	Integer	Definition: Disk size. Range: N/A
unit	String	Definition: Unit of the disk size. Range: N/A

Table 5-430 log_export_path

Parameter	Type	Description
obs_url	String	Definition: OBS path for storing training job logs.

Table 5-431 SpecResponse

Parameter	Type	Description
resource	Resource object	Definition: Resource flavor of a training job. Select either flavor_id or pool_id and flavor_id .
volumes	Array of JobVolumeResp objects	Definition: Mounting volume information of a training job.
log_export_path	LogExportPathResp object	Definition: Log output of a training job.
schedule_policy	SchedulePolicyResp object	Definition: Scheduling policy of a training job.
custom_metrics	Array of CustomMetrics objects	Definition: Metric collection configuration.

Table 5-432 Resource

Parameter	Type	Description
policy	String	Definition: Resource flavor mode of a training job. Range: • regular: standard mode
flavor_id	String	Definition: ID of the resource flavor of a training job. Range: The flavor_id parameter cannot be specified for a dedicated resource pool of CPU specifications. The options for dedicated resource pools with GPU/Ascend specifications are as follows: • modelarts.pool.visual.xlarge (1 PU) • modelarts.pool.visual.2xlarge (2 PUs) • modelarts.pool.visual.4xlarge (4 PUs) • modelarts.pool.visual.8xlarge (8 PUs)
flavor_name	String	Definition: Read-only flavor name returned by ModelArts when flavor_id is used. Range: N/A
node_count	Integer	Definition: Number of resource replicas selected for a training job. Range: N/A
pool_id	String	Definition: ID of the resource pool selected for a training job. Range: N/A
pool_group_id	String	Definition: ID of the resource pool federation selected for a training job. Range: N/A
flavor_detail	FlavorDetail object	Definition: Flavor details of a training job or algorithm. This parameter is available only for public resource pools.
main_container_allocated_resources	MainContainerAllocatedResources object	Definition: Resource specifications actually obtained by the training container of a training job.

Parameter	Type	Description
main_container_customized_flavor	MainContainerCustomizedFlavor object	Definition: Custom flavor of a training job. Range: The number of CPU cores and memory size must be greater than 0, and the number of accelerator PUs must be greater than or equal to 0.

Table 5-433 FlavorDetail

Parameter	Type	Description
flavor_type	String	Definition: Resource flavor type. Range: • CPU • GPU • Ascend
billing	BillingInfo object	Definition: Billing information of a resource flavor.
flavor_info	FlavorInfo object	Definition: Resource flavor details.

Table 5-434 BillingInfo

Parameter	Type	Description
code	String	Definition: Billing code. Range: N/A
unit_num	Integer	Definition: Billing unit. Range: N/A

Table 5-435 FlavorInfo

Parameter	Type	Description
max_num	Integer	Definition: Maximum number of nodes that can be selected. The value 1 indicates that the distributed mode is not supported. Range: N/A
cpu	Cpu object	Definition: CPU specifications.
gpu	Gpu object	Definition: GPU specifications.

Parameter	Type	Description
npu	Npu object	Definition: Ascend specifications.
memory	Memory object	Definition: Memory information.
disk	Disk object	Definition: Disk information.

Table 5-436 Cpu

Parameter	Type	Description
arch	String	Definition: CPU architecture. Range: N/A
core_num	Integer	Definition: Number of cores. Range: N/A

Table 5-437 Gpu

Parameter	Type	Description
unit_num	Integer	Definition: Number of GPUs. Range: N/A
product_name	String	Definition: Product name. Range: N/A
memory	String	Definition: Memory. Range: N/A

Table 5-438 Npu

Parameter	Type	Description
unit_num	String	Definition: Number of NPUs. Range: N/A
product_name	String	Definition: Product name. Range: N/A
memory	String	Definition: Memory. Range: N/A

Table 5-439 Memory

Parameter	Type	Description
size	Integer	Definition: Memory size. Range: N/A
unit	String	Definition: Number of memory units. Range: N/A

Table 5-440 Disk

Parameter	Type	Description
size	String	Definition: Disk size. Range: N/A
unit	String	Definition: Unit of the disk size. Generally, the unit is GB. Range: N/A

Table 5-441 MainContainerAllocatedResources

Parameter	Type	Description
cpu_arch	String	Definition: CPU architecture. Range: N/A
cpu_core_num	Float	Definition: Number of cores. Range: N/A
mem_size	Float	Definition: Memory information. Range: N/A
accelerator_num	Float	Definition: Number of accelerator cards. Range: N/A
accelerator_type	String	Definition: Type of accelerator cards. Range: N/A

Table 5-442 MainContainerCustomizedFlavor

Parameter	Type	Description
cpu_core_num	Float	Definition: Number of CPU cores. Range: greater than 0

Parameter	Type	Description
mem_size	Float	Definition: Memory size. Range: greater than 0
accelerator_num	Float	Definition: Number of accelerator cards. Range: greater than or equal to 0

Table 5-443 JobVolumeResp

Parameter	Type	Description
nfs	NfsResp object	Definition: Volumes attached in NFS mode.

Table 5-444 NfsResp

Parameter	Type	Description
nfs_server_path	String	Definition: NFS server path, for example, 10.10.10.10:/example/path . Range: N/A
local_path	String	Definition: Path for attaching volumes to the training container, for example, /example/path . Range: N/A
read_only	Boolean	Definition: Specifies whether the disks attached to the container in NFS mode are read-only. Range: • true: read only • false: non-read-only

Table 5-445 LogExportPathResp

Parameter	Type	Description
obs_url	String	Definition: OBS path for storing training job logs, for example, obs://example/path . Range: N/A

Parameter	Type	Description
host_path	String	Definition: Path of the host where training job logs are stored, for example, /example/path . Range: N/A

Table 5-446 SchedulePolicyResp

Parameter	Type	Description
required_affinity	RequiredAffinityResp object	Definition: Affinity requirements of a training job.
priority	Integer	Definition: Priority of a training job. Range: 0 to 3
preemptible	Boolean	Definition: Whether the resource can be preempted. Range: • true: The resource can be preempted. • false: The resource cannot be preempted.

Table 5-447 RequiredAffinityResp

Parameter	Type	Description
affinity_type	String	Definition: Affinity scheduling policy. Range: • cabinet: strong cabinet scheduling • hyperinstance: supernode affinity scheduling
affinity_group_size	Integer	Definition: Size of an affinity group. Range: N/A

Table 5-448 CustomMetrics

Parameter	Type	Description
exec	Exec object	Definition: Metrics are collected in CLI mode.

Parameter	Type	Description
http_get	HttpGet object	Definition: Metrics are collected in HTTP mode.

Table 5-449 Exec

Parameter	Type	Description
command	Array of strings	Definition: Metrics are collected in CLI mode.

Table 5-450 HttpGet

Parameter	Type	Description
path	String	Definition: URL for obtaining metrics over HTTP. Both the URL and the port below must either be configured together or remain empty. Range: N/A
port	Integer	Definition: Port for obtaining metrics over HTTP. This parameter and the URL above must be set or left blank at the same time. Range: N/A

Table 5-451 JobEndpointsResp

Parameter	Type	Description
ssh	SSHResp object	Definition: SSH connection information.
jupyter_lab	JupyterLab object	Definition: JupyterLab connection information.
tensorboard	Tensorboard object	Definition: TensorBoard connection information.
mindstudio_insight	MindStudioInsight object	Definition: MindStudio Insight connection information.

Table 5-452 SSHResp

Parameter	Type	Description
key_pair_names	Array of strings	Definition: Name of the SSH key pair, which can be created and viewed on the Key Pair page of the Elastic Cloud Server (ECS) console. Range: N/A
task_urls	Array of TaskUrls objects	Definition: SSH connection address.

Table 5-453 TaskUrls

Parameter	Type	Description
task	String	Definition: Task ID of a training job. Range: N/A
url	String	Definition: SSH connection address of a training job. Range: N/A

Table 5-454 JupyterLab

Parameter	Type	Description
url	String	Definition: JupyterLab address of a training job. Range: N/A
token	String	Definition: JupyterLab token of a training job. Range: N/A

Table 5-455 Tensorboard

Parameter	Type	Description
url	String	Definition: TensorBoard address of a training job. Range: N/A
token	String	Definition: TensorBoard token of a training job. Range: N/A

Table 5-456 MindStudioInsight

Parameter	Type	Description
url	String	Definition: MindStudio Insight address of a training job. Range: N/A
token	String	Definition: MindStudio Insight token of a training job. Range: N/A

Example Requests

The following is an example of how to obtain training jobs. The number of obtained training jobs has been limited to **1**, and the system will only query data for training jobs with names containing **trainjob**.

```
POST https://endpoint/v2/{project_id}/training-job-searches?limit=1
```

```
{
  "offset" : 0,
  "limit" : 1,
  "filters" : [ {
    "key" : "name",
    "operator" : "like",
    "value" : [ "trainjob" ]
  }, {
    "key" : "create_time",
    "operator" : "between",
    "value" : [ "", "" ]
  }, {
    "key" : "phase",
    "operator" : "in",
    "value" : [ "" ]
  }, {
    "key" : "algorithm_name",
    "operator" : "like",
    "value" : [ "" ]
  }, {
    "key" : "kind",
    "operator" : "in",
    "value" : [ ]
  }, {
    "key" : "user_id",
    "operator" : "in",
    "value" : [ "" ]
  }, {
    "key" : "runtime_type",
    "operator" : "in",
    "value" : [ "debug" ]
  } ]
}
```

Example Responses

Status code: 200

ok

```
{
  "total" : 5059,
```

```
"count" : 1,
"limit" : 1,
"offset" : 0,
"sort_by" : "create_time",
"order" : "desc",
"group_by" : "",
"workspace_id" : "0",
"ai_project" : "default-ai-project",
"items" : [ {
  "kind" : "job",
  "metadata" : {
    "id" : "3faf5c03-aaa1-4cbe-879d-24b05d997347",
    "name" : "trainjob--py14_mem06-byd-108",
    "description" : "",
    "create_time" : 1636447346315,
    "workspace_id" : "0",
    "user_name" : "ei_modelarts_q00357245_01"
  },
  "status" : {
    "phase" : "Abnormal",
    "secondary_phase" : "CreateFailed",
    "duration" : 0,
    "start_time" : 0,
    "node_count_metrics" : [ [ 1636447746000, 0 ], [ 1636447755000, 0 ], [ 1636447756000, 0 ] ],
    "tasks" : [ "worker-0" ]
  },
  "algorithm" : {
    "code_dir" : "obs://test-crq/economic_test/py_minist/",
    "boot_file" : "obs://test-crq/economic_test/py_minist/minist_common.py",
    "inputs" : [ {
      "name" : "data_url",
      "local_dir" : "/home/ma-user/modelarts/inputs/data_url_0",
      "remote" : {
        "obs" : {
          "obs_url" : "/test-crq/data/py_minist/"
        }
      }
    } ],
    "outputs" : [ {
      "name" : "train_url",
      "local_dir" : "/home/ma-user/modelarts/outputs/train_url_0",
      "remote" : {
        "obs" : {
          "obs_url" : "/test-crq/train_output/"
        }
      }
    } ],
    "engine" : {
      "engine_id" : "pytorch-cp36-1.4.0-v2",
      "engine_name" : "PyTorch",
      "engine_version" : "PyTorch-1.4.0-python3.6-v2"
    }
  },
  "spec" : {
    "resource" : {
      "policy" : "economic",
      "flavor_id" : "modelarts.vm.pnt1.large.eco",
      "flavor_name" : "Computing GPU(Pnt1) instance",
      "node_count" : 1,
      "flavor_detail" : {
        "flavor_type" : "GPU",
        "billing" : {
          "code" : "modelarts.vm.gpu.pnt1.eco",
          "unit_num" : 1
        }
      },
      "flavor_info" : {
        "cpu" : {
          "arch" : "x86",
          "core_num" : 8
```

```
    },
    "gpu" : {
      "unit_num" : 1,
      "product_name" : "GP-Pnt1",
      "memory" : "8GB"
    },
    "memory" : {
      "size" : 64,
      "unit" : "GB"
    }
  }
}
}
```

Status Codes

Status Code	Description
200	ok

Error Codes

See [Error Codes](#).

5.15 Obtaining the Events of a Training Job

Function

This API is used to obtain the events of a training job on ModelArts.

This API applies to the following scenario: When you need to view the event records of a specific training job, you can use this API to obtain the event list. Before using this API, ensure that you have obtained the training job ID and have the permission to view the event list. After the query is complete, the platform returns the event records of the training job. If the training job ID does not exist or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/training-jobs/{training_job_id}/events

Table 5-457 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
training_job_id	Yes	String	Definition: Training job ID. For details, see Obtaining Training Jobs . Constraints: N/A Range: N/A Default Value: N/A

Table 5-458 Query Parameters

Parameter	Mandatory	Type	Description
offset	No	Integer	Definition: Offset of data records Constraints: N/A Range: N/A Default Value: N/A
limit	No	Integer	Definition: Maximum number of records returned on each page Constraints: N/A Range: [1, 100] Default Value: 50
order	No	String	Definition: Instance order Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
start_time	No	String	Definition: Start time Constraints: The start time must be passed together with the end time. Range: N/A Default Value: N/A
end_time	No	String	Definition: End time Constraints: The end time must be passed together with the start time. Range: N/A Default Value: N/A
level	No	String	Definition: Level of the event to be returned Constraints: N/A Range: [Info Error Warning] Default Value: N/A
pattern	No	String	Definition: Content contained in an event Constraints: The value can contain a maximum of 256 characters. Range: N/A Default Value: N/A
source	No	String	Definition: Source of the event to be returned Constraints: N/A Range: [K8S Job Task] Default Value: N/A

Request Parameters

Table 5-459 Request header parameters

Parameter	Mandatory	Type	Description
X-Language	No	String	Definition: Language Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 5-460 Response body parameters

Parameter	Type	Description
total	String	Definition: Total number of records. Range: N/A
limit	String	Definition: Maximum number of records that can be displayed. Range: N/A
offset	String	Definition: Start number of records. Range: N/A
order	String	Definition: Sorting mode. Range: N/A
start_time	String	Definition: Start time of an event. Range: N/A
end_time	String	Definition: End time of an event. Range: N/A
events	Array of Event objects	Definition: Event list.

Table 5-461 Event

Parameter	Type	Description
message	String	Definition: Event information. Range: N/A
level	String	Definition: Event level. Range: N/A
time	String	Definition: Time when an event occurs. Range: N/A
source	String	Definition: Event source. Range: N/A

Status code: 400

Table 5-462 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://endpoint/v2/{project_id}/training-jobs/{training_job_id}/events?  
order=desc&offset=0&limit=10&start_time=1669449696964&end_time=1669711991259
```

Example Responses

Status code: 200

ok

```
{  
  "total" : 27,  
  "limit" : 10,  
  "offset" : 0,  
  "order" : "desc",  
  "start_time" : "2022-11-26T16:01:36+08:00",  
  "end_time" : "2022-11-29T16:53:11+08:00",  
  "events" : [ {  
    "time" : "2022-11-26T16:03:41+08:00",  
    "level" : "Error",  
    "message" : "Training job failed.",  
    "source" : "Job"  
  }, {  
    "time" : "2022-11-26T16:03:16+08:00",  
    "level" : "Info",  
    "message" : "[Job: modelarts-job-5bd61eea-9de2-4864-a0f7-5fae966171b5] ExecuteAction: Start to  
execute action TerminateJob",  
    "source" : "K8S"  
  }, {  
    "time" : "2022-11-26T16:03:12+08:00",  
    "level" : "Info",  
    "message" : "[worker-0][time used: 0.296s] Upload training output(parameter name: train_url) finished.",  
    "source" : "Task"  
  }, {  
    "time" : "2022-11-26T16:03:12+08:00",  
    "level" : "Info",  
    "message" : "[worker-0] Training output(parameter name: train_url) Uploading.",  
    "source" : "Task"  
  }, {  
    "time" : "2022-11-26T16:03:11+08:00",  
    "level" : "Info",  
    "message" : "[worker-0] Training finished. Exit code 1.",  
    "source" : "Task"  
  }, {  
    "time" : "2022-11-26T16:02:10+08:00",  
    "level" : "Info",  
    "message" : "[worker-0] training started.",  
    "source" : "Task"  
  }, {  
    "time" : "2022-11-26T16:02:09+08:00",  
    "level" : "Info",  
    "message" : "Training job is running.",
```

```
{
  "source": "Job"
}, {
  "time": "2022-11-26T16:02:06+08:00",
  "level": "Info",
  "message": "[Pod: modelarts-job-5bd61eea-9de2-4864-a0f7-5fae966171b5-worker-0] Started: Started container",
  "source": "K8S"
}, {
  "time": "2022-11-26T16:02:06+08:00",
  "level": "Info",
  "message": "[Pod: modelarts-job-5bd61eea-9de2-4864-a0f7-5fae966171b5-worker-0] SuccessfulCreate: Created container",
  "source": "K8S"
}, {
  "time": "2022-11-26T16:02:05+08:00",
  "level": "Info",
  "message": "[Pod: modelarts-job-5bd61eea-9de2-4864-a0f7-5fae966171b5-worker-0] Pulled: Successfully pulled image \"swr.cn-north-7.myhuaweicloud.com/modelarts-job-dev-image/modelarts-tool-container:1.0.0-5.3.1-b002.2\"",
  "source": "K8s"
}
}
```

Status code: 400

Bad request.

```
{
  "error_code": "ModelArts.50004000",
  "error_msg": "Bad request."
}
```

Status Codes

Status Code	Description
200	ok
400	Bad request.

Error Codes

See [Error Codes](#).

5.16 Obtaining the General Specifications Supported by a Training Job

Function

This API is used to obtain the supported resource specifications of training jobs on ModelArts.

This API applies to the following scenario: When you need to know the resource specifications supported by the platform to configure training jobs, you can use this API to obtain the specification list. Before using this API, ensure that you have the permission to view the resource specifications. After the query is complete, the

platform returns the supported resource specifications. If you do not have the permission to perform operations, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/training-job-flavors

Table 5-463 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 5-464 Query Parameters

Parameter	Mandatory	Type	Description
flavor_type	No	String	Definition: Specification type to be obtained. If this parameter is not specified, all specification types are queried. Constraints: N/A Range: Enums: • CPU • GPU • Ascend Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 5-465 Response body parameters

Parameter	Type	Description
total_count	Integer	Definition: Total number of training job resource flavors. Range: N/A
flavors	Array of FlavorResponse objects	Definition: List of training job resource flavors.

Table 5-466 FlavorResponse

Parameter	Type	Description
pool_id	String	Definition: ID of the resource pool selected for a training job. Range: N/A
flavor_id	String	Definition: Resource flavor ID. Range: N/A
flavor_name	String	Definition: Resource flavor name. Range: N/A
max_num	Integer	Definition: Maximum number of nodes supported by a flavor. Range: N/A
flavor_type	String	Definition: Resource flavor type. Range: • CPU • GPU • Ascend
billing	BillingInfo object	Definition: Billing information of a resource flavor.
flavor_info	FlavorInfoResponse object	Definition: Resource flavor details.
attributes	Map<String,String>	Definition: Other flavor attributes. Range: N/A

Table 5-467 BillingInfo

Parameter	Type	Description
code	String	Definition: Billing code. Range: N/A
unit_num	Integer	Definition: Billing unit. Range: N/A

Table 5-468 FlavorInfoResponse

Parameter	Type	Description
max_num	Integer	Definition: Maximum number of nodes that can be selected. The value 1 indicates that the distributed mode is not supported. Range: N/A
cpu	Cpu object	Definition: CPU specifications.
gpu	Gpu object	Definition: GPU specifications.
npu	Npu object	Definition: Ascend specifications.
memory	Memory object	Definition: Memory information.
disk	DiskResponse object	Definition: Disk information.

Table 5-469 Cpu

Parameter	Type	Description
arch	String	Definition: CPU architecture. Range: N/A
core_num	Integer	Definition: Number of cores. Range: N/A

Table 5-470 Gpu

Parameter	Type	Description
unit_num	Integer	Definition: Number of GPUs. Range: N/A

Parameter	Type	Description
product_name	String	Definition: Product name. Range: N/A
memory	String	Definition: Memory. Range: N/A

Table 5-471 Npu

Parameter	Type	Description
unit_num	String	Definition: Number of NPUs. Range: N/A
product_name	String	Definition: Product name. Range: N/A
memory	String	Definition: Memory. Range: N/A

Table 5-472 Memory

Parameter	Type	Description
size	Integer	Definition: Memory size. Range: N/A
unit	String	Definition: Number of memory units. Range: N/A

Table 5-473 DiskResponse

Parameter	Type	Description
size	Integer	Definition: Disk size. Range: N/A
unit	String	Definition: Unit of the disk size. Range: N/A

Example Requests

The following shows how to query the public CPU resource flavors of training jobs in CN North-Beijing4.

GET https://endpoint/v2/{project_id}/training-job-flavors?flavor_type=CPU

Example Responses

Status code: 200

ok

```
{
  "total_count" : 2,
  "flavors" : [ {
    "flavor_id" : "modelarts.vm.cpu.2u",
    "flavor_name" : "Computing CPU(2U) instance",
    "flavor_type" : "CPU",
    "billing" : {
      "code" : "modelarts.vm.cpu.2u",
      "unit_num" : 1
    },
    "flavor_info" : {
      "max_num" : 1,
      "cpu" : {
        "arch" : "x86",
        "core_num" : 2
      },
      "memory" : {
        "size" : 8,
        "unit" : "GB"
      },
      "disk" : {
        "size" : 50,
        "unit" : "GB"
      }
    }
  }, {
    "flavor_id" : "modelarts.vm.cpu.8u",
    "flavor_name" : "Computing CPU(8U) instance",
    "flavor_type" : "CPU",
    "billing" : {
      "code" : "modelarts.vm.cpu.8u",
      "unit_num" : 1
    },
    "flavor_info" : {
      "max_num" : 16,
      "cpu" : {
        "arch" : "x86",
        "core_num" : 8
      },
      "memory" : {
        "size" : 32,
        "unit" : "GB"
      },
      "disk" : {
        "size" : 50,
        "unit" : "GB"
      }
    }
  }
]
}
```

Status Codes

Status Code	Description
200	ok

Error Codes

See [Error Codes](#).

5.17 Obtaining the Preset AI Frameworks Supported by a Training Job

Function

This API is used to query the list of preset AI frameworks supported by the current system.

This API is used when you need to know the preset AI frameworks supported by the system. Before using this API, ensure that you have the required permissions. After the query, you will obtain the details of all preset AI frameworks supported by the system. If you do not have the required permission or the query fails, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/training-job-engines

Table 5-474 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 5-475 Response body parameters

Parameter	Type	Description
total	Integer	Definition: Total number of training job engine flavors. Range: N/A
items	Array of items objects	Definition: Engine flavor parameter list.

Table 5-476 items

Parameter	Type	Description
engine_id	String	Definition: Engine flavor ID, for example, caffe-1.0.0-python2.7 . Range: N/A
engine_name	String	Definition: Engine flavor name, for example, Caffe . Range: N/A
engine_version	String	Definition: Engine flavor version. Engines with the same name have multiple versions, for example, Caffe-1.0.0-python2.7 of Python 2.7. Range: N/A
v1_compatible	Boolean	Definition: Specifies whether the v1 compatibility mode is used. Range • true: v1 compatibility • false: v1 incompatibility
run_user	String	Definition: Default UID for the engine startup. Range: N/A
image_info	image_info object	Definition: Engine information.

Table 5-477 image_info

Parameter	Type	Description
cpu_image_url	String	Definition: Image of the CPU flavor. Range: N/A

Parameter	Type	Description
gpu_image_url	String	Definition: Image with the matched GPU or Ascend flavor. Range: N/A
image_version	String	Definition: Image version. Range: N/A

Example Requests

The following shows how to query all public engine specifications of a training job in CN North-Beijing4 (only part of the specifications are displayed because there are too many engines).

```
GET https://endpoint/v2/{project_id}/training-job-engines
```

Example Responses

Status code: 200

ok

```
{
  "total": 20,
  "items": [ {
    "engine_id": "caffe-1.0.0-python2.7",
    "engine_name": "Caffe",
    "engine_version": "caffe-1.0.0-python2.7",
    "v1_compatible": true,
    "run_user": "",
    "image_info": {
      "cpu_image_url": "modelarts-job-dev-image/caffe1-cpu-cp27:1.0.0",
      "gpu_image_url": "modelarts-job-dev-image/caffe1-gpu-cuda8-cp27:1.0.0",
      "image_version": "3.1.0"
    }
  }, {
    "engine_id": "horovod-cp36-tf-1.16.2",
    "engine_name": "Horovod",
    "engine_version": "0.16.2-TF-1.13.1-python3.6",
    "v1_compatible": true,
    "run_user": "",
    "image_info": {
      "cpu_image_url": "modelarts-job-dev-image/tensorflow-gpu-cuda10-cp36-horovod0162:1.13.1",
      "gpu_image_url": "modelarts-job-dev-image/tensorflow-gpu-cuda10-cp36-horovod0162:1.13.1",
      "image_version": "3.2.1"
    }
  }, {
    "engine_id": "horovod_0.20.0-tensorflow_2.1.0-cuda_10.1-py_3.7-ubuntu_18.04-x86_64",
    "engine_name": "Horovod",
    "engine_version": "horovod_0.20.0-tensorflow_2.1.0-cuda_10.1-py_3.7-ubuntu_18.04-x86_64",
    "v1_compatible": false,
    "run_user": "1102",
    "image_info": {
      "cpu_image_url": "aip/horovod_tensorflow:train",
      "gpu_image_url": "aip/horovod_tensorflow:train",
      "image_version": "horovod_0.20.0-tensorflow_2.1.0-cuda_10.1-py_3.7-ubuntu_18.04-x86_64-20210912152543-1e0838d"
    }
  }, ".....", {
    "engine_id": "tensorflow_2.1.0-cuda_10.1-py_3.7-ubuntu_18.04-x86_64",
```



```
"engine_name": "TensorFlow",
"engine_version": "tensorflow_2.1.0-cuda_10.1-py_3.7-ubuntu_18.04-x86_64",
"v1_compatible": false,
"run_user": "1102",
"image_info": {
  "cpu_image_url": "aip/tensorflow_2_1:train",
  "gpu_image_url": "aip/tensorflow_2_1:train",
  "image_version": "tensorflow_2.1.0-cuda_10.1-py_3.7-ubuntu_18.04-x86_64-20210912152543-1e0838d"
}, {
  "engine_id": "xgboost-sklearn-python3.6",
  "engine_name": "XGBoost-Sklearn",
  "engine_version": "XGBoost-0.80-Sklearn-0.18.1-python3.6",
  "v1_compatible": true,
  "run_user": "",
  "image_info": {
    "cpu_image_url": "modelarts-job-dev-image/python-train-py36:secure",
    "gpu_image_url": "",
    "image_version": "2.0.10-20211101113705"
  }
}]
}
```

Status Codes

Status Code	Description
200	ok

Error Codes

See [Error Codes](#).

6 Model Management

6.1 Obtaining the Model Runtime

Function

This API is used to obtain the AI engine and runtime of models.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/models/ai-engine-runtimes

Table 6-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID .

Table 6-2 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	String	Number of items displayed on each page
offset	No	String	Offset, which is the position where the query starts. The value must be greater than or equal to 0.

Request Parameters

Table 6-3 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.

Response Parameters

Status code: 200**Table 6-4** Response body parameters

Parameter	Type	Description
count	Integer	Total number of records that meet the search criteria when no pagination is performed
total_count	Integer	Number of records in the query result. If offset and limit are not configured, the values of count and total are the same.
engine_runtimes	Array of EngineAndRuntimesResponse objects	Engine runtime environment

Table 6-5 EngineAndRuntimesResponse

Parameter	Type	Description
ai_engine	String	AI engine type. The options are as follows: • TensorFlow • PyTorch • MindSpore • XGBoost • Scikit_Learn • Spark_MLlib
runtimes	Array of strings	Runtime image, for example, pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64

Parameter	Type	Description
request_mode	Array of strings	Request mode. The AI engine supports synchronous or asynchronous real-time services. • sync: synchronous real-time service • async: asynchronous real-time service
accelerators	Array of Accelerator objects	Accelerator cards that can be used by the AI engine.
arch	Array of strings	AI engine architecture. The options are as follows: • x86_64 • aarch64
status_list	Array of strings	AI engine status. The options are as follows: • normal: The AI engine is normal. • deleted: The AI engine is deleted. • deleting: The AI engine is being deleted.
image_source	Array of strings	Image source. The options are as follows: • base_image • uniform_image

Table 6-6 Accelerator

Parameter	Type	Description
type	String	Accelerator card type. The options are as follows: • npu • gpu • none
name	String	Accelerator card name, for example, SNT9B .
cuda_version	String	CUDA driver version.
driver_version_section	String	Driver version set.

Status code: 401**Table 6-7** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 6-8** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 6-9** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/models/ai-engine-runtimes
```

Example Responses**Status code: 200**

OK

```
{  
  "count" : 4,  
  "total_count" : 4,
```

```
"engine_runtimes" : [ {
  "ai_engine" : "TensorFlow",
  "runtimes" : [ "tf1.13-python3.6-cpu", "tf1.13-python3.6-gpu", "tf1.13-python3.7-cpu", "tf1.13-python3.7-
gpu", "python3.6", "tf1.13-python3.7-aiflow-gpu", "tf1.13-python3.7-gpu-async", "tensorflow_2.1.0-
cuda_10.1-py_3.7-ubuntu_18.04-x86_64", "tensorflow_2.6.0-cuda_11.2-py_3.7-ubuntu_18.04-x86_64",
"tensorflow_1.15.5-cuda_11.4-py_3.8-ubuntu_20.04-x86_64" ],
  "request_mode" : [ "sync", "sync", "sync", "sync", "sync", "sync", "async", "sync", "sync", "sync" ],
  "accelerators" : [ {
    "type" : "none"
  }, {
    "type" : "gpu",
    "cuda_version" : "cuda 10.2"
  }, {
    "type" : "none"
  }, {
    "type" : "gpu",
    "cuda_version" : "cuda 10.2"
  }, {
    "type" : "none"
  }, {
    "type" : "gpu",
    "cuda_version" : "cuda 10.2"
  }, {
    "type" : "none"
  }, {
    "type" : "gpu",
    "cuda_version" : "cuda 10.2"
  }, {
    "type" : "none"
  }, {
    "type" : "none"
  }, {
    "type" : "none"
  } ],
  "arch" : [ "x86_64", "x86_64", "x86_64", "x86_64", "x86_64", "x86_64", "x86_64", "x86_64", "x86_64",
"x86_64" ],
  "status_list" : [ "normal", "normal", "normal", "normal", "normal", "normal", "normal", "normal",
"normal", "normal" ],
  "image_source" : [ "base_image", "base_image", "base_image", "base_image", "base_image",
"base_image", "base_image", "uniform_image", "uniform_image", "uniform_image" ]
}, {
  "ai_engine" : "PyTorch",
  "runtimes" : [ "python3.6", "python3.7", "pytorch1.4-python3.7", "pytorch_1.11.0-cann_7.0.1-py_3.9-
euler_2.10.7-aarch64-snt9b", "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64", "pytorch_1.8.2-
cuda_11.1-py_3.7-ubuntu_18.04-x86_64" ],
  "request_mode" : [ "sync", "sync", "sync", "sync", "sync", "sync" ],
  "accelerators" : [ {
    "type" : "none"
  }, {
    "type" : "none"
  }, {
    "type" : "none"
  }, {
    "type" : "npu",
    "name" : "SNT9",
    "driver_version_section" : "C8x"
  }, {
    "type" : "none"
  }, {
    "type" : "none"
  } ],
  "arch" : [ "x86_64", "x86_64", "x86_64", "aarch64", "x86_64", "x86_64" ],
  "status_list" : [ "normal", "normal", "normal", "normal", "normal", "normal" ],
  "image_source" : [ "base_image", "base_image", "base_image", "uniform_image", "uniform_image",
"uniform_image" ]
}, {
  "ai_engine" : "MindSpore",
  "runtimes" : [ "mindspore_1.9.0-cann_6.0.1-py_3.7-euler_2.9.9-x86_64-snt3p-300i", "mindspore_1.7.0-
cuda_10.1-py_3.7-ubuntu_18.04-x86_64", "mindspore_1.2.0-py_3.7-cuda_10.1-ubuntu_18.04-x86_64" ],
  "request_mode" : [ "sync", "sync", "sync" ],
  "accelerators" : [ {
```

```
{
  "type": "none"
}, {
  "type": "none"
}, {
  "type": "none"
} ],
"arch": [ "x86_64", "x86_64", "x86_64" ],
"status_list": [ "normal", "normal", "normal" ],
"image_source": [ "uniform_image", "uniform_image", "uniform_image" ]
}, {
  "ai_engine": "Custom",
  "runtimes": [ ],
  "request_mode": [ ],
  "accelerators": [ ],
  "arch": [ ],
  "status_list": [ ],
  "image_source": [ ]
} ]
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

6.2 Querying the AI Application List

Function

This API is used to query the AI application list based on different search parameters.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/models

Table 6-10 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Table 6-11 Query Parameters

Parameter	Mandatory	Type	Description
model_name	No	String	Model name. Fuzzy match is supported. If a model name contains an underscore (_), add the exact_match parameter to the request and set the parameter value to true because the underscore needs to be escaped. This ensures that the query operation can be performed properly.
exact_match	No	Boolean	Whether to escape underscores (.). <i>If a model name contains underscores ()</i> , set this parameter to true to ensure that the query operation can be performed properly. By default, this parameter is left blank.
model_version	No	String	Model version The format is Digit:Digit:Digit, where Digit is a one-digit or two-digit positive integer. Note that the version number cannot start with 0, for example, 01.01.01.

Parameter	Mandatory	Type	Description
model_status	No	String	Model status. You can obtain models based on model statuses. Options: • publishing: The model is being published. • published: The model has been published. • failed: Publishing the model failed. • building: The image is being created. • building_failed: Creating an image failed.
description	No	String	Description. Fuzzy match is supported.
offset	No	Integer	Index of the query page, which defaults to 0
limit	No	Integer	Maximum number of records returned on each page. Default value: 1000
sort_by	No	String	Sorting field. Enums: • create_at: time when an AI application is created (default value) • model_version: AI application version • model_size: AI application size
order	No	String	Sorting order. Enums: • asc: ascending order • desc: descending order (default value)
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Parameter	Mandatory	Type	Description
model_type	No	String	Model type. The models of this type are queried. model_type and not_model_type are mutually exclusive and cannot co-exist. The value can be TensorFlow, PyTorch, MindSpore, Image, Custom or Template.
not_model_type	No	String	Model type, which is used for obtaining models of types except for this type. The value can be TensorFlow, PyTorch, MindSpore, Image, Custom or Template.

Request Parameters

Table 6-12 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API that is used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 6-13 Response body parameters

Parameter	Type	Description
models	Array of ModelListItem objects	Model metadata
total_count	Integer	Total number of models that meet the search criteria when no paging is performed
count	Integer	Total number of models that meet the search criteria

Table 6-14 ModelListItem

Parameter	Type	Description
owner	String	User ID of the tenant to which a model belongs
model_version	String	Model version
model_type	String	Model type
description	String	Model description
project	String	Project ID of the tenant to which a model belongs
source_type	String	Model source type. This parameter is valid and its value is auto only if the model is deployed using ExeML.
model_id	String	Model ID
model_source	String	Model source. Options: • auto: ExeML • algos: built-in algorithm • custom: custom model
install_type	Array of strings	Deployment types supported by a model
model_size	Integer	Model size, in bytes
workspace_id	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.
model_status	String	Model status
market_flag	Boolean	Whether a model is subscribed from AI Gallery
tunable	Boolean	Whether a model can be tuned. true indicates that the model can be tuned, and false indicates not.
model_name	String	Model name
create_at	Long	Time when a model is created, in milliseconds calculated from 1970.1.1 0:0:0 UTC.
publishable_flag	Boolean	Whether a model can be published to AI Gallery

Parameter	Type	Description
source_copy	String	Whether to enable image replication. This parameter is valid only when model_type is set to Image . • true: Image replication is enabled. After this function is enabled, AI applications cannot be rapidly created, and modifying or deleting an image in the SWR source directory will not affect service deployment. • false: Image replication is not enabled. After this function is disabled, AI applications can be rapidly created, but modifying or deleting an image in the SWR source directory will affect service deployment. If this parameter is not configured, image replication is enabled by default.
tenant	String	Account ID of the tenant to which a model belongs
subscription_id	String	Model subscription ID
extra	String	Extended parameter
specification	ModelSpecification object	Deployment specifications.
deployment_constraints	DeploymentConstraints object	Deployment constraints.

Table 6-15 ModelSpecification

Parameter	Type	Description
min_cpu	String	Minimal CPU specifications
min_gpu	String	Minimal GPU specifications
min_memory	String	Minimum memory
min_ascend	String	Minimal Ascend specifications

Table 6-16 DeploymentConstraints

Parameter	Type	Description
accelerators	Array of Accelerator objects	Supported accelerator card types. Custom images support only one accelerator card type during import.
cpu_type	String	CPU type.
input_types	Array of strings	Input and output type in asynchronous mode and video service scenarios, such as OBS and VIS . This parameter is used for importing custom images. Non-custom images are declared in runtime .
output_types	Array of strings	Input and output type in asynchronous mode and video service scenarios, such as OBS and DIS . This parameter is used for importing custom images. Non-custom images are declared in runtime .
request_mode	String	Request model of a job when the model is deployed as a service.
rsa	Rsa object	Used for secure communication between the container and inference platform or field encryption. This parameter is used for importing custom images. Non-custom images are declared in runtime .
service_config	String	Service deployment field, which can be specified during service deployment. This parameter is used for importing custom images. Non-custom images are declared in runtime . As the structure is rather complex, use the value in the XML format.
task_config	String	Field of job-related configurations, which can be specified during job creation. This parameter is used for importing custom images. Non-custom images are declared in runtime . As the structure is rather complex, use the value in the XML format.
model_security	ModelSecurity object	Model encryption and decryption parameters.

Table 6-17 Accelerator

Parameter	Type	Description
type	String	Accelerator card type. The options are as follows: • npu • gpu • none
name	String	Accelerator card name, for example, SNT9B .
cuda_version	String	CUDA driver version.
driver_version_section	String	Driver version set.

Table 6-18 Rsa

Parameter	Type	Description
mode	String	Encryption mode.
private_key	String	Private key.
public_key	String	Public key.

Table 6-19 ModelSecurity

Parameter	Type	Description
model_key	String	After the model is encrypted using Edge, the root key, model key, and encrypted model can be obtained.
root_key	String	After the model is encrypted using Edge, the root key, model key, and encrypted model can be obtained.
security_policy	String	Model encryption mode.
is_verify_app	Boolean	Specifies whether to verify the files in edge scenarios, including the configuration files, container images, and library files.

Example Requests

```
GET https://{endpoint}/v1/{project_id}/models
```

Example Responses

Status code: 200

Models

```
{
  "total_count": 1,
  "count": 1,
  "models": [ {
    "model_name": "mnist",
    "model_version": "1.0.0",
    "model_id": "10eb0091-887f-4839-9929-cbc884f1e20e",
    "model_type": "tensorflow",
    "model_size": 5012312,
    "tenant": "6d28e85aa78b4e1a9b4bd83501bcd4a1",
    "project": "d04c10db1f264cfef1966deff1a3527c",
    "owner": "6d28e85aa78b4e1a9b4bd83501bcd4a1",
    "create_at": 1533041553000,
    "description": "mnist model",
    "workspace_id": "0",
    "specification": { }
  } ]
}
```

Status Codes

Status Code	Description
200	Models

Error Codes

See [Error Codes](#).

6.3 Creating an AI Application

Function

Import a meta model to create an AI application.

The execution code and model must be uploaded to OBS first. By default, the model generated by a training job is stored in OBS.

Constraints

The body parameter requirements for importing a model using a template are different from those for importing a model without using a template. In the following body parameters, **template parameters** indicate the parameters that can be configured when a model is imported using a template, **non-template parameters** indicate the parameters that can be configured when a model is imported without using a template, and **public parameters** indicate the parameters that are irrelevant to the model import mode.

- When a model is imported using a template (**model_type** is set to **Template**), the **template** field is mandatory and the **source_location** field does not need to be configured.
- If a model is imported without using a template (**model_type** is not set to **Template**), **source_location** is mandatory and **template** does not need to be configured.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/models

Table 6-20 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Request Parameters

Table 6-21 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API that is used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Table 6-22 Request body parameters

Parameter	Mandatory	Type	Description
model_docs	No	Array of GuideDoc objects	List of model description documents. A maximum of three documents are supported. Common parameter

Parameter	Mandatory	Type	Description
template	No	ModelTemplate object	Configuration items in a template. This parameter is mandatory when model_type is set to Template . Template parameter
model_version	Yes	String	Model version in the format of <i>Digit.Digit.Digit</i> . Each digit is a one-digit or two-digit positive integer, but cannot start with 0. For example, 01.01.01 is not allowed. Common parameter
source_job_version	No	String	Version of the source training job. If the model is generated from a training job, input this parameter for source tracing. If the model is imported from a third-party meta model, leave this parameter blank. This parameter is left blank by default. Non-template parameter
source_location	Yes	String	OBS path where the model is located or the SWR image location
source_copy	No	String	Whether to enable image replication. This parameter is valid only when model_type is set to Image . Options: • true: Default value, indicating that image replication is enabled. After this function is enabled, AI applications cannot be rapidly created, and modifying or deleting an image in the SWR source directory will not affect service deployment. • false: Image replication is not enabled. After this function is disabled, AI applications can be rapidly created, but modifying or deleting an image in the SWR source directory will affect service deployment.

Parameter	Mandatory	Type	Description
initial_config	No	String	Character string converted from the model configuration file. You are advised to use the initial_config configuration file to provide information about the apis, dependencies, input_params, output_params, health, readiness_health, and startup_health fields. ** Non-template parameter**
execution_code	No	String	OBS path for storing the execution code. By default, this parameter is left blank. The name of the execution code file is consistently to be customize_service.py . The inference code file must be stored in the model directory. This parameter can be left blank. Then, the system will automatically identify the inference code in the model directory. Common parameter
source_job_id	No	String	ID of the source training job. If the model is generated from a training job, input this parameter for source tracing. If the model is imported from a third-party meta model, leave this parameter blank. This parameter is left blank by default. Non-template parameter
model_type	Yes	String	Model type. The value is TensorFlow/Image/PyTorch/Template/MindSpore, which is read from the configuration file. ** Common Parameters**
output_params	No	Array of CreateModelRequestInferParams objects	Collection of output parameters of a model. By default, this parameter is left blank. If the parameters are read from apis in the configuration file, provide only the initial_config field, and this field can be left blank. Non-template parameter

Parameter	Mandatory	Type	Description
description	No	String	Model description that consists of 1 to 100 characters. The following special characters cannot be contained: &!"'<>= Common parameter
runtime	No	String	Model runtime environment. Its possible values are determined based on model_type . For details, see Supported AI Engines for ModelArts Inference .
model_metrics	No	String	Model precision. If the value is read from the configuration file, this parameter can be left blank. Non-template parameter
source_type	No	String	Model source type. Currently, the value can only be auto, which is used to distinguish models deployed through ExeML (the model download function is not provided). This parameter is not required for models deployed through training jobs or other methods. It is left blank by default. ** Non-template parameter**
dependencies	No	Array of ModelDependencies objects	Package required for inference code and model. By default, this parameter is left blank. If the package is read from the configuration file, this parameter can be left blank. Non-template parameter
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Parameter	Mandatory	Type	Description
model_algorithm	No	String	Model algorithm. If the algorithm is read from the configuration file, this parameter can be left blank. The value can be predict_analysis , object_detection , or image_classification . Non-template parameter
apis	No	Array of CreateModel , RequestModel , InferParams , ModelApi objects	All API input and output parameters of the model. If the parameters are parsed from the configuration file, this parameter can be left blank. Non-template parameter
model_name	Yes	String	Model name, which consists of 1 to 64 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Common parameter
install_type	No	Array of strings	Deployment type. Only lowercase letters are supported. The value can be real-time , edge , or batch . The default value is [real-time , edge , batch].
input_params	No	Array of CreateModel , RequestInferParams objects	Collection of input parameters of a model. By default, this parameter is left blank. If the parameters are read from apis in the configuration file, provide only the initial_config field, and this field can be left blank. Non-template parameter
cmd	No	String	Image startup command.
deployment_constraints	No	deployment_constraints object	Model deployment constraints (tag:hc,hk)

Table 6-23 GuideDoc

Parameter	Mandatory	Type	Description
doc_url	Yes	String	HTTP(S) link of the document
doc_name	Yes	String	Document name, which must start with a letter. Enter 1 to 48 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed.

Table 6-24 ModelTemplate

Parameter	Mandatory	Type	Description
infer_format	No	String	Input and output mode ID. When this parameter is provided, the built-in input and output modes in the template are overwritten.
template_inputs	Yes	Array of CreateModelRequestTemplateInput objects	Template input configuration, specifying the source path for configuring a model.
template_id	Yes	String	ID of the used template. The template has a built-in input and output mode.

Table 6-25 CreateModelRequestTemplateInput

Parameter	Mandatory	Type	Description
input	Yes	String	Template input path, which can be a path to an OBS file or directory. When you use a template with multiple input items to create a model, if the target paths input_properties specified in the template are the same, the OBS directory or OBS file name entered here must be unique to prevent files from being overwritten.
input_id	Yes	String	Input item ID, which is obtained from template details.

Table 6-26 ModelDependencies

Parameter	Mandatory	Type	Description
installer	Yes	String	Installation mode. Only pip is supported.
packages	Yes	Array of Packages objects	Collection of dependency packages

Table 6-27 Packages

Parameter	Mandatory	Type	Description
package_version	No	String	Version of a dependency package. If this parameter is left blank, the latest version is installed by default. Chinese characters and special characters (&!"'<>=) are not allowed.
package_name	Yes	String	Name of a dependency package. Ensure that the package name is correct and available. Chinese characters and special characters (&!"'<>=) are not allowed.
restraint	No	String	Version restriction. This parameter is mandatory only when package_version exists. The options are as follows: • EXACT: The version is the same as the specified version. • ATLEAST: The version is not earlier than the specified version. • ATMOST: not later than the specified version.

Table 6-28 CreateModelRequestModelApis

Parameter	Mandatory	Type	Description
protocol	No	String	Request protocol. The options are HTTP and HTTPS.

Parameter	Mandatory	Type	Description
method	No	String	Request method, which can be post or get .
input_params	No	ModelInOutputParams object	API input and output parameters, described in JSON Schema format.
output_params	No	ModelInOutputParams object	API input and output parameters, described in JSON Schema format.
url	No	String	Inference request URL

Table 6-29 ModelInOutputParams

Parameter	Mandatory	Type	Description
type	No	String	Type in JSON Schema, which can be object .
properties	No	Object	Properties of an object element in JSON Schema. You can configure parameters, including the parameter name and type.

Table 6-30 CreateModelRequestInferParams

Parameter	Mandatory	Type	Description
protocol	Yes	String	Request protocol. The options are HTTP and HTTPS.
min	No	Number	Minimum value of the parameter. This parameter is optional when param_type is set to int or float. By default, this parameter is left blank.
method	Yes	String	Request method, which can be post or get .
max	No	Number	Maximum value of the parameter. This parameter is optional when param_type is set to int or float. By default, this parameter is left blank.

Parameter	Mandatory	Type	Description
param_desc	No	String	Parameter description. It is recommended that the parameter description contain a maximum of 100 characters. By default, this parameter is left blank.
param_name	Yes	String	Parameter name. It is recommended that the parameter name contain a maximum of 64 characters.
url	Yes	String	API URL
param_type	Yes	String	Parameter type, which can be int , string , float , timestamp , date , or file

Table 6-31 deployment_constraints

Parameter	Mandatory	Type	Description
request_mode	No	String	Request model of a job when the model is deployed as a service
cpu_type	No	String	CPU type
input_types	No	Array of strings	Input and output type in asynchronous mode and video service scenarios, such as OBS and VIS . This parameter is used for importing custom images. Non-custom images are described in the runtime file.
outputTypes	No	Array of strings	Input and output type in asynchronous mode and video service scenarios, such as OBS and DIS . This parameter is used for importing custom images. Non-custom images are described in the runtime file.

Parameter	Mandatory	Type	Description
service_config	No	String	Service deployment field, which can be specified during service deployment. This parameter is used for importing custom images. Non-custom images are declared in runtime . As the structure is rather complex, use the value in the XML format.
task_config	No	String	Field of job-related configurations, which can be specified during job creation. This parameter is used for importing custom images. Non-custom images are declared in runtime . As the structure is rather complex, use the value in the XML format.
model_security	No	model_security object	After the model is encrypted using the Edge, the root key, model key, and encrypted model can be obtained.

Table 6-32 model_security

Parameter	Mandatory	Type	Description
model_key	No	String	Obtain the model key after using the Edge to encrypt the model.
rootKey	No	String	Obtain the root key after using the Edge to encrypt the model.
security_policy	No	String	Obtain the model encryption policy after using the Edge to encrypt the model.
is_verify_app	No	Boolean	Whether to verify the files in the edge scenario, including the configuration files, container images, and library files.

Response Parameters

Status code: 200

Table 6-33 Response body parameters

Parameter	Type	Description
model_id	String	Model ID.

Example Requests

Create an AI application. Set the AI application name to **mnist**, version to **1.0.0**, type to **TensorFlow**, and model file source to an OBS bucket.

POST https://{endpoint}/v1/{project_id}/models

```
{
  "model_name": "mnist",
  "model_version": "1.0.0",
  "source_location": "https://models.obs.xxxx.com/mnist",
  "source_job_id": "55",
  "source_job_version": "Vnt1",
  "model_type": "TensorFlow",
  "runtime": "python2.7",
  "description": "mnist model",
  "execution_code": "https://testmodel.obs.xxxx.com/customize_service.py",
  "input_params": [ {
    "url": "/v1/xxx/image",
    "protocol": "http",
    "method": "post",
    "param_name": "image_url",
    "param_type": "string",
    "min": 0,
    "max": 9,
    "param_desc": "http://test/test.jpeg"
  } ],
  "output_params": [ {
    "url": "/v1/xxx/image",
    "protocol": "http",
    "method": "post",
    "param_name": "face_location",
    "param_type": "box",
    "param_desc": "face_location param value description"
  } ],
  "dependencies": [ {
    "installer": "pip",
    "packages": [ {
      "package_name": "numpy",
      "package_version": "1.5.0",
      "restraint": "ATLEAST"
    } ]
  } ],
  "model_algorithm": "object_detection",
  "model_metrics": "{\"f1\":0.52381,\"recall\":0.666667,\"precision\":0.466667,\"accuracy\":0.625}",
  "apis": [ {
    "url": "/v1/xxx/image",
    "protocol": "http",
    "method": "post",
    "input_params": {
      "type": "object",
      "properties": {
        "image_url": {
          "type": "string"
        }
      }
    }
  } ]
}
```

```
    }
  },
  "output_params": {
    "type": "object",
    "properties": {
      "face_location": {
        "type": "box"
      }
    }
  }
},
"initial_config": "{ \"protocol\": \"http\", \"port\": \"8080\", \"health\": { \"check_method\": \"HTTP\", \"protocol\": \"http\", \"url\": \"/health\", \"period_seconds\": \"5\", \"failure_threshold\": \"10\", \"initial_delay_seconds\": \"12\" }, \"readiness_health\": { \"check_method\": \"HTTP\", \"protocol\": \"http\", \"url\": \"/readiness_health\", \"period_seconds\": \"5\", \"failure_threshold\": \"20\", \"initial_delay_seconds\": \"12\" }, \"startup_health\": { \"check_method\": \"HTTP\", \"protocol\": \"http\", \"url\": \"/startup_health\", \"period_seconds\": \"5\", \"failure_threshold\": \"10\", \"initial_delay_seconds\": \"12\" } }"
```

Example Responses

Status code: 200

The model is created.

```
{
  "model_id": "7feb7235-ed9c-48ae-9833-2876b2458445"
}
```

Status Codes

Status Code	Description
200	The model is created.

Error Codes

See [Error Codes](#).

6.4 Obtaining Details About an AI Application

Function

This API is used to query details about an AI application based on the AI application ID.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/models/{model_id}

Table 6-34 Path Parameters

Parameter	Mandatory	Type	Description
model_id	Yes	String	Model ID, which can be obtained from the response body when an AI application is created. You can also obtain the AI applications owned by the current user by calling the API for querying the AI application list. The model_id field indicates the model ID.
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Request Parameters

Table 6-35 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API that is used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 6-36 Response body parameters

Parameter	Type	Description
model_version	String	Model version
source_job_version	String	Version of the source training job
source_location	String	OBS path where the model is located or the template address of the SWR image
source_job_id	String	ID of the source training job

Parameter	Type	Description
source_copy	String	Whether to enable image replication. This parameter is valid only when model_type is set to Image . • true: Default value, indicating that image replication is enabled. After this function is enabled, AI applications cannot be rapidly created, and modifying or deleting an image in the SWR source directory will not affect service deployment. • false: Image replication is not enabled. After this function is disabled, AI applications can be rapidly created, but modifying or deleting an image in the SWR source directory will affect service deployment.
description	String	Model description
project	String	Project ID of the tenant to which a model belongs
workspace_id	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.
model_algorithm	String	Model algorithm type, which can be predict_analysis , object_detection , or image_classification
model_name	String	Model name
tenant	String	Account ID of the tenant to which a model belongs
model_docs	Array of GuideDoc objects	List of template documents
owner	String	ID of the tenant to which a model belongs
execution_code	String	OBS path for storing the execution code. The name of the execution code file is consistently to be customize_service.py .
schema_doc	String	Download address of the model schema file

Parameter	Type	Description
image_address	String	Image path generated after model packaging
output_params	Array of ModelParamsInfo objects	Collection of output parameters of a model
health	ModelHealth object	Model health check API information.
runtime	String	Model runtime environment
model_metrics	String	Model precision
source_type	String	Model source type. This parameter is valid and its value is auto only if the model is deployed using ExeML.
model_type	String	Model type. The value is TensorFlow/Image/PyTorch/Template/MindSpore.
model_id	String	Model ID
dependencies	Array of ModelDependencies objects	Package required for running the code and model
model_size	Long	Model size, in bytes
model_status	String	Model status
apis	String	All input and output apis parameter information of a model, which is obtained from the model preview
model_source	String	Model source. Options: • auto: ExeML • algos: preset algorithm • custom: customized
tunable	Boolean	Whether a model can be tuned. Options: • true: Supported. • false: Not supported.
market_flag	Boolean	Whether a model is subscribed from the marketplace. Options: • true: from the market • false: no

Parameter	Type	Description
publishable_flag	Boolean	Whether a model can be published to the marketplace. Options: • true: The product can be released to the market. • false: The product cannot be released to the marketplace.
model_labels	Array of strings	Model label array
labels_map	Map<String,String>	Model label map. The key is consistently to be labels , and the value is the model label array.
install_type	Array of strings	Supported service type for deployment
config	String	Model configurations. Probe configurations include health, readiness_health, and startup_health.
specification	ModelSpecification object	Minimum specifications for model deployment
input_params	Array of ModelParamInfo objects	Collection of input parameters of a model
create_at	Long	Time when a model is created, in milliseconds calculated from 1970.1.1 0:0:0 UTC.
cmd	String	Image startup command.

Table 6-37 GuideDoc

Parameter	Type	Description
doc_url	String	HTTP(S) link of the document
doc_name	String	Document name, which must start with a letter. Enter 1 to 48 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed.

Table 6-38 ModelHealth

Parameter	Type	Description
protocol	String	Request protocol of the health check API. Only HTTP is supported.

Parameter	Type	Description
initial_delay_seconds	String	After an instance is started, a health check starts after the time configured in initial_delay_seconds expires.
timeout_seconds	String	Health check timeout.
url	String	URL of a health check API.
period_seconds	String	Health check period.
failure_threshold	String	Maximum number of health check failures.
check_method	String	Health check method, which can be HTTP or EXEC (commands).
command	String	Commands, which are strings separated by spaces.

Table 6-39 ModelDependencies

Parameter	Type	Description
installer	String	Installation mode. Only pip is supported.
packages	Array of Packages objects	Collection of dependency packages

Table 6-40 Packages

Parameter	Type	Description
package_version	String	Version of a dependency package. If this parameter is left blank, the latest version is installed by default. Chinese characters and special characters (&!"'<>=) are not allowed.
package_name	String	Name of a dependency package. Ensure that the package name is correct and available. Chinese characters and special characters (&!"'<>=) are not allowed.

Parameter	Type	Description
restraint	String	Version restriction. This parameter is mandatory only when package_version exists. The options are as follows: - EXACT: The version is the same as the specified version. - ATLEAST: The version is not earlier than the specified version. - ATMOST: not later than the specified version.

Table 6-41 ModelSpecification

Parameter	Type	Description
min_cpu	String	Minimal CPU specifications
min_gpu	String	Minimal GPU specifications
min_memory	String	Minimum memory
min_ascend	String	Minimal Ascend specifications

Table 6-42 ModelParamsInfo

Parameter	Type	Description
protocol	String	Request protocol, for example, http .
url	String	API URL
min	Number	Minimum value of a numeric parameter.
method	String	Request method, for example, post .
max	Number	Maximum value of a numeric parameter.
param_desc	String	Parameter description.
param_name	String	Parameter name.
param_type	String	Parameter type.

Example Requests

```
GET https://{endpoint}/v1/{project_id}/models/{model_id}
```

Example Responses

Status code: 200

Model details

```
{
  "model_id": "10eb0091-887f-4839-9929-cbc884f1e20e",
  "model_name": "mnist",
  "model_version": "1.0.0",
  "runtime": "python2.7",
  "tenant": "6d28e85aa78b4e1a9b4bd83501bcd4a1",
  "project": "d04c10db1f264cfeb1966deff1a3527c",
  "owner": "6d28e85aa78b4e1a9b4bd83501bcd4a1",
  "source_location": "https://models.obs.xxxx.com/mnist",
  "model_type": "TensorFlow",
  "model_size": 5633481,
  "model_status": "published",
  "execution_code": "https://testmodel.obs.xxxx.com/customize_service.py",
  "image_address": "100.125.5.235:20202/models/10eb0091-887f-4839-9929-cbc884f1e20e:1.0.0",
  "input_params": [ {
    "url": "/",
    "method": "post",
    "protocol": "http",
    "param_name": "data",
    "param_type": "object",
    "param_desc": "{ \"type\": \"object\", \"properties\": { \"req_data\": { \"items\": { \"type\": \"object\", \"properties\": { } } }, \"type\": \"array\" } } }"
  } ],
  "output_params": [ {
    "url": "/",
    "method": "post",
    "protocol": "http",
    "param_name": "data",
    "param_type": "object",
    "param_desc": "{ \"type\": \"object\", \"properties\": { \"resp_data\": { \"type\": \"array\", \"items\": { \"type\": \"object\", \"properties\": { } } } } }"
  } ],
  "dependencies": [ {
    "installer": "pip",
    "packages": [ {
      "package_name": "pkg1",
      "package_version": "1.0.1",
      "restraint": "ATLEAST"
    } ]
  } ],
  "model_metrics": "{ \"f1\": 0.52381, \"recall\": 0.666667, \"precision\": 0.466667, \"accuracy\": 0.625 }",
  "apis": [ {
    "protocol": "http",
    "method": "post",
    "url": "/",
    "input_params": {
      "type": "object",
      "properties": {
        "data": {
          "type": "object",
          "properties": {
            "req_data": {
              "items": {
                "type": "object",
                "properties": { }
              }
            },
            "type": "array"
          }
        },
        "output_params": {
          "type": "object",
          "properties": {
            "data": {
              "type": "object",
              "properties": {
                "resp_data": {
                  "type": "array",
                  "items": {
                    "type": "object",
                    "properties": { }
                  }
                }
              }
            }
          }
        }
      }
    },
    "model_labels": [ ],
    "labels_map": {
      "labels": [ ]
    },
    "workspace_id": "0",
    "install_type": [ "realtime", "batch", "edge" ],
    "specification": { },
    "config": {
      "model_algorithm": "image_classification",
      "model_source": "auto",
      "tunable": false,
      "downloadable_flag": true,
      "algorithm": "resnet_v2_50,mobilenet_v1",
      "metrics": {
        "f1": 0.912078373015873,
        "recall": 0.9125,
        "precision": 0.9340277777777778,
        "accuracy": 0.263250724969475
      },
      "model_type": "TensorFlow",
      "runtime": "tf1.13-python3.6-cpu",
      "apis": [
        {
          "protocol": "https",
          "url": "/",
          "method": "post",
          "request": {
            "data": {
              "type": "object",
              "properties": {
                "images": {
                  "type": "file"
                },
                "Content-type": "multipart/form-data",
                "response": {
                  "data": {
                    "type": "object",
                    "required": [ "predicted_label", "scores" ],
                    "properties": {
                      "predicted_label": {
                        "type": "string"
                      },
                      "scores": {
                        "type": "array",
                        "items": {
                          "type": "array",
                          "minItems": 2,
                          "maxItems": 2
                        },
                        "items": {
                          "type": "string",
                          "number"
                        }
                      }
                    },
                    "Content-type": "multipart/form-data",
                    "dependencies": {
                      "installer": "pip",
                      "packages": [
                        {
                          "package_name": "numpy",
                          "package_version": "1.17.0",
                          "restraint": "ATLEAST"
                        }
                      ]
                    }
                  }
                }
              }
            }
          }
        }
      ]
    }
  } ]
}
```

```
{\":\":\"EXACT\",{\":\"package_name\":\":\"h5py\",\":\"package_version\":\":\"2.8.0\",\":\"restraint\":\":\"EXACT\",{\":\"package_name\":\":\"Pillow\",\":\"package_version\":\":\"5.2.0\",\":\"restraint\":\":\"EXACT\",{\":\"package_name\":\":\"scipy\",\":\"package_version\":\":\"1.2.1\",\":\"restraint\":\":\"EXACT\",{\":\"package_name\":\":\"resampy\",\":\"package_version\":\":\"0.2.1\",\":\"restraint\":\":\"EXACT\",{\":\"package_name\":\":\"scikit-learn\",\":\"package_version\":\":\"0.19.1\",\":\"restraint\":\":\"EXACT\"}}}],\":\"health\":{\":\"check_method\":\":\"HTTP\",\":\"protocol\":\":\"http\",\":\"url\":\":\"/health\",\":\"period_seconds\":\":\"5\",\":\"failure_threshold\":\":\"10\",\":\"initial_delay_seconds\":\":\"12\",\":\"readiness_health\":{\":\"check_method\":\":\"HTTP\",\":\"protocol\":\":\"http\",\":\"url\":\":\"/readiness_health\",\":\"period_seconds\":\":\"5\",\":\"failure_threshold\":\":\"20\",\":\"initial_delay_seconds\":\":\"12\",\":\"startup_health\":{\":\"check_method\":\":\"HTTP\",\":\"protocol\":\":\"http\",\":\"url\":\":\"/startup_health\",\":\"period_seconds\":\":\"5\",\":\"failure_threshold\":\":\"10\",\":\"initial_delay_seconds\":\":\"12\"}}}
```

Status Codes

Status Code	Description
200	Model details

Error Codes

See [Error Codes](#).

6.5 Deleting an AI application

Function

This interface is used to delete an AI application based on the AI application ID. When cascade is set to true, the AI application specified by the AI application ID and other AI applications with the same name but different versions as the specified AI application are deleted. By default, only the AI application corresponding to the current AI application ID is deleted.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/models/{model_id}

Table 6-43 Path Parameters

Parameter	Mandatory	Type	Description
model_id	Yes	String	ID of the AI application to be deleted.
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Table 6-44 Query Parameters

Parameter	Mandatory	Type	Description
cascade	No	Boolean	Indicates whether to perform cascading deletion. The default value is false, indicating that only the model with the specified model ID is deleted. If this parameter is set to true, the model specified by the model ID is deleted, and all models with the same name but different versions as the specified model are deleted. A maximum of 20 models can be deleted at a time. Excess models are not deleted.

Request Parameters

Table 6-45 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API that is used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 6-46 Response body parameters

Parameter	Type	Description
delete_success_list	Array of strings	ID list of models successfully deleted
delete_failed_list	Array of DeleteModelResponseFailedList objects	ID of the model that fails to be deleted and the failure cause list

Table 6-47 DeleteModelResponseFailedList

Parameter	Type	Description
error_msg	String	Error message of the model deletion failure
error_code	String	Error code of the model deletion failure
model_id	String	ID of a model that fails to be deleted

Example Requests

```
DELETE https://{endpoint}/v1/{project_id}/models/{model_id}
```

Example Responses

Status code: 200

Message indicating a successful deletion or a deletion failure

```
{
  "delete_success_list" : [ "10eb0091-887f-4839-9929-cbc884f1e20e" ],
  "delete_failed_list" : [ {
    "error_msg" : "Failed to delete model because the model (759645d9-3672-4db1-bb6d-49ed58b84e10)
has been used to deploy a service.",
    "error_code" : "ModelArts.3009",
    "model_id" : "e527d311-a947-46da-a6e0-66c49945dfaa"
  } ]
}
```

Status Codes

Status Code	Description
200	Message indicating a successful deletion or a deletion failure

Error Codes

See [Error Codes](#).

7 App Authentication Management

7.1 Obtaining the App List

Function

This API is used to obtain the basic information about APIG apps. You can obtain only the information about the apps created by yourself.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/app-auth/apps

Table 7-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID .

Table 7-2 Query Parameters

Parameter	Mandatory	Type	Description
app_name	No	String	App name.
limit	No	String	Number of items displayed on one page. The default value is 1000 .

Parameter	Mandatory	Type	Description
offset	No	String	Sequence number of the page from which data is displayed on multiple pages. The default value is 0 .
order	No	String	Sorting mode of the returned app list. The value can be asc and desc . The default value is asc .
sort_by	No	String	Attribute by which the returned app list is sorted. The options are app_name , created_at , and updated_at . The default value is app_name .
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.
iphertext_enabled	No	Boolean	Whether to display the AppSecret in plaintext.
app_ids	No	Array of strings	App IDs to be displayed in plaintext.

Request Parameters

Table 7-3 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	No	String	Message body type. text/plain indicates that a temporary preview URL is returned. application/octet-stream indicates that a temporary download URL is returned.
X-Auth-Token	Yes	String	User token.

Response Parameters

Status code: 200

Table 7-4 Response body parameters

Parameter	Type	Description
apps	Array of ApigAppDetailInfo objects	Basic app information array, which may be an empty array
count	Integer	Number of queried apps
total_count	Integer	Total number of apps

Table 7-5 ApigAppDetailInfo

Parameter	Type	Description
app_codes	Array of strings	App code list. When app_type is APIC , this parameter is left blank.
app_id	String	App ID
app_key	String	App key
app_name	String	App name
app_remark	String	App description, which is left blank by default. The value contains a maximum of 200 characters.
app_secret	String	App secret key
app_type	String	App type. Enums: • APIC: This App is registered with the ROMA Connect gateway. • APIG: This App is registered with the shared API gateway. • DEDICATE_APIG: This App is registered with the dedicated API gateway.
bounded_api_count	Integer	Number of APIs bound to the app
created_at	Long	Time when an app is created
project_id	String	Project ID
updated_at	Long	App update time
user_id	String	ID of the user who creates the app

Status code: 401**Table 7-6** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 7-7** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 7-8** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/app-auth/apps
```

Example Responses**Status code: 200**

OK

```
{  
  "apps": [ {  
    "app_id": "fb1a9eadd87b48abbd74b8ba1755dffd",  
  } ]  
}
```

```
"app_name" : "app_13e0",
"app_remark" : "ds",
"app_key" : "b11ae87581b04b5284aa92b0d4ae332c",
"app_secret" : "cb5d1b57368b4f129b635332a03bf0e3",
"user_id" : "04f258c8fb00d42a1f65c00df88cc4dc",
"project_id" : "04f258c84780d5a52f3bc00dc15aa5e7",
"app_type" : "APIG",
"app_codes" : [ "53a7c6de82be4671b93414adf98c1c507d5cef29fbdd48d88a4dddb668b0f0ad",
"3b5930537438461b9a3e81e5f21d56b49eadbe1047174574b9d2dde859beec54",
"55804013463d4344ac37775ff8f6e9d8343933f8f0be420cb2e87bb5aad4c6a3" ],
"created_at" : 1683173880900,
"updated_at" : 1703160524345,
"bounded_api_count" : 29
} ],
"count" : 1,
"total_count" : 1
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

7.2 Creating Apps

Function

This API is used to create API Gateway applications (apps for short). Each user can create a maximum of five apps. You can apply for increasing the quota as required.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/app-auth/apps

Table 7-9 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Request Parameters

Table 7-10 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	No	String	Message body type. text/plain indicates that a temporary preview URL is returned. application/octet-stream indicates that a temporary download URL is returned.
X-Auth-Token	Yes	String	User token

Table 7-11 Request body parameters

Parameter	Mandatory	Type	Description
app_name	Yes	String	App name.
app_remark	No	String	App remarks.
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Response Parameters

Status code: 200

Table 7-12 Response body parameters

Parameter	Type	Description
app	ApigAppDetailInfo object	Basic information about the created app

Table 7-13 ApigAppDetailInfo

Parameter	Type	Description
app_codes	Array of strings	App code list. When app_type is APIC , this parameter is left blank.
app_id	String	App ID
app_key	String	App key
app_name	String	App name
app_remark	String	App description, which is left blank by default. The value contains a maximum of 200 characters.
app_secret	String	App secret key
app_type	String	App type. Enums: • APIC: This App is registered with the ROMA Connect gateway. • APIG: This App is registered with the shared API gateway. • DEDICATE_APIG: This App is registered with the dedicated API gateway.
bounded_api_count	Integer	Number of APIs bound to the app
created_at	Long	Time when an app is created
project_id	String	Project ID
updated_at	Long	App update time
user_id	String	ID of the user who creates the app

Status code: 401

Table 7-14 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 7-15** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 7-16** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
POST https://{endpoint}/v1/{project_id}/app-auth/apps
{
  "app_name": "app_4ef0",
  "app_remark": ""
}
```

Example Responses**Status code: 200**

OK

```
{
  "app": {
```

```
"app_id" : "logic-app-7ded3898-8306-49ee-a1df-2708f9aac83a",
"app_name" : "app_c8ae",
"app_key" : "9cdbfd0b65364fbe8b1c6cf29255a46f",
"app_secret" : "c736b99bdc33403ab0652bf91c00e99e",
"user_id" : "04f258c8fb00d42a1f65c00df88cc4dc",
"project_id" : "04f258c84780d5a52f3bc00dc15aa5e7",
"app_type" : "DEDICATE_APIG",
"app_codes" : [ ],
"created_at" : 1703162733450,
"updated_at" : 1703162733450,
"bounded_api_count" : 0
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

7.3 Obtaining App Details

Function

This API is used to obtain details about a specified app.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/app-auth/apps/{app_id}

Table 7-17 Path Parameters

Parameter	Mandatory	Type	Description
app_id	Yes	String	App ID.

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Table 7-18 Query Parameters

Parameter	Mandatory	Type	Description
workspace_id	No	String	Workspace ID. For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.
iphertext_enabled	No	Boolean	Whether to display in plaintext.

Request Parameters

Table 7-19 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	No	String	Message body type. text/plain indicates that a temporary preview URL is returned. application/octet-stream indicates that a temporary download URL is returned.
X-Auth-Token	Yes	String	User token.

Response Parameters

Status code: 200

Table 7-20 Response body parameters

Parameter	Type	Description
app	ApigAppDetailInfo object	Basic information about the created app

Table 7-21 ApigAppDetailInfo

Parameter	Type	Description
app_codes	Array of strings	App code list. When app_type is APIC , this parameter is left blank.
app_id	String	App ID
app_key	String	App key
app_name	String	App name
app_remark	String	App description, which is left blank by default. The value contains a maximum of 200 characters.
app_secret	String	App secret key
app_type	String	App type. Enums: • APIC: This App is registered with the ROMA Connect gateway. • APIG: This App is registered with the shared API gateway. • DEDICATE_APIG: This App is registered with the dedicated API gateway.
bounded_api_count	Integer	Number of APIs bound to the app
created_at	Long	Time when an app is created
project_id	String	Project ID
updated_at	Long	App update time
user_id	String	ID of the user who creates the app

Status code: 401**Table 7-22** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range : N/A
error_msg	String	Definition : Error message. Range : N/A

Status code: 403

Table 7-23 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404

Table 7-24 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

GET https://{endpoint}/v1/{project_id}/app-auth/apps/{app_id}

Example Responses

Status code: 200

OK

```
{
  "app": {
    "app_id": "logic-app-7ded3898-8306-49ee-a1df-2708f9aac83a",
    "app_name": "app_c8ae",
    "app_key": "9cdbfd0b65364fbe8b1c6cf29255a46f",
    "app_secret": "c736b99bdc33403ab0652bf91c00e99e",
    "user_id": "04f258c8fb00d42a1f65c00df88cc4dc",
    "project_id": "04f258c84780d5a52f3bc00dc15aa5e7",
    "app_type": "DEDICATE_APIG",
    "app_codes": [ ],
    "created_at": 1703162733450,
    "updated_at": 1703162733450,
    "bounded_api_count": 0
  }
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

7.4 Deleting an App

Function

This API is used to delete a specified app. Only the user who creates the app can delete it, and the app is not bound to any API.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/app-auth/apps/{app_id}

Table 7-25 Path Parameters

Parameter	Mandatory	Type	Description
app_id	Yes	String	App ID, which can be obtained by calling the API for obtaining the App list.
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Table 7-26 Query Parameters

Parameter	Mandatory	Type	Description
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Request Parameters

Table 7-27 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	No	String	Message body type. text/plain indicates that a temporary preview URL is returned. application/octet-stream indicates that a temporary download URL is returned.
X-Auth-Token	Yes	String	User token.

Response Parameters

Status code: 200

OK

Status code: 401

Table 7-28 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403

Table 7-29 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
DELETE https://{endpoint}/v1/{project_id}/app-auth/apps/{app_id}
```

Example Responses

None

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden

Error Codes

See [Error Codes](#).

7.5 Adding an App Code

Function

This API is used to create an app code for a specified API Gateway app. Only the user who creates the app can create an app code, and only apps of the shared or dedicated API Gateway can have app codes.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/app-auth/apps/{app_id}/app-code

Table 7-30 Path Parameters

Parameter	Mandatory	Type	Description
app_id	Yes	String	App ID, which can be obtained by calling the API for obtaining the App list.
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Request Parameters

Table 7-31 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	No	String	Message body type. text/plain indicates that a temporary preview URL is returned. application/octet-stream indicates that a temporary download URL is returned.
X-Auth-Token	Yes	String	User token.

Table 7-32 Request body parameters

Parameter	Mandatory	Type	Description
app_name	Yes	String	App name.
app_remark	No	String	App remarks.
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Response Parameters

Status code: 200

Table 7-33 Response body parameters

Parameter	Type	Description
app	ApigAppDetailInfo object	Basic information about the created app

Table 7-34 ApigAppDetailInfo

Parameter	Type	Description
app_codes	Array of strings	App code list. When app_type is APIC , this parameter is left blank.
app_id	String	App ID
app_key	String	App key
app_name	String	App name
app_remark	String	App description, which is left blank by default. The value contains a maximum of 200 characters.
app_secret	String	App secret key
app_type	String	App type. Enums: • APIC: This App is registered with the ROMA Connect gateway. • APIG: This App is registered with the shared API gateway. • DEDICATE_APIG: This App is registered with the dedicated API gateway.
bounded_api_count	Integer	Number of APIs bound to the app
created_at	Long	Time when an app is created
project_id	String	Project ID
updated_at	Long	App update time
user_id	String	ID of the user who creates the app

Status code: 401

Table 7-35 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403

Table 7-36 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404

Table 7-37 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
POST https://{endpoint}/v1/{project_id}/app-auth/apps/{app_id}/app-code
{
  "workspace_id" : "0",
  "app_name" : "app_test",
  "app_remark" : "test"
}
```

Example Responses

Status code: 200

OK

```
{
  "app" : {
    "app_id" : "f29eddd1443e4dceb76898f881c07a4d",
    "app_name" : "app_xq0XT",
    "app_remark" : "autotest",
    "app_key" : "bcb835430eab4c72bd45e2315d98fdb9",
    "app_secret" : "80dc4ab97b34456fbf73a04e83164a1b",
    "user_id" : "04f258c8fb00d42a1f65c00df88cc4dc",
    "project_id" : "04f258c84780d5a52f3bc00dc15aa5e7",
    "app_type" : "APIG",
    "app_codes" : [ "6fcc73e9a8d344ce8df47cdd252a532772e9bb762aa74c3ea99f3f2373806174" ],
    "created_at" : 1698745606957,
    "updated_at" : 1703162872355,
    "bounded_api_count" : 0
  }
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

7.6 Resetting an App Code

Function

This API is used to reset a specified app code of an API Gateway app. Only the user who creates the app can reset it, and only apps of the shared or dedicated API Gateway can have app codes.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/{project_id}/app-auth/apps/{app_id}/app-code/{app_code}

Table 7-38 Path Parameters

Parameter	Mandatory	Type	Description
app_code	Yes	String	App code to be reset
app_id	Yes	String	App ID, which can be obtained by calling the API for obtaining the app list
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Request Parameters

Table 7-39 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	No	String	Message body type. text/plain indicates that a temporary preview URL is returned. application/octet-stream indicates that a temporary download URL is returned.
X-Auth-Token	Yes	String	User token.

Table 7-40 Request body parameters

Parameter	Mandatory	Type	Description
app_name	Yes	String	App name.
app_remark	No	String	App remarks.
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Response Parameters

Status code: 200

Table 7-41 Response body parameters

Parameter	Type	Description
app	ApigAppDetailInfo object	Basic information about the created app

Table 7-42 ApigAppDetailInfo

Parameter	Type	Description
app_codes	Array of strings	App code list. When app_type is APIC , this parameter is left blank.
app_id	String	App ID
app_key	String	App key
app_name	String	App name
app_remark	String	App description, which is left blank by default. The value contains a maximum of 200 characters.
app_secret	String	App secret key
app_type	String	App type. Enums: • APIC: This App is registered with the ROMA Connect gateway. • APIG: This App is registered with the shared API gateway. • DEDICATE_APIG: This App is registered with the dedicated API gateway.
bounded_api_count	Integer	Number of APIs bound to the app
created_at	Long	Time when an app is created
project_id	String	Project ID
updated_at	Long	App update time
user_id	String	ID of the user who creates the app

Status code: 401

Table 7-43 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 7-44** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 7-45** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
PUT https://{endpoint}/v1/{project_id}/app-auth/apps/{app_id}/app-code/{app_code}
{
  "workspace_id": "0",
  "app_name": "app_test",
  "app_remark": "test"
}
```

Example Responses

Status code: 200

OK

```
{
  "app" : {
    "app_id" : "f29eddd1443e4dceb76898f881c07a4d",
    "app_name" : "app_xq0XT",
    "app_remark" : "autotest",
    "app_key" : "bcb835430eab4c72bd45e2315d98fdb9",
    "app_secret" : "80dc4ab97b34456fbf73a04e83164a1b",
    "user_id" : "04f258c8fb00d42a1f65c00df88cc4dc",
    "project_id" : "04f258c84780d5a52f3bc00dc15aa5e7",
    "app_type" : "APIG",
    "app_codes" : [ "873810a2cd4e4a9c88df5979411d6a50753c0af4024840fcac59e37ce38364e4" ],
    "created_at" : 1698745606957,
    "updated_at" : 1703162907779,
    "bounded_api_count" : 0
  }
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

7.7 Deleting an App Code

Function

This API is used to delete a specified app code of an API Gateway app. Only the user who creates the app can delete it, and only apps of the shared or dedicated API Gateway can have app codes.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/app-auth/apps/{app_id}/app-code/{app_code}

Table 7-46 Path Parameters

Parameter	Mandatory	Type	Description
app_code	Yes	String	App code to be deleted
app_id	Yes	String	App ID, which can be obtained by calling the API for obtaining the App list.
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Table 7-47 Query Parameters

Parameter	Mandatory	Type	Description
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Request Parameters

Table 7-48 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	No	String	Message body type. text/plain indicates that a temporary preview URL is returned. application/octet-stream indicates that a temporary download URL is returned.
X-Auth-Token	Yes	String	User token.

Response Parameters

Status code: 200

Table 7-49 Response body parameters

Parameter	Type	Description
app	ApigAppDetailInfo object	Basic information about the created app

Table 7-50 ApigAppDetailInfo

Parameter	Type	Description
app_codes	Array of strings	App code list. When app_type is APIC , this parameter is left blank.
app_id	String	App ID
app_key	String	App key
app_name	String	App name
app_remark	String	App description, which is left blank by default. The value contains a maximum of 200 characters.
app_secret	String	App secret key
app_type	String	App type. Enums: • APIC: This App is registered with the ROMA Connect gateway. • APIG: This App is registered with the shared API gateway. • DEDICATE_APIG: This App is registered with the dedicated API gateway.
bounded_api_count	Integer	Number of APIs bound to the app
created_at	Long	Time when an app is created
project_id	String	Project ID
updated_at	Long	App update time
user_id	String	ID of the user who creates the app

Status code: 401

Table 7-51 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403

Table 7-52 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

DELETE https://{endpoint}/v1/{project_id}/app-auth/apps/{app_id}/app-code/{app_code}

Example Responses

Status code: 200

OK

```
{
  "app": {
    "app_id": "f29eddd1443e4dceb76898f881c07a4d",
    "app_name": "app_xq0XT",
    "app_remark": "autotest",
    "app_key": "bcb835430eab4c72bd45e2315d98fdb9",
    "app_secret": "80dc4ab97b34456fbf73a04e83164a1b",
    "user_id": "04f258c8fb00d42a1f65c00df88cc4dc",
    "project_id": "04f258c84780d5a52f3bc00dc15aa5e7",
    "app_type": "APIG",
    "app_codes": [ ],
    "created_at": 1698745606957,
    "updated_at": 1703162934072,
    "bounded_api_count": 0
  }
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden

Error Codes

See [Error Codes](#).

7.8 Resetting an AppSecret

Function

This API is used to reset the AppSecret of a specified API Gateway app. Only the user who creates the app can reset the AppSecret.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/{project_id}/app-auth/apps/{app_id}/app-secret

Table 7-53 Path Parameters

Parameter	Mandatory	Type	Description
app_id	Yes	String	App ID, which can be obtained by calling the API for obtaining the app list
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Request Parameters

Table 7-54 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	No	String	Message body type. text/plain indicates that a temporary preview URL is returned. application/octet-stream indicates that a temporary download URL is returned.
X-Auth-Token	Yes	String	User token.

Table 7-55 Request body parameters

Parameter	Mandatory	Type	Description
app_name	Yes	String	App name.
app_remark	No	String	App remarks.
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Response Parameters

Status code: 200

Table 7-56 Response body parameters

Parameter	Type	Description
app	ApigAppDetailInfo object	Basic information about the created app

Table 7-57 ApigAppDetailInfo

Parameter	Type	Description
app_codes	Array of strings	App code list. When app_type is APIC , this parameter is left blank.

Parameter	Type	Description
app_id	String	App ID
app_key	String	App key
app_name	String	App name
app_remark	String	App description, which is left blank by default. The value contains a maximum of 200 characters.
app_secret	String	App secret key
app_type	String	App type. Enums: • APIC: This App is registered with the ROMA Connect gateway. • APIG: This App is registered with the shared API gateway. • DEDICATE_APIG: This App is registered with the dedicated API gateway.
bounded_api_count	Integer	Number of APIs bound to the app
created_at	Long	Time when an app is created
project_id	String	Project ID
updated_at	Long	App update time
user_id	String	ID of the user who creates the app

Status code: 401**Table 7-58** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range : N/A
error_msg	String	Definition : Error message. Range : N/A

Status code: 403

Table 7-59 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404

Table 7-60 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
PUT https://{endpoint}/v1/{project_id}/app-auth/apps/{app_id}/app-secret
{
  "workspace_id" : "0",
  "app_name" : "app_test",
  "app_remark" : "test"
}
```

Example Responses

Status code: 200

OK

```
{
  "app" : {
    "app_id" : "f29eddd1443e4dceb76898f881c07a4d",
    "app_name" : "app_xq0XT",
    "app_remark" : "autotest",
    "app_key" : "bcb835430eab4c72bd45e2315d98fdb9",
    "app_secret" : "55816679b0f8447c9d51d2c35e4f679a",
    "user_id" : "04f258c8fb00d42a1f65c00df88cc4dc",
    "project_id" : "04f258c84780d5a52f3bc00dc15aa5e7",
    "app_type" : "APIG",
    "app_codes" : [ ],
    "created_at" : 1698745606957,
    "updated_at" : 1703162969843,
    "bounded_api_count" : 0
  }
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

7.9 Obtaining the List of APIs Bound to an App

Function

This API is used to obtain the list of APIs bound to an app.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/app-auth/apps/{app_id}/auth-apis

Table 7-61 Path Parameters

Parameter	Mandatory	Type	Description
app_id	Yes	String	App ID
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Table 7-62 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	String	Number of items displayed on one page. The default value is 1000 .

Parameter	Mandatory	Type	Description
offset	No	String	Sequence number of the page from which data is displayed on multiple pages. The default value is 0 .
order	No	String	Sorting mode of the returned app list. The value can be asc and desc . The default value is asc .
service_name	No	String	Name of the service to which the API belongs. Fuzzy search is supported.
sort_by	No	String	Attribute by which the returned app list is sorted. The options are app_name , created_at , and updated_at . The default value is app_name .
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Request Parameters

Table 7-63 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	No	String	Message body type. text/plain indicates that a temporary preview URL is returned. application/octet-stream indicates that a temporary download URL is returned.
X-Auth-Token	Yes	String	User token.

Response Parameters

Status code: 200

Table 7-64 Response body parameters

Parameter	Type	Description
apis	Array of AuthTypeApiBasicInfo objects	API authentication information list.
count	Integer	Number of records.
total_count	Integer	Total number of records.

Table 7-65 AuthTypeApiBasicInfo

Parameter	Type	Description
api_id	String	API ID
api_method	String	Request method, which can be GET , POST , PUT , DELETE , HEAD , PATCH , OPTIONS , or ANY . ANY is the default value.
api_name	String	API name
api_remark	String	API description. The value contains a maximum of 255 characters.
auth_type	String	API authentication mode. The options are: Enums: • NONE: no authentication • APP: App authentication • IAM: IAM authentication
predict_url	String	Prediction URL
service_id	String	Service ID
service_name	String	Service name
support_app_code	Boolean	Whether to support the App code

Status code: 401**Table 7-66** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range : N/A

Parameter	Type	Description
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 7-67** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 7-68** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/app-auth/apps/{app_id}/auth-apis
```

Example Responses

Status code: 200

OK

```
{
  "apis" : [ {
    "api_id" : "7e0d272df0e94297b7d4046bada3f158",
    "api_name" : "infer_ae20fc9fb37c48c28ebc3f3a638c9f48",
    "api_method" : "ANY",
    "predict_url" : "https://b86b2d069324491fbd66940e4533b45c.apig.xxxxxx.com/v1/infers/ae20fc9f-b37c-48c2-8ebc-3f3a638c9f48",
    "support_app_code" : true,
    "service_id" : "ae20fc9f-b37c-48c2-8ebc-3f3a638c9f48",
    "service_name" : "service-3c02"
  } ],
}
```

```
"count" : 1  
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

7.10 Registering an API and Authorizing the API to an App

Function

This API is used to register an API and authorize the API to an App. Only Huawei Cloud users who have the permission to update the service can call this API.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/services/{service_id}/app-auth-api

Table 7-69 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .
service_id	Yes	String	Service ID, which can be obtained by querying services

Request Parameters

Table 7-70 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token

Table 7-71 Request body parameters

Parameter	Mandatory	Type	Description
apps	Yes	Array of Apps objects	App list
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Table 7-72 Apps

Parameter	Mandatory	Type	Description
app_id	No	String	App ID, which can be obtained by querying apps

Response Parameters

Status code: 200

Table 7-73 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-74 Response body parameters

Parameter	Type	Description
api	AuthTypeApiBasicInfo object	API details.
auth_result	Array of AppAuthResultInfo objects	Authorization result.

Table 7-75 AuthTypeApiBasicInfo

Parameter	Type	Description
api_id	String	API ID
api_method	String	Request method, which can be GET , POST , PUT , DELETE , HEAD , PATCH , OPTIONS , or ANY . ANY is the default value.
api_name	String	API name
api_remark	String	API description. The value contains a maximum of 255 characters.
auth_type	String	API authentication mode. The options are: Enums: • NONE: no authentication • APP: App authentication • IAM: IAM authentication
predict_url	String	Prediction URL
service_id	String	Service ID
service_name	String	Service name
support_app_code	Boolean	Whether to support the App code

Table 7-76 AppAuthResultInfo

Parameter	Type	Description
api_id	String	API ID
app_id	String	App ID, which can be obtained by querying apps
auth_id	String	Authorization ID, which is empty if the authorization fails

Parameter	Type	Description
reason	String	Authorization or authorization cancellation failure reason, which is empty if the authorization is successful
success	Boolean	Whether authorization or authorization cancellation is successful

Status code: 400**Table 7-77** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-78 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 7-79** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-80 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 7-81** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-82 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 7-83** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-84 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Creating an API and authorizing an App

POST https://{endpoint}/v1/{project_id}/services/{service_id}/app-auth-api

```
{
  "apps": [ {
    "app_id": "e2fb64be3be9418bb0f570c60f0ed93f"
  } ],
  "workspace_id": "0"
}
```

Example Responses

Status code: 200

OK

```
{
  "api": {
    "api_id": "b9c78dbb50d04230aab90e35e141fccf",
    "api_name": "infer_456963f1-737c-4de0-8bee-5b4f6f3a8fa3",
    "api_method": "ANY",
    "predict_url": "https://d566c7efafe04a26a83d3a8475602ee3.apig.xxxxxx.com/v1/infers/456963f1-737c-4de0-8bee-5b4f6f3a8fa3",
    "support_app_code": true,
    "service_id": "456963f1-737c-4de0-8bee-5b4f6f3a8fa3",
    "service_name": "service-129c-test"
  },
  "auth_result": [ {
    "api_id": "b9c78dbb50d04230aab90e35e141fccf",
    "app_id": "e2fb64be3be9418bb0f570c60f0ed93f",
    "success": true
  } ]
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

Error Codes

See [Error Codes](#).

7.11 Deleting an API

Function

This API is used to delete a specified API. Only users who have the permission to delete the service to which the API belongs can delete the API.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/services/{service_id}/app-auth-apis/{api_id}

Table 7-85 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .
service_id	Yes	String	Service ID.
api_id	Yes	String	API ID.

Table 7-86 Query Parameters

Parameter	Mandatory	Type	Description
workspace_id	No	String	Definition: Workspace ID. . Constraints: There must be a workspace in use. Range: N/A Default Value: 0

Request Parameters

Table 7-87 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.

Response Parameters

Status code: 204

Table 7-88 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Status code: 401

Table 7-89 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-90 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 7-91** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-92 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 7-93** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-94 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
DELETE https://{endpoint}/v1/{project_id}/services/{service_id}/app-auth-apis/{api_id}
```

Example Responses

None

Status Codes

Status Code	Description
204	No Content
401	Unauthorized
403	Forbidden
500	Server Internal Error

Error Codes

See [Error Codes](#).

7.12 Authorizing an API to an App

Function

This API is used to authorize a specified API to an App. The API authentication mode must be App authentication. The user who creates an App must be the creator of the service to which the API belongs, and the request user must have the update permission on the service to which the API belongs.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/services/{service_id}/app-auth-apis/{api_id}/app-auth-api

Table 7-95 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .
service_id	Yes	String	ID of the service to which the API belongs
api_id	Yes	String	API ID

Request Parameters

Table 7-96 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token

Table 7-97 Request body parameters

Parameter	Mandatory	Type	Description
apps	Yes	Array of Apps objects	App list
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Table 7-98 Apps

Parameter	Mandatory	Type	Description
app_id	No	String	App ID, which can be obtained by querying apps

Response Parameters

Status code: 200

Table 7-99 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-100 Response body parameters

Parameter	Type	Description
auth_result	Array of AppAuthResultInfo objects	Authorization result list.

Table 7-101 AppAuthResultInfo

Parameter	Type	Description
api_id	String	API ID
app_id	String	App ID, which can be obtained by querying apps
auth_id	String	Authorization ID, which is empty if the authorization fails
reason	String	Authorization or authorization cancellation failure reason, which is empty if the authorization is successful
success	Boolean	Whether authorization or authorization cancellation is successful

Status code: 401

Table 7-102 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-103 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 7-104** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-105 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 7-106** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-107 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 7-108** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-109 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Authorizing an App to a specified API

```
POST https://{endpoint}/v1/{project_id}/services/{service_id}/app-auth-apis/{api_id}/app-auth-api
{
  "apps": [ {
    "app_id": "e2fb64be3be9418bb0f570c60f0ed93f"
  } ]
}
```

Example Responses

Status code: 200

OK

```
{
  "auth_result": [ {
    "api_id": "logic-api-fe84e858-49ec-41c6-80d7-a34fc22435c2",
    "app_id": "logic-app-ce0d0a41-451d-4563-94d9-acc75b5e440f",
    "success": true
  } ]
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden

Status Code	Description
404	Not Found
500	Server Internal Error

Error Codes

See [Error Codes](#).

7.13 Updating API Authorization

Function

This API is used to update the authorization relationship of an API. The API authentication mode must be App authentication. The user who creates an App must be the creator of the service to which the API belongs, and the request user must have the update permission on the service to which the API belongs.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/{project_id}/services/{service_id}/app-auth-apis/{api_id}/app-auth-api

Table 7-110 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .
service_id	Yes	String	ID of the service to which the API belongs
api_id	Yes	String	API ID

Request Parameters

Table 7-111 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token

Table 7-112 Request body parameters

Parameter	Mandatory	Type	Description
apps	Yes	Array of Apps objects	App list
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Table 7-113 Apps

Parameter	Mandatory	Type	Description
app_id	No	String	App ID, which can be obtained by querying apps

Response Parameters

Status code: 200

Table 7-114 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-115 Response body parameters

Parameter	Type	Description
auth_result	Array of AppAuthResultInfo objects	Authorization result list.

Table 7-116 AppAuthResultInfo

Parameter	Type	Description
api_id	String	API ID
app_id	String	App ID, which can be obtained by querying apps
auth_id	String	Authorization ID, which is empty if the authorization fails
reason	String	Authorization or authorization cancellation failure reason, which is empty if the authorization is successful
success	Boolean	Whether authorization or authorization cancellation is successful

Status code: 401**Table 7-117** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-118 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403

Table 7-119 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-120 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 7-121** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-122 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Updating the authorization relationship of an API

```
PUT https://{endpoint}/v1/{project_id}/services/{service_id}/app-auth-apis/{api_id}/app-auth-api
```

```
{
  "apps": [ {
    "app_id": "fb1a9eadd87b48abbd74b8ba1755dffd"
  } ]
}
```

Example Responses

Status code: 200

OK

```
{
  "auth_result": [ {
    "api_id": "logic-api-fe84e858-49ec-41c6-80d7-a34fc22435c2",
    "app_id": "logic-app-9b9acb40-6df6-4623-9f87-e0dae781d867",
    "success": true
  }, {
    "api_id": "logic-api-fe84e858-49ec-41c6-80d7-a34fc22435c2",
    "app_id": "logic-app-ce0d0a41-451d-4563-94d9-acc75b5e440f",
    "success": true
  } ]
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

7.14 Canceling the Authorization of an API to an App

Function

This API is used to cancel the authorization of a specified API to an app. The request user must have the update permission on the service to which the API belongs. Same as the URL: /v1/{project_id}/app-auth/{service_id}/apis/{api_id}/auths

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/services/{service_id}/app-auth-apis/{api_id}/app-auth-api

Table 7-123 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .
service_id	Yes	String	ID of the service to which the API belongs
api_id	Yes	String	API ID

Table 7-124 Query Parameters

Parameter	Mandatory	Type	Description
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Request Parameters

Table 7-125 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.

Table 7-126 Request body parameters

Parameter	Mandatory	Type	Description
apps	Yes	Array of Apps objects	App list
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Table 7-127 Apps

Parameter	Mandatory	Type	Description
app_id	No	String	App ID, which can be obtained by querying apps

Response Parameters

Status code: 200

Table 7-128 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-129 Response body parameters

Parameter	Type	Description
unauth_result	Array of AppAuthResultInfo objects	Authorization cancellation result

Table 7-130 AppAuthResultInfo

Parameter	Type	Description
api_id	String	API ID
app_id	String	App ID, which can be obtained by querying apps
auth_id	String	Authorization ID, which is empty if the authorization fails
reason	String	Authorization or authorization cancellation failure reason, which is empty if the authorization is successful
success	Boolean	Whether authorization or authorization cancellation is successful

Status code: 401

Table 7-131 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-132 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 7-133** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID

Table 7-134 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Canceling the authorization of a specified API to an App

```
DELETE https://{endpoint}/v1/{project_id}/services/{service_id}/app-auth-apis/{api_id}/app-auth-api
```

```
{
  "apps": [ {
    "app_id": "fb1a9eadd87b48abbd74b8ba1755dffd"
  } ]
}
```

Example Responses

Status code: 200

OK

```
{
  "unauth_result": [ {
    "api_id": "logic-api-fe84e858-49ec-41c6-80d7-a34fc22435c2",
    "app_id": "logic-app-9b9acb40-6df6-4623-9f87-e0dae781d867",
    "success": true
  } ]
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden

Error Codes

See [Error Codes](#).

7.15 Obtaining API Authorization Relationships

Function

This API is used to obtain the authorization relationships between specified APIs and Apps. The API authentication mode must be App authentication. Administrators can obtain authorization information about all APIs. Common users can obtain only authorization information about APIs of services on which they have access permissions.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/services/{service_id}/app-auth-apis/{api_id}/api-auths

Table 7-135 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Parameter	Mandatory	Type	Description
service_id	Yes	String	Service ID.
api_id	Yes	String	API ID

Table 7-136 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	String	Number of items displayed on one page. The default value is 1000 .
offset	No	String	Sequence number of the page from which data is displayed on multiple pages. The default value is 0 .
app_name	No	String	App name. Fuzzy search is supported.
order	No	String	Sorting mode of the returned App list. The value can be asc and desc . The default value is asc .
show_only	No	String	App information. Enums: • AUTH: Only information about authorized Apps is displayed. • UNAUTH: Only information about unauthorized Apps is displayed. By default, this parameter is left blank, indicating that information about all visible Apps is displayed.
sort_by	No	String	Sorting field of the returned App list. Enums: • app_name: application name • created_at: application creation time • updated_at: application update time The default value is app_name .

Parameter	Mandatory	Type	Description
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.
iphertext_enabled	No	Boolean	Whether to display the AppSecret in plaintext.
app_ids	No	Array of strings	App IDs to be displayed in plaintext.

Request Parameters

None

Response Parameters

Status code: 200

Table 7-137 Response body parameters

Parameter	Type	Description
auths	Array of ApiAuthInfo objects	Authorization array
count	Integer	Number of queried authorizations
total_count	Integer	Total number of authorizations

Table 7-138 ApiAuthInfo

Parameter	Type	Description
app	ApigAppDetailInfo object	App information
authed	Boolean	Whether the API has been authorized to the app

Table 7-139 ApigAppDetailInfo

Parameter	Type	Description
app_codes	Array of strings	App code list. When app_type is APIC , this parameter is left blank.
app_id	String	App ID
app_key	String	App key
app_name	String	App name
app_remark	String	App description, which is left blank by default. The value contains a maximum of 200 characters.
app_secret	String	App secret key
app_type	String	App type. Enums: • APIC: This App is registered with the ROMA Connect gateway. • APIG: This App is registered with the shared API gateway. • DEDICATE_APIG: This App is registered with the dedicated API gateway.
bounded_api_count	Integer	Number of APIs bound to the app
created_at	Long	Time when an app is created
project_id	String	Project ID
updated_at	Long	App update time
user_id	String	ID of the user who creates the app

Status code: 400**Table 7-140** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range : N/A
error_msg	String	Definition : Error message. Range : N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/services/{service_id}/app-auth-apis/{api_id}/api-auths
```

Example Responses

Status code: 200

OK

```
{
  "auths": [ {
    "app": {
      "app_id": "fb1a9eadd87b48abbd74b8ba1755dffd",
      "app_name": "app_13e0",
      "app_remark": "ds",
      "app_key": "b11ae87581b04b5284aa92b0d4ae332c",
      "app_secret": "cb5d1b57368b4f129b635332a03bf0e3",
      "user_id": "04f258c8fb00d42a1f65c00df88cc4dc",
      "project_id": "04f258c84780d5a52f3bc00dc15aa5e7",
      "app_type": "APIG",
      "app_codes": [ "53a7c6de82be4671b93414adf98c1c507d5cef29fbdd48d88a4dddb668b0f0ad" ],
      "created_at": 1683173880900,
      "updated_at": 1700531228874,
      "bounded_api_count": 28
    },
    "authed": true
  } ],
  "count": 1,
  "total_count": 1
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See [Error Codes](#).

7.16 Creates an API.

Function

An API is created, but the API is not authorized to the app.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/app-auth/{service_id}/apis

Table 7-141 Path Parameters

Parameter	Mandatory	Type	Description
service_id	Yes	String	ID of the service to which the API belongs
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 7-142 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Table 7-143 Request body parameters

Parameter	Mandatory	Type	Description
workspace_id	No	String	Workspace ID
support_app_code	No	Boolean	Whether to support the App code

Parameter	Mandatory	Type	Description
auth_type	No	String	API authentication mode. Options: • NONE • APP • IAM
api_name	No	String	API name
api_url	No	String	URL of the API. with a maximum of 255 characters.
api_path	No	String	Path of the API. with a maximum of 255 characters.
api_method	No	String	Request method, which can be GET, POST, PUT, DELETE, HEAD, PATCH, OPTIONS , or ANY . ANY is the default value.
api_remark	No	String	API description, with a maximum of 255 characters.

Response Parameters

Status code: 200

Table 7-144 Response body parameters

Parameter	Type	Description
api	AuthTypeApiBasicInfo object	API authentication details.

Table 7-145 AuthTypeApiBasicInfo

Parameter	Type	Description
api_id	String	API ID
api_method	String	Request method, which can be GET, POST, PUT, DELETE, HEAD, PATCH, OPTIONS , or ANY . ANY is the default value.
api_name	String	API name
api_remark	String	API description. The value contains a maximum of 255 characters.

Parameter	Type	Description
auth_type	String	API authentication mode. The options are: Enums: • NONE: no authentication • APP: App authentication • IAM: IAM authentication
predict_url	String	Prediction URL
service_id	String	Service ID
service_name	String	Service name
support_app_code	Boolean	Whether to support the App code

Status code: 401**Table 7-146** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range : N/A
error_msg	String	Definition : Error message. Range : N/A

Status code: 403**Table 7-147** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range : N/A
error_msg	String	Definition : Error message. Range : N/A

Status code: 404

Table 7-148 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
POST https://{endpoint}/v1/{project_id}/app-auth/{service_id}/apis
{
  "workspace_id" : "0",
  "support_app_code" : true,
  "auth_type" : "APIG",
  "api_name" : "app_test",
  "api_url" : "https://d566c7efafe04a26a83d3a8475602ee3.apig.xxxxxx.com/v1/infers/456963f1-737c-4de0-8bee-5b4f6f3a8fa3",
  "api_path" : "/v1/infers/456963f1-737c-4de0-8bee-5b4f6f3a8fa3",
  "api_method" : "GET",
  "api_remark" : "test"
}
```

Example Responses

Status code: 200

OK

```
{
  "api" : {
    "api_id" : "7e0d272df0e94297b7d4046bada3f158",
    "api_name" : "infer_ae20fc9fb37c48c28ebc3f3a638c9f48",
    "api_method" : "ANY",
    "predict_url" : "https://b86b2d069324491fbd66940e4533b45c.apig.xxxxxx.com/v1/infers/ae20fc9f-b37c-48c2-8ebc-3f3a638c9f48",
    "support_app_code" : true,
    "service_id" : "ae20fc9f-b37c-48c2-8ebc-3f3a638c9f48",
    "service_name" : "service-3c02",
    "auth_type" : "APP",
    "api_remark" : "test"
  }
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

7.17 API query

Function

This API is used to query details about a specified API.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/app-auth/{service_id}/apis/{api_id}

Table 7-149 Path Parameters

Parameter	Mandatory	Type	Description
service_id	Yes	String	Service ID, which can be obtained by querying services
api_id	Yes	String	App ID
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 7-150 Query Parameters

Parameter	Mandatory	Type	Description
workspace_id	No	String	Definition: Workspace ID. . Constraints: There must be a workspace in use. Range: N/A Default Value: 0

Request Parameters

Table 7-151 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 7-152 Response body parameters

Parameter	Type	Description
api	AuthTypeApiBasicInfo object	API authentication details.

Table 7-153 AuthTypeApiBasicInfo

Parameter	Type	Description
api_id	String	API ID
api_method	String	Request method, which can be GET , POST , PUT , DELETE , HEAD , PATCH , OPTIONS , or ANY . ANY is the default value.
api_name	String	API name
api_remark	String	API description. The value contains a maximum of 255 characters.
auth_type	String	API authentication mode. The options are: Enums: • NONE: no authentication • APP: App authentication • IAM: IAM authentication
predict_url	String	Prediction URL

Parameter	Type	Description
service_id	String	Service ID
service_name	String	Service name
support_app_code	Boolean	Whether to support the App code

Status code: 401**Table 7-154** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 7-155** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 7-156** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/app-auth/{service_id}/apis/{api_id}
```

Example Responses

Status code: 200

OK

```
{
  "api" : {
    "api_id" : "7e0d272df0e94297b7d4046bada3f158",
    "api_name" : "infer_ae20fc9fb37c48c28ebc3f3a638c9f48",
    "api_method" : "ANY",
    "predict_url" : "https://b86b2d069324491fbd66940e4533b45c.apig.xxxxxx.com/v1/infers/ae20fc9f-b37c-48c2-8ebc-3f3a638c9f48",
    "support_app_code" : true,
    "service_id" : "ae20fc9f-b37c-48c2-8ebc-3f3a638c9f48",
    "service_name" : "service-3c02",
    "auth_type" : "APP",
    "api_remark" : "test"
  }
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

7.18 Querying APIs and Apps

Function

This API is used to query information about APIs and apps authorized by a service.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

```
GET /v1/{project_id}/services/{service_id}/api-auths
```

Table 7-157 Path Parameters

Parameter	Mandatory	Type	Description
service_id	Yes	String	Service ID
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 7-158 Query Parameters

Parameter	Mandatory	Type	Description
workspace_id	No	String	Definition: Workspace ID. . Constraints: There must be a workspace in use. Range: N/A Default Value: 0

Request Parameters

Table 7-159 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 7-160 Response body parameters

Parameter	Type	Description
enable_app_auth	Boolean	Indicates whether the app has been authorized.
app_auth_api	AppAuthApiAuthInfo object	Basic information about the app to which the API has been authorized

Table 7-161 AppAuthApiAuthInfo

Parameter	Type	Description
api_id	String	API ID
authed_apps	Array of ApigAppDetailInfo objects	Basic information about the app to which the API has been authorized

Table 7-162 ApigAppDetailInfo

Parameter	Type	Description
app_codes	Array of strings	App code list. When app_type is APIC , this parameter is left blank.
app_id	String	App ID
app_key	String	App key
app_name	String	App name
app_remark	String	App description, which is left blank by default. The value contains a maximum of 200 characters.
app_secret	String	App secret key
app_type	String	App type. Enums: • APIC: This App is registered with the ROMA Connect gateway. • APIG: This App is registered with the shared API gateway. • DEDICATE_APIG: This App is registered with the dedicated API gateway.
bounded_api_count	Integer	Number of APIs bound to the app
created_at	Long	Time when an app is created

Parameter	Type	Description
project_id	String	Project ID
updated_at	Long	App update time
user_id	String	ID of the user who creates the app

Status code: 401**Table 7-163** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 7-164** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 7-165** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

GET https://{endpoint}/v1/{project_id}/services/{service_id}/api-auths

Example Responses

Status code: 200

OK

```
{
  "enable_app_auth" : true,
  "app_auth_api" : {
    "api_id" : "string",
    "authenticated_apps" : [ {
      "app_codes" : [ "1f5f6cb703864cc580d1ba2cdfd77a271a74eee8e5a242e8b5adc009f77a8b2a" ],
      "app_id" : "54d9104db9e7418f9138980da63a857f",
      "app_key" : "151f1f4dfb20445b97326bde3db0c515",
      "app_name" : "app_for_9332aab245ea4d56871e75d6966aa274",
      "app_remark" : "app for user op_svc_modelarts_container0",
      "app_secret" : "0080fa74e6214d0c8d1b2cb01d9d7708",
      "app_type" : "APIG",
      "bounded_api_count" : 0,
      "created_at" : 1574946998167,
      "project_id" : "string",
      "updated_at" : 1574946998167,
      "user_id" : "9332aab245ea4d56871e75d6966aa274"
    } ]
  }
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

7.19 Check whether the app exists.

Function

Check whether the app exists.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/app-auth/apps/{app_name}/exists

Table 7-166 Path Parameters

Parameter	Mandatory	Type	Description
app_name	Yes	String	App name.
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 7-167 Query Parameters

Parameter	Mandatory	Type	Description
workspace_id	No	String	Definition: Workspace ID. . Constraints: There must be a workspace in use. Range: N/A Default Value: 0

Request Parameters

Table 7-168 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 7-169 Response body parameters

Parameter	Type	Description
exists	Boolean	Indicates whether an app exists.

Status code: 401

Table 7-170 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403

Table 7-171 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404

Table 7-172 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/app-auth/apps/{app_name}/exists&workspace_id=0
```

Example Responses

Status code: 200

OK

```
{
  "exists" : true
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found

Error Codes

See [Error Codes](#).

8 Service Management

8.1 Updating the Service Through the Patch Operation

Function

This API is used to update the service through the patch operation. For details about the patch format, see **json patch**.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PATCH /v1/{project_id}/services/{service_id}

Table 8-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .
service_id	Yes	String	Service ID

Request Parameters

Table 8-2 Request header parameters

Parameter	Mandatory	Type	Description
X-ModelArts-User-ID	No	String	User ID required for using the agency token to verify the workspace
X-Auth-Token	Yes	String	User token

Table 8-3 Request body parameters

Parameter	Mandatory	Type	Description
[items]	Yes	Array of PatchServiceV2RequestBody objects	Request body of the service PATCH operation

Table 8-4 PatchServiceV2RequestBody

Parameter	Mandatory	Type	Description
op	No	String	Operation type. Currently, only replace is supported, indicating the value replacement operation.
path	No	String	Operation path, which complies with the standard JSON PATCH format. It indicates the target path (JSON PATH) of the value to be replaced based on the JSON response body of the service details. Currently, only model-related parameters can be replaced and updated. Therefore, the prefix is fixed to /config/. For example, if you want to update the number of instances in the first model, the path is /config/0/instance_count.
value	No	String	Target value for replacement.

Response Parameters

Status code: 200

Table 8-5 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Request link ID, which can be used for log tracing

Table 8-6 Response body parameters

Parameter	Type	Description
update_time	String	Update time. This parameter is returned only when the service configuration upgrade is triggered. For example, if the config parameter is modified, the update result can be filtered from the service update records based on this time. This parameter is not returned when the description is modified or the service is started or stopped.
resource_ids	String	Updated resource IDs.

Status code: 400

Table 8-7 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Request link ID, which can be used for log tracing

Table 8-8 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Update the service through the patch operation.

```
PATCH https://{endpoint}/v1/{project_id}/services/{service_id}

[ {
  "op": "replace",
  "path": "/config/0/envs",
  "value": { }
}, {
  "op": "replace",
  "path": "/config/0/model_id",
  "value": "a9542b46-8dfd-4184-bd81-c8d8946edb47"
}, {
  "op": "replace",
  "path": "/config/0/additional_properties",
  "value": {
    "persistent_volumes": [ {
      "storage_type": "obs_pfs",
      "source_address": "/dongcong4",
      "mount_path": "/var/tmp",
      "storage_type_text": "atelier_webservice_detail_model_config_volumes_type_obs"
    } ]
  }
}, {
  "op": "replace",
  "path": "/config/0/specification",
  "value": "modelarts.vm.ai1.a310"
}, {
  "op": "replace",
  "path": "/config/0/pool_name",
  "value": "pool-c8e2-04f258c84780d5a52f3bc00dc15aa5e7"
} ]
```

Example Responses

Status code: 200

OK

```
{
  "update_time": 1700625410586,
  "resource_ids": [ "INF-ae2aa85ce2a3fcac-1700530937033", "INF-ae2aa85ca9542b46-1700530937026" ]
}
```

Status Codes

Status Code	Description
200	OK
400	Invalid parameter

Error Codes

See [Error Codes](#).

8.2 Obtaining Service Monitoring

Function

This API is used to obtain service monitoring information.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/services/{service_id}/monitor

Table 8-9 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .
service_id	Yes	String	Service ID

Table 8-10 Query Parameters

Parameter	Mandatory	Type	Description
node_id	No	String	ID of the edge node to be obtained. This parameter is available only when infer_type is set to edge . By default, all nodes are obtained.

Request Parameters

Table 8-11 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API that is used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200**Table 8-12** Response body parameters

Parameter	Type	Description
service_name	String	Service name
service_id	String	Service ID
monitors	Array of Monitor objects	Monitoring details
service_running_in stance_count	Integer	Number of running service instances
service_instance_c ount	Integer	Number of service instances
req_count_per_mi n	Long	Total number of service calls in the last minute

Table 8-13 Monitor

Parameter	Type	Description
failed_times	Integer	Number of times that a model instance fails to be called. This parameter is available for real-time services.
model_version	String	Model version, which is available for real-time services
cpu_memory_tota l	Integer	Total memory, in MB

Parameter	Type	Description
gpu_usage	Float	Number of used GPUs
node_name	String	Node name, which is available for edge services
gpu_total	Float	Total number of GPUs
model_id	String	Model ID, which is available for real-time services
invocation_times	Integer	Number of times that a model instance is called. This parameter is available for real-time services.
cpu_core_usage	Float	Number of used CPU cores
cpu_core_total	Float	Total number of CPU cores
model_name	String	Model name, which is available for real-time services
cpu_memory_usage	Integer	Used memory, in MB
node_id	String	Edge node ID, which is available for edge services
model_running_instance_count	Integer	Number of running model instances
model_instance_count	Integer	Number of model instances
gpu_memory_total	Float	Total GPU memory, in MB.
gpu_memory_usage	Float	Used GPU memory, in MB.
npu_total	Float	Total number of NPUs.
npu_usage	Float	Number of used NPUs.
npu_memory_total	Float	Total NPU memory, in MB.
npu_memory_usage	Float	Used NPU memory, in MB.

Example Requests

```
GET https://{endpoint}/v1/{project_id}/services/{service_id}/monitor
```

Example Responses

Status code: 200

Monitoring information

```
{
  "service_name": "mnist",
  "service_id": "195c1f2d-136d-40af-a0f3-db5717d2634a",
  "monitors": [ {
    "failed_times": 1,
    "model_version": "1.0.0",
    "cpu_core_total": 4,
    "cpu_memory_total": 8192,
    "model_name": "mnist",
    "gpu_usage": 0.6,
    "cpu_memory_usage": 2011,
    "gpu_total": 1,
    "model_id": "0e07b41b-173e-42db-8c16-8e1b44cc0d44",
    "invocation_times": 50,
    "cpu_core_usage": 2.4
  } ]
}
```

Status Codes

Status Code	Description
200	Monitoring information

Error Codes

See [Error Codes](#).

8.3 Obtaining Services

Function

This API is used to obtain model services.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/services

Table 8-14 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Table 8-15 Query Parameters

Parameter	Mandatory	Type	Description
service_id	No	String	Service ID. You can obtain the service ID from the response body when creating a service or obtain the services owned by the current user by calling the API for querying the service list. The service_id field indicates the service ID. By default, service IDs are not filtered.
service_name	No	String	Service name, which is specified by the user during creation. By default, the service name is not filtered.
model_id	No	String	Model ID, which can be obtained from the response body when an AI application is created. You can also obtain the AI applications owned by the current user by calling the API for querying the AI application list. The model_id field indicates the model ID. By default, model IDs are not filtered.
workspace_id	No	String	Workspace ID For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.

Parameter	Mandatory	Type	Description
infer_type	No	String	Inference mode. By default, the inference mode is not filtered. Options: • real-time • batch • edge
status	No	String	Service status. By default, the service status is not filtered. The options are as follows: • running: The service is running properly. • deploying: The service is being deployed, including image creation and resource scheduling deployment. • concerning: An alarm has been generated, indicating that some backend instances malfunction. • failed: Deploying the service failed. For details about the failure cause, see the event and log tab pages. • stopped: The service has been stopped. • finished: Service running is completed. This status is available only for batch services. • stopping: The service is being stopped. • deleting: The service is being deleted. • pending: The service is pending. This status is available only for real-time services. • waiting: The resource is being queued. This status is available only for real-time services.
offset	No	Integer	Start page for pagination display. The default value is 0 .

Parameter	Mandatory	Type	Description
limit	No	Integer	Maximum number of records returned on each page. Default value: 1000
sort_by	No	String	Sorting field. Enums: • publish_at: service publishing time, which is the default value • service_name: service name • transition_at: update time
order	No	String	Sorting order. Enums: • asc: ascending order • desc: descending order (default value)
tags	No	String	Tag. By default, tags are not filtered.

Request Parameters

Table 8-16 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API that is used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 8-17 Response body parameters

Parameter	Type	Description
total_count	Integer	Total number of services that meet the search criteria when no paging is performed

Parameter	Type	Description
count	Integer	Number of services in the query result. If offset and limit are not configured, the values of count and total are the same.
services	Array of ListServices objects	Collection of obtained services

Table 8-18 ListServices

Parameter	Type	Description
failed_times	Long	Number of failed service calls
owner	String	User to which a service belongs
due_time	Number	Time when an online service automatically stops, in milliseconds calculated from 1970.1.1 0:0:0 UTC. This parameter is not returned if automatic stop is not configured.
finished_time	Number	Batch service completion time, in milliseconds calculated from 1970.1.1 0:0:0 UTC. This parameter is returned only when the service is a batch service.
infer_type	String	Inference mode. Options: • real-time • batch • edge
service_name	String	Service name
description	String	Service description.
project	String	Project to which a service belongs
invocation_times	Long	Total number of service calls
publish_at	Long	Latest service release time, in milliseconds calculated from 1970.1.1 0:0:0 UTC.
workspace_id	String	Workspace ID
schedule	Array of Schedule objects	Service scheduling configuration. If this parameter is not configured, no value will be returned.

Parameter	Type	Description
start_time	Number	Batch service start time, in milliseconds calculated from 1970.1.1 0:0:0 UTC. This parameter is returned only when the service is a batch service.
operation_time	Number	Operation time of a request
is_shared	Boolean	Whether a service is subscribed True indicates that the service is a subscription service.
service_id	String	Service ID
progress	Integer	Deployment progress. This parameter is available when the status is deploying .
shared_count	Number	Number of subscribed services
tenant	String	Tenant to which a service belongs
status	String	Service status. The options are as follows: • running: The service is running properly. • deploying: The service is being deployed, including image creation and resource scheduling deployment. • concerning: An alarm has been generated, indicating that some backend instances malfunction. • failed: Deploying the service failed. For details about the failure cause, see the event and log tab pages. • stopped: The service has been stopped. • finished: Service running is completed. This status is available only for batch services.
is_opened_sample_collection	String	Whether to enable data collection, which defaults to false
transition_at	Number	Time when the service status changes
is_free	Boolean	Whether a free-of-charge flavor is used

Parameter	Type	Description
additional_properties	Map<String,String>	Additional service attribute. If this parameter is not configured, no value will be returned.

Table 8-19 Schedule

Parameter	Type	Description
duration	Integer	Value mapping a time unit. For example, if the task stops after two hours, set time_unit to HOURS and duration to 2 .
time_unit	String	Scheduling time unit. Possible values are DAYS , HOURS , and MINUTES .
type	String	Scheduling type. Currently, the value can only be stop, indicating that the task automatically stops after a specified period of time.

Example Requests

GET https://{endpoint}/v1/{project_id}/services

Example Responses

Status code: 200

Service list

```
{
  "total_count" : 1,
  "count" : 1,
  "services" : [ {
    "failed_times" : 1,
    "owner" : "b575785bcece44beb23597770fb819f9",
    "infer_type" : "real-time",
    "service_name" : "mnist",
    "description" : "",
    "project" : "b575785bcece44beb23597770fb819f9",
    "invocation_times" : 50,
    "publish_at" : 1243143243,
    "workspace_id" : 0,
    "is_shared" : false,
    "service_id" : "195c1f2d-136d-40af-a0f3-db5717d2634a",
    "shared_count" : 0,
    "tenant" : "b575785bcece44beb23597770fb819f9",
    "status" : "running"
  } ]
}
```

Status Codes

Status Code	Description
200	Service list

Error Codes

See [Error Codes](#).

8.4 Deploying Services

Function

This API is used to deploy a model as a service.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/services

Table 8-20 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Request Parameters

Table 8-21 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API that is used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Table 8-22 Request body parameters

Parameter	Mandatory	Type	Description
workspace_id	No	String	ID of the workspace to which the service belongs. For details about how to obtain the value, see Querying the Workspace List . If no workspace is created, the default value is 0. If a workspace is created and used, the actual value prevails.
schedule	No	Array of Schedule objects	Service scheduling configuration, which can be configured only for real-time services. By default, this parameter is not used. Services run for a long time.

Parameter	Mandatory	Type	Description
cluster_id	No	String	Resource pool ID used for deploying a service. This parameter is optional. For real-time and batch services, the value is the ID of the old-version dedicated resource pool. After this parameter is configured, the network configuration of the cluster is used and the vpc_id parameter does not take effect. Ensure that the cluster status is normal when using a dedicated resource pool to deploy a service. If you want to use a dedicated resource pool, configure either cluster_id or pool_name . The priority of pool_name is higher than that of cluster_id . If neither of them is configured, a shared resource pool is used. When they are configured together with cluster_id or pool_name in the config field, the setting in config is preferentially used. For edge services, the value is the edge resource pool ID. To use an edge resource pool to deploy a service, ensure that the resource pool status is normal. If this parameter is configured together with the cluster_id parameter in the config field, the setting in config is preferentially used.

Parameter	Mandatory	Type	Description
pool_name	No	String	Resource pool ID of the elastic cluster in the AI dedicated resource pool used for service deployment. This parameter is optional for real-time and batch services. Ensure that the cluster status is normal when using a dedicated resource pool to deploy services. If this parameter is configured together with cluster_id or pool_name in config , the config settings are preferentially used. To use a dedicated resource pool, you need to configure either cluster_id or pool_name . The priority of pool_name is higher than that of cluster_id . If neither of them is configured, the shared resource pool is used.
infer_type	Yes	String	Inference type. The value can be real-time, edge, or batch. • real-time: real-time service. A model is deployed as a web service • batch: batch service. A batch service can perform inference on batch data and automatically stops after data processing is completed. • [edge]: edge service. A model is deployed as a web service on an edge node through Intelligent EdgeFabric (IEF). that provides a real-time test UI and monitoring capabilities. The service keeps running. You need to create a node on IEF beforehand.] (tag:hc,hk)

Parameter	Mandatory	Type	Description
vpc_id	No	String	ID of the VPC to which a real-time service instance is deployed. By default, this parameter is left blank. In this case, ModelArts allocates a dedicated VPC to each user, and users are isolated from each other. To access other service components in the VPC of the service instance, set this parameter to the ID of the corresponding VPC. Once a VPC is configured, it cannot be modified. If both vpc_id and cluster_id are configured, only the dedicated resource pool takes effect.
service_name	Yes	String	Service name, which consists of 1 to 64 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed.
description	No	String	Service description, which is empty by default. The value can contain a maximum of 100 characters and cannot contain the following special characters: !<>+&"
security_group_id	No	String	Security group. By default, this parameter is left blank. This parameter is mandatory if vpc_id is configured. A security group is a virtual firewall that provides secure network access control policies for service instances. A security group must contain at least one inbound rule to permit the requests whose protocol is TCP, source address is 0.0.0.0/0, and port number is 8080.

Parameter	Mandatory	Type	Description
subnet_network_id	No	String	ID of a subnet. By default, this parameter is left blank. This parameter is mandatory if vpc_id is configured. Enter the network ID displayed in the subnet details on the VPC management console. A subnet provides dedicated network resources that are isolated from other networks.
config	Yes	Array of ServiceConfig objects	Model running configurations. If infer_type is batch or edge , you can configure only one model. If infer_type is real-time , you can configure multiple models and assign weights based on service requirements. However, the versions of multiple models must be unique.
additional_properties	No	Map<String, ServiceAdditionalProperties >	Additional service attribute, which facilitates service management
load_balancer_policy	No	String	Backend ELB forwarding policy that can be set only for synchronous real-time services. The value can be ROUND_ROBIN (weighted round robin), LEAST_CONNECTIONS (weighted least connections), or SOURCE_IP (source IP address algorithm).
service_secrets	No	Array of ServiceSecret objects	This API is used to specify the list of keys mounted to the service.
priority	No	Integer	Preemption priority. The value ranges from 1 to 3. The scheduling of high-priority services is guaranteed by setting the preemption priority. When infer_type is set to real-time or batch, the preemption priority can be set.

Table 8-23 Schedule

Parameter	Mandatory	Type	Description
duration	Yes	Integer	Value mapping a time unit. For example, if the task stops after two hours, set time_unit to HOURS and duration to 2 .
time_unit	Yes	String	Scheduling time unit. Possible values are DAYS , HOURS , and MINUTES .
type	Yes	String	Scheduling type. Currently, the value can only be stop, indicating that the task automatically stops after a specified period of time.

Table 8-24 ServiceConfig

Parameter	Mandatory	Type	Description
custom_spec	No	CustomSpec object	Customized resource specification configuration. This parameter is returned only when specification is set to custom.
envs	No	Map<String,String>	Common parameter. (Optional) Environment variable key-value pair required for running a model. By default, this parameter is left blank.

Parameter	Mandatory	Type	Description
specification	Yes	String	Common parameter. Resource flavor. You can query the supported service deployment flavors. The current version supports modelarts.vm.cpu.2u , modelarts.vm.gpu.pnt004 (must be requested), modelarts.vm.ai1.snt3 (must be requested), and custom (available only when the service is deployed in a dedicated resource pool). To request a flavor, submit a service ticket and obtain permissions from ModelArts O&M engineers. If this parameter is set to custom , the custom_spec parameter must be specified.
weight	No	Integer	This parameter is mandatory for real-time . Weight of traffic allocated to a model. This parameter is mandatory only when infer_type is set to real-time . The sum of all weights must be equal to 100. If multiple model versions are configured with different traffic weights in a real-time service, ModelArts will continuously access the prediction API of the service and forward prediction requests to the model instances of the corresponding versions based on the weights.
deploy_timeout_in_seconds	No	Integer	Timeout interval for deploying a single model instance
model_id	Yes	String	Common parameters Model ID. You can obtain the value by calling the API for querying the AI application list.
src_path	No	String	Mandatory for batch services. OBS path to the input data of a batch job

Parameter	Mandatory	Type	Description
req_uri	No	String	Mandatory for batch services. Inference API called in a batch task, which is the RESTful API exposed in the model image. You must select an API URL from the config.json file of the model for inference. If a built-in inference image of ModelArts is used, the API is displayed as <code>/</code> .
mapping_type	No	String	The batch service type is mandatory. Mapping type of the input data. The value can be file or csv. • If file is selected, each inference request corresponds to a file in the input data directory. When this mode is used, req_uri corresponding to the model can have only one input parameter and the parameter type is file. • If csv is selected, each inference request corresponds to a row of data in the CSV file. If this mode is used, the file name extension in the input data directory must be .csv, and the mapping_rule parameter must be configured to indicate the CSV index corresponding to each parameter in the inference request body.

Parameter	Mandatory	Type	Description
cluster_id	No	String	Resource pool ID used for deploying a service. This parameter is optional. For real-time and batch services, the value is the ID of the old-version dedicated resource pool. After this parameter is configured, the network configuration of the cluster is used and the vpc_id parameter does not take effect. When using a dedicated resource pool to deploy a service, ensure that the cluster status is normal and this parameter has a lower priority than pool_name . When setting this parameter, you also need to set the cluster_id or pool_name parameter of the service level, and the priority of this parameter is higher than that of the cluster_id and pool_name parameters of the service level. If both cluster_id and pool_name are missing in config , the cluster_id and pool_name parameters of the service level are used. If none of them is configured, the shared resource pool is used. For edge services, the value is the edge resource pool ID. When using an edge resource pool to deploy a service, ensure that the resource pool status is normal. When setting this parameter, you also need to set the cluster_id parameter of the service level, and the priority of this parameter is higher than that of the cluster_id parameter of the service level. If this parameter is not set, the cluster_id parameter of the service level is used.

Parameter	Mandatory	Type	Description
pool_name	No	String	Resource pool ID of the elastic cluster in the AI dedicated resource pool used for service deployment. When using a dedicated resource pool to deploy a service, ensure that the cluster status is normal and this parameter has a higher priority than cluster_id . When setting this parameter, you also need to set cluster_id or pool_name of the service level, and the priority of this parameter is higher than that of cluster_id and pool_name of the service level. If neither cluster_id nor pool_name is configured in config , the cluster_id and pool_name parameters of the service level are used. If none of them is configured, the shared resource pool is used. This parameter is optional for real-time and batch services.
nodes	No	Array of strings	Edge node ID array. The node ID is the edge node ID on IEF, which can be obtained after the edge node is created on IEF. This parameter is optional for edge services.

Parameter	Mandatory	Type	Description
mapping_rule	No	Object	Optional for batch services. Mapping between input parameters and CSV data. This parameter is mandatory only when mapping_type is set to csv . The mapping rule is similar to the definition of the input parameters in the config.json file. You only need to configure the index parameters under each parameter of the string, number, integer, or boolean type, and specify the value of this parameter to the values of the index parameters in the CSV file to send an inference request. Use commas (,) to separate multiple pieces of CSV data. The values of the index parameters start from 0. If the value of the index parameter is -1, ignore this parameter. For details, see the sample of creating a batch service.
src_type	No	String	Mandatory for batch services. Data source type, which can be ManifestFile . By default, this parameter is left blank, indicating that only files in the src_path directory are read. If this parameter is set to ManifestFile , src_path must be set to a specific manifest path. Multiple data paths can be specified in the manifest file. For details, see the manifest inference specifications.
dest_path	No	String	Mandatory for batch services. OBS path to the output data of a batch job

Parameter	Mandatory	Type	Description
instance_count	Yes	Integer	Common parameter. Number of instances deployed in a model. The maximum number of instances is 128. To use more instances, submit a service ticket.
additional_properties	No	Map<String, ModelAdditionalProperties >	Additional attributes for model deployment, facilitating service instance management
affinity	No	ServiceAffinity object	Service Affinity Deployment

Table 8-25 CustomSpec

Parameter	Mandatory	Type	Description
gpu_p4	No	Float	Number of GPUs, which can be a decimal. The value cannot be smaller than 0, with the third decimal place is rounded off. This parameter is optional and is not used by default.
memory	Yes	Integer	Memory in MB, which must be an integer
cpu	Yes	Float	Number of CPU cores, which can be a decimal. The value cannot be smaller than 0.01, with the third decimal place is rounded off.
ascend_a310	No	Integer	Number of Ascend chips. This parameter is optional and is not used by default. Either this parameter or gpu is configured.

Table 8-26 ModelAdditionalProperties

Parameter	Mandatory	Type	Description
log_volume	No	Array of LogVolume objects	Host directory mounting. This parameter takes effect only if a dedicated resource pool is used. If a public resource pool is used to deploy services, this parameter cannot be configured. Otherwise, an error will occur.
max_surge	No	Float	The value must be greater than 0. If this parameter is not set, the default value 1 is used. If the value is less than 1, it indicates the percentage of instances to be added during the rolling upgrade. If the value is greater than 1, it indicates the maximum number of instances to be added during the rolling upgrade.
max_unavailable	No	Float	The value must be greater than 0. If this parameter is not set, the default value 0 is used. If the value is less than 1, it indicates the percentage of instances that can be scaled in during the rolling upgrade. If the value is greater than 1, it indicates the number of instances that can be scaled in during the rolling upgrade.
termination_grace_period_seconds	No	Integer	Graceful stop period of a container.
persistent_volumes	No	Array of PersistentVolumes objects	Persistent storage mounting.
dew_secret	No	DewSecret object	DEW secret.

Table 8-27 LogVolume

Parameter	Mandatory	Type	Description
host_path	Yes	String	Log path to be mapped on the host
mount_path	Yes	String	Path to the logs in the container

Table 8-28 PersistentVolumes

Parameter	Mandatory	Type	Description
name	No	String	Volume name.
mount_path	Yes	String	Mount path of a volume in the container. Example: /tmp. The container path must not be a system directory, such as / and /var/run. Otherwise, an exception occurs. It is a good practice to mount the container to an empty directory. If the directory is not empty, ensure that there are no files affecting container startup in the directory. Otherwise, such files will be replaced, resulting in failures to start the container and create the workload.
storage_type	No	String	Mount type: sfs_turbo.
source_addresses	No	String	Specifies the mounting source path. The value is the SFS Turbo ID when an EFS file is mounted.

Table 8-29 DewSecret

Parameter	Mandatory	Type	Description
secret_name	No	String	DEW secret name.

Table 8-30 ServiceAffinity

Parameter	Mandatory	Type	Description
node_affinity	No	NodeAffinity object	Set this parameter when node affinity is used.

Table 8-31 NodeAffinity

Parameter	Mandatory	Type	Description
mode	Yes	String	Node affinity mode. The value required indicates strong affinity. A service instance can be scheduled only to a specified node. If the specified node does not exist, the scheduling fails. preferred indicates weak affinity. A service instance tends to be scheduled to a specified node. If the specified node does not meet the scheduling conditions, the service instance will be scheduled to another node.
pool_infos	No	Array of AffinityPoolInfo objects	Configure an affinity policy for a specified cluster and specify the nodes in the cluster.

Table 8-32 AffinityPoolInfo

Parameter	Mandatory	Type	Description
pool_name	Yes	String	Cluster name. The cluster name must be in the outer pool_name.
nodes	Yes	Array of AffinityNodeInfo objects	Affinity Node List

Table 8-33 AffinityNodeInfo

Parameter	Mandatory	Type	Description
name	Yes	String	Node name, which corresponds to the private IP address of the node.

Table 8-34 ServiceAdditionalProperties

Parameter	Mandatory	Type	Description
smn_notification	Yes	Map<String, SmnNotification >	SMN message notification structure, which is used to notify the user of the service status change
log_report_channels	No	Array of LogReportPipeline objects	Log channel group. If this parameter is not specified or the array length is 0, LTS log interconnection is disabled. This function cannot be modified after being enabled.
websocket_upgrade	No	Boolean	Whether the service interface is upgraded to WebSocket. During service deployment, the default value is false . During service configuration update, the default value is the value set last time. • false: Do not upgrade to WebSocket. • true: Upgrade to WebSocket. This parameter cannot be modified after WebSocket is enabled. WebSocket cannot be enabled together with Traffic Limit.

Table 8-35 SmnNotification

Parameter	Mandatory	Type	Description
topic_urn	Yes	String	URN of an SMN topic

Parameter	Mandatory	Type	Description
events	Yes	Array of integers	Event ID. The options are as follows: • 1: failed • 3: running • 7: concerning • 11: pending

Table 8-36 LogReportPipeline

Parameter	Mandatory	Type	Description
type	Yes	String	Log pipeline type. Currently, only LTS is supported.
configuration	No	LtsConfiguration object	LTS log configuration.

Table 8-37 LtsConfiguration

Parameter	Mandatory	Type	Description
log_group_id	Yes	String	LTS log group ID. The value contains 64 characters.
log_stream_id	Yes	String	LTS log stream ID. The value contains 64 characters.

Table 8-38 ServiceSecret

Parameter	Mandatory	Type	Description
secretId	Yes	String	Specifies the key ID.
mount_path	Yes	String	Mount path.

Response Parameters

Status code: 200

Table 8-39 Response body parameters

Parameter	Type	Description
service_id	String	Service ID
resource_ids	Array of strings	Resource ID array for the resource IDs generated by the target model

Example Requests

- Sample request of creating a real-time service

POST https://{endpoint}/v1/{project_id}/services

```
{
  "infer_type": "real-time",
  "service_name": "mnist",
  "description": "mnist service",
  "config": [ {
    "specification": "modelarts.vm.cpu.2u",
    "weight": 100,
    "model_id": "0e07b41b-173e-42db-8c16-8e1b44cc0d44",
    "instance_count": 1
  } ]
}
```

- Create a real-time service and configure multi-version traffic distribution.

POST https://{endpoint}/v1/{project_id}/services

```
{
  "service_name": "mnist",
  "description": "mnist service",
  "infer_type": "real-time",
  "config": [ {
    "model_id": "xxxmodel-idxxx",
    "weight": "70",
    "specification": "modelarts.vm.cpu.2u",
    "instance_count": 1,
    "envs": {
      "model_name": "mxnet-model-1",
      "load_epoch": "0"
    }
  }, {
    "model_id": "xxxxxx",
    "weight": "30",
    "specification": "modelarts.vm.cpu.2u",
    "instance_count": 1
  } ]
}
```

- Create a real-time service in a dedicated resource pool with custom specifications.

POST https://{endpoint}/v1/{project_id}/services

```
{
  "service_name": "realtime-demo",
  "description": "",
  "infer_type": "real-time",
  "cluster_id": "8abf68a969c3cb3a0169c4acb24b0000",
  "config": [ {
    "model_id": "eb6a4a8c-5713-4a27-b8ed-c7e694499af5",
    "weight": "100",
    "cluster_id": "8abf68a969c3cb3a0169c4acb24b0000",
    "specification": "custom",
  } ]
}
```

```
"custom_spec" : {
  "cpu" : 1.5,
  "memory" : 7500
},
"instance_count" : 1
} ]
}
```

- Create a real-time service and configure it to automatically stop.

POST https://{endpoint}/v1/{project_id}/services

```
{
  "service_name" : "service-demo",
  "description" : "demo",
  "infer_type" : "real-time",
  "config" : [ {
    "model_id" : "xxxmodel-idxxx",
    "weight" : "100",
    "specification" : "modelarts.vm.cpu.2u",
    "instance_count" : 1
  } ],
  "schedule" : [ {
    "type" : "stop",
    "time_unit" : "HOURS",
    "duration" : 1
  } ]
}
```

- Create a batch service and set **mapping_type** to **file**.

POST https://{endpoint}/v1/{project_id}/services

```
{
  "service_name" : "batchservicetest",
  "description" : "",
  "infer_type" : "batch",
  "cluster_id" : "8abf68a969c3cb3a0169c4acb24b****",
  "config" : [ {
    "model_id" : "598b913a-af3e-41ba-a1b5-bf065320f1e2",
    "specification" : "modelarts.vm.cpu.2u",
    "instance_count" : 1,
    "src_path" : "https://infern-data.obs.xxxx.com/xgboosterdata/",
    "dest_path" : "https://infern-data.obs.xxxx.com/output/",
    "req_uri" : "/",
    "mapping_type" : "file"
  } ]
}
```

- Create a batch service and set **mapping_type** to **csv**.

POST https://{endpoint}/v1/{project_id}/services

```
{
  "service_name" : "batchservicetest",
  "description" : "",
  "infer_type" : "batch",
  "config" : [ {
    "model_id" : "598b913a-af3e-41ba-a1b5-bf065320f1e2",
    "specification" : "modelarts.vm.cpu.2u",
    "instance_count" : 1,
    "src_path" : "https://infern-data.obs.xxxx.com/xgboosterdata/",
    "dest_path" : "https://infern-data.obs.xxxx.com/output/",
    "req_uri" : "/",
    "mapping_type" : "csv",
    "mapping_rule" : {
      "type" : "object",
      "properties" : {
        "data" : {
          "type" : "object",
          "properties" : {
            "req_data" : {
              "type" : "array",
```

```
    "items": [ {
      "type": "object",
      "properties": {
        "input5": {
          "type": "number",
          "index": 0
        },
        "input4": {
          "type": "number",
          "index": 1
        },
        "input3": {
          "type": "number",
          "index": 2
        },
        "input2": {
          "type": "number",
          "index": 3
        },
        "input1": {
          "type": "number",
          "index": 4
        }
      }
    }
  ]
}
```

- Create an edge service.

POST https://{endpoint}/v1/{project_id}/services

```
{
  "service_name": "service-edge-demo",
  "description": "",
  "infer_type": "edge",
  "config": [ {
    "model_id": "eb6a4a8c-5713-4a27-b8ed-c7e694499af5",
    "specification": "custom",
    "instance_count": 1,
    "custom_spec": {
      "cpu": 1.5,
      "memory": 7500
    },
    "envs": { },
    "nodes": [ "2r8c4fb9-t497-40u3-89yf-skui77db0472" ]
  }
]
```

Example Responses

Status code: 200

Service deployed

```
{
  "service_id": "10eb0091-887f-4839-9929-cbc884f1e20e",
  "resource_ids": [ "INF-f878991839647358@1598319442708" ]
}
```

Status Codes

Status Code	Description
200	Service deployed

Error Codes

See [Error Codes](#).

8.5 Obtaining Supported Service Deployment Specifications

Function

This API is used to obtain supported service deployment specifications.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/services/specifications

Table 8-40 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Table 8-41 Query Parameters

Parameter	Mandatory	Type	Description
is_personal_cluster	No	Boolean	Whether to obtain the service deployment flavors supported by dedicated resource pool. The default value is false .

Parameter	Mandatory	Type	Description
infer_type	No	String	Inference type. Enums: • real-time, which is the default value • batch • edge
limit	No	String	Maximum number of records returned on each page. The default value is 1000 .
offset	No	String	Start offset of the returned data. The default value is 0 .

Request Parameters

Table 8-42 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API that is used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 8-43 Response body parameters

Parameter	Type	Description
total_count	Integer	Total number of deployed service specifications.
count	Integer	Number of specifications in the current list.
specifications	Array of Specification objects	Supported service deployment flavors

Table 8-44 Specification

Parameter	Type	Description
is_open	Boolean	Whether to enable the flavor. The default value is true . If this parameter is set to false , submit a service ticket to apply for the flavor.
spec_status	String	Specification status. The options are as follows: • normal: The specification is normal. • sellout: The specification cannot be used to deploy services because it is sold out.
specification	String	Unique flavor ID
billing_spec	String	Unique ID of the billing specifications
category	String	The flavor type.
cpu_info	CpuInfo object	Specifies the CPU information of the flavor.
memory_info	MemoryInfo object	Specifies the memory information of the flavor.
gpu_info	GpuInfo object	Specifies the GPU information of the flavor.
npu_info	NpuInfo object	NPU information of the flavor.
source_type	String	Model type, which can be empty or auto . The default value is empty , indicating that the model is generated by the user. If the value is auto , the model is trained using ExeML. The billing mode varies depending on the model type.
is_free	Boolean	Whether the flavor is free of charge. The value true indicates that the flavor is free of charge.
over_quota	Boolean	Whether the quota exceeds the upper limit. The value true indicates that the quota exceeds the upper limit.
extend_params	Integer	Billing item
display_en	String	Specifications description in English
display_cn	String	Specification description

Table 8-45 CpuInfo

Parameter	Type	Description
arch	String	Architecture type.
cpu	Number	Number of CPUs

Table 8-46 MemoryInfo

Parameter	Type	Description
unit	String	Unit.
memory	Integer	Memory size.

Table 8-47 GpuInfo

Parameter	Type	Description
brand	String	Brand.
version	String	Card type.
unit	String	Unit.
memory	Integer	Memory size of the card.
gpu	Number	Definition: Number of GPUs. Range: N/A

Table 8-48 NpuInfo

Parameter	Type	Description
brand	String	Brand.
version	String	Card type.
unit	String	Unit.
memory	Integer	Memory size of the card.
npu	Integer	Number of NPUs.

Example Requests

```
GET https://{endpoint}/v1/{project_id}/services/specifications
```

Example Responses

Status code: 200

Service deployment flavors.

```
{
  "total_count" : 3,
  "count" : 3,
  "specifications" : [ {
    "specification" : "modelarts.vm.cpu.2u",
    "billing_spec" : "modelarts.vm.cpu.2u",
    "category" : "CPU",
    "cpu_info" : {
      "arch" : "x86",
      "cpu" : 2.0
    },
    "memory_info" : {
      "unit" : "GB",
      "memory" : 8
    },
    "gpu_info" : {
      "unit" : "MB",
      "gpu" : 0.0,
      "memory" : 0
    },
    "npu_info" : {
      "unit" : "MB",
      "npu" : 0,
      "memory" : 0
    },
    "display_en" : "CPU: 2 vCPUs | 8 GiB",
    "display_cn" : "CPU: 2 Core 8 GiB",
    "is_open" : true,
    "spec_status" : "normal",
    "is_free" : false,
    "over_quota" : false,
    "extend_params" : 1
  }, {
    "specification" : "modelarts.vm.gpu.pnt004",
    "billing_spec" : "modelarts.vm.gpu.pnt004",
    "category" : "GPU",
    "cpu_info" : {
      "arch" : "x86",
      "cpu" : 8.0
    },
    "memory_info" : {
      "unit" : "GB",
      "memory" : 32
    },
    "gpu_info" : {
      "unit" : "GB",
      "brand" : "NVIDIA",
      "version" : "Pnt004",
      "gpu" : 1.0,
      "memory" : 16
    },
    "npu_info" : {
      "unit" : "MB",
      "npu" : 0,
      "memory" : 0
    },
    "display_en" : "CPU: 8 vCPUs | 32 GiB GPU: Pnt004",
    "display_cn" : "CPU: 8 cores 32 GiB GPU: 1 x Pnt004",
    "is_open" : true,
    "spec_status" : "normal",
    "is_free" : false,
    "over_quota" : false,
    "extend_params" : 1
  }
]
```



```
{, {
  "specification" : "modelarts.vm.ai1.snt3",
  "billing_spec" : "modelarts.vm.ai1.snt3",
  "category" : "NPU",
  "cpu_info" : {
    "arch" : "x86",
    "cpu" : 2.0
  },
  "memory_info" : {
    "unit" : "GB",
    "memory" : 8
  },
  "gpu_info" : {
    "unit" : "MB",
    "gpu" : 0.0,
    "memory" : 0
  },
  "npu_info" : {
    "unit" : "GB",
    "brand" : "Ascend",
    "version" : "Snt3",
    "npu" : 1,
    "memory" : 8
  },
  "display_en" : "CPU: 2 vCPUs | 8 GiB Ascend: 1 x Ascend snt3",
  "display_cn" : "CPU: 2 cores 8 GiB Ascend: 1 x Ascend snt3",
  "is_open" : false,
  "spec_status" : "normal",
  "is_free" : false,
  "over_quota" : false,
  "extend_params" : 1
}]
}
```

Status Codes

Status Code	Description
200	Service deployment flavors.

Error Codes

See [Error Codes](#).

8.6 Obtaining Service Details

Function

This API is used to obtain the details about a model service based on the service ID.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/services/{service_id}

Table 8-49 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .
service_id	Yes	String	Service ID. You can obtain the service ID from the response body when creating a service or obtain the services owned by the current user by calling the API for querying the service list. The service_id field indicates the service ID.

Request Parameters

Table 8-50 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API that is used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 8-51 Response body parameters

Parameter	Type	Description
service_id	String	Service ID
service_name	String	Service name
description	String	Service description
tenant	String	Tenant to which a service belongs
project	String	Project to which a service belongs

Parameter	Type	Description
owner	String	User to which a service belongs
publish_at	Number	Latest service release time, in milliseconds calculated from 1970.1.1 0:0:0 UTC.
infer_type	String	Inference mode. Options: • real-time • batch • edge
workspace_id	String	Workspace ID
cluster_id	String	ID of the dedicated resource pool used by a real-time or batch service or ID of the edge resource pool used by an edge service. This parameter is returned only when a dedicated resource pool or edge resource pool is configured.
vpc_id	String	ID of the VPC to which the real-time service instance belongs. This parameter is available when the network configuration is customized.
subnet_network_id	String	ID of the subnet to which the real-time service instance belongs. This parameter is available when the network configuration is customized.
security_group_id	String	Security group to which the real-time service instance belongs. This parameter is available when the network configuration is customized.

Parameter	Type	Description
status	String	Service status. The options are as follows: • running: The service is running properly. • deploying: The service is being deployed, including image creation and resource scheduling deployment. • concerning: An alarm has been generated, indicating that some backend instances malfunction. • failed: Deploying the service failed. For details about the failure cause, see the event and log tab pages. • stopped: The service has been stopped. • finished: Service running is completed. This status is available only for batch services. • stopping: The service is being stopped. • deleting: The service is being deleted. • pending: The service is pending. This status is available only for real-time services. • waiting: The resource is being queued. This status is available only for real-time services.
progress	Integer	Deployment progress. This parameter is available when the status is deploying .
error_msg	String	Error message. When status is failed , an error message carrying the failure cause is returned.
config	Array of QueryServiceConfig objects	Service configuration (If a service is shared, only model_id , model_name , and model_version are returned.)
access_address	String	Access address of an inference request. This parameter is only valid when infer_type is set to real-time and the service is deployed.

Parameter	Type	Description
bind_access_address	String	Request address of a custom domain name. This parameter is available after a domain name is bound.
invocation_times	Number	Total number of service calls
failed_times	Number	Number of failed service calls
is_shared	Boolean	Whether a service is subscribed
shared_count	Number	Number of subscribed services
schedule	Array of Schedule objects	Service scheduling configuration. If this parameter is not configured, no value will be returned.
update_time	Number	Time when the configuration used by the current service is updated, in milliseconds calculated from 1970.1.1 0:0:0 UTC.
debug_url	String	Online debugging address of a real-time service. This parameter is available only when the model supports online debugging and there is only one instance.
due_time	Number	Time when an online service automatically stops, in milliseconds calculated from 1970.1.1 0:0:0 UTC. If automatic stop is not configured, this parameter is not returned.
operation_time	Number	Operation time of a request
transition_at	Number	Time when the service status changes
is_free	Boolean	Whether a free-of-charge flavor is used
additional_properties	Map<String,String>	Additional service attribute
pool_name	String	Resource pool ID of the elastic cluster in the AI dedicated resource pool used by the real-time or batch service. This parameter is returned only when a dedicated resource pool is configured.

Parameter	Type	Description
load_balancer_policy	String	Backend ELB forwarding policy that can be set for synchronous real-time services. The value can be ROUND_ROBIN (weighted round robin), LEAST_CONNECTIONS (weighted least connections), or SOURCE_IP (source IP address algorithm).
priority	Integer	Preemption priority. The value ranges from 1 to 3. The scheduling of high-priority services is guaranteed by setting the preemption priority. When infer_type is set to real-time or batch, the preemption priority can be set.

Table 8-52 QueryServiceConfig

Parameter	Type	Description
model_version	String	Model version
finished_time	Number	Task completion time, in milliseconds calculated from 1970.1.1 0:0:0 UTC. This parameter is not returned before the task is complete.
custom_spec	CustomSpec object	Customized resource specification configuration. This parameter is returned only when specification is set to custom.
envs	Map<String,String>	Environment variable key-value pair required for running a model
specification	String	Resource specifications, for example, modelarts.vm.cpu.2u/ modelarts.vm.gpu.pnt004/ modelarts.vm.ai1.snt3. If this parameter is set to custom, a customized flavor is used, which matches the custom_spec field.
weight	Integer	Traffic weight allocated to a model
source_type	String	Model source. This parameter is returned when a model is created using ExeML. The value is auto .
model_id	String	Model ID

Parameter	Type	Description
src_path	String	OBS path for storing the input data of a batch task, for example, https://xxx.obs.myhwclouds.com/image/ .
req_uri	String	Inference path invoked in a batch task, for example, / .
mapping_type	String	Mapping type of the input data, which can be file or csv
start_time	Number	Task start time, in milliseconds calculated from 1970.1.1 0:0:0 UTC. This parameter is not returned before the task starts.
cluster_id	String	ID of the dedicated resource pool or edge resource pool used by the service instance. This parameter is returned only when a dedicated resource pool or edge resource pool is configured.
nodes	Array of Nodes objects	Edge node information. This parameter is returned only when ModelArts edge nodes are configured.
mapping_rule	Object	Mapping between input parameters and CSV data. This parameter is mandatory only when mapping_type is set to csv .
model_name	String	Model name
src_type	String	Data source type. This parameter is returned only when ManifestFile is used.
dest_path	String	OBS path to the output data of a batch job Example: https://xxx.obs.myhwclouds.com/res/ .
instance_count	Integer	Number of instances deployed for a model

Parameter	Type	Description
status	String	Service status. The options are as follows: • running: The service is running properly. • deploying: The service is being deployed, including image creation and resource scheduling deployment. • concerning: An alarm has been generated, indicating that some backend instances malfunction. • failed: Deploying the service failed. For details about the failure cause, see the event and log tab pages. • stopped: The service has been stopped. • finished: Service running is completed. This status is available only for batch services.
scaling	Boolean	Whether auto scaling is enabled
support_debug	Boolean	Whether a model supports online debugging
additional_properties	Map<String, ModelAdditionalProperties >	Additional model deployment attribute
pool_name	String	Resource pool ID of the elastic cluster in the AI dedicated resource pool used by the service instance. This parameter is returned only when a dedicated resource pool is configured.
affinity	ServiceAffinity object	Service Affinity Information
specification_details	ServiceSpecificationDetails object	Flavor details.

Table 8-53 CustomSpec

Parameter	Type	Description
gpu_p4	Float	Number of GPUs, which can be a decimal. The value cannot be smaller than 0, with the third decimal place is rounded off. This parameter is optional and is not used by default.
memory	Integer	Memory in MB, which must be an integer
cpu	Float	Number of CPU cores, which can be a decimal. The value cannot be smaller than 0.01, with the third decimal place is rounded off.
ascend_a310	Integer	Number of Ascend chips. This parameter is optional and is not used by default. Either this parameter or gpu is configured.

Table 8-54 Nodes

Parameter	Type	Description
memory	Integer	Memory size, in MB
os_version	String	OS version of a node
cpu	Integer	Number of CPU cores
created_at	String	Creation time, in the format of YYYY-MM-DDThh:mm:ss (UTC)
description	String	Node description.
message	String	Indicates the reason when instance_status is failed or notReady.
predict_url	String	Inference URL of a node
enable_gpu	Boolean	Whether to enable GPUs
gpu_num	Integer	Number of GPUs
host_ips	Array of strings	Host IP address of a node
updated_at	String	Update time, in the format of YYYY-MM-DDThh:mm:ss (UTC)
node_label	String	Node label
os_type	String	OS type of a node

Parameter	Type	Description
name	String	Name of an edge node
os_name	String	OS name of a node
arch	String	Node architecture
id	String	Edge node ID
instance_status	String	Running status of a model instance on the node. The options are as follows: • running: The task is running. • stopped: The service has been stopped. • notReady: not ready. • failed: The task fails to be executed.
state	String	Host status, which can be RUNNING , FAIL , or UNCONNECTED
deployment_num	Integer	Number of application instances deployed on a node
host_name	String	Host name of a node

Table 8-55 ModelAdditionalProperties

Parameter	Type	Description
log_volume	Array of LogVolume objects	Host directory mounting. This parameter takes effect only if a dedicated resource pool is used. If a public resource pool is used to deploy services, this parameter cannot be configured. Otherwise, an error will occur.
max_surge	Float	The value must be greater than 0. If this parameter is not set, the default value 1 is used. If the value is less than 1, it indicates the percentage of instances to be added during the rolling upgrade. If the value is greater than 1, it indicates the maximum number of instances to be added during the rolling upgrade.

Parameter	Type	Description
max_unavailable	Float	The value must be greater than 0. If this parameter is not set, the default value 0 is used. If the value is less than 1, it indicates the percentage of instances that can be scaled in during the rolling upgrade. If the value is greater than 1, it indicates the number of instances that can be scaled in during the rolling upgrade.
termination_grace_period_seconds	Integer	Graceful stop period of a container.
persistent_volumes	Array of PersistentVolumes objects	Persistent storage mounting.
dew_secret	DewSecret object	DEW secret.

Table 8-56 LogVolume

Parameter	Type	Description
host_path	String	Log path to be mapped on the host
mount_path	String	Path to the logs in the container

Table 8-57 PersistentVolumes

Parameter	Type	Description
name	String	Volume name.
mount_path	String	Mount path of a volume in the container. Example: /tmp. The container path must not be a system directory, such as / and /var/run. Otherwise, an exception occurs. It is a good practice to mount the container to an empty directory. If the directory is not empty, ensure that there are no files affecting container startup in the directory. Otherwise, such files will be replaced, resulting in failures to start the container and create the workload.
storage_type	String	Mount type: sfs_turbo.

Parameter	Type	Description
source_address	String	Specifies the mounting source path. The value is the SFS Turbo ID when an EFS file is mounted.

Table 8-58 DewSecret

Parameter	Type	Description
secret_name	String	DEW secret name.

Table 8-59 ServiceAffinity

Parameter	Type	Description
node_affinity	NodeAffinity object	Set this parameter when node affinity is used.

Table 8-60 NodeAffinity

Parameter	Type	Description
mode	String	Node affinity mode. The value required indicates strong affinity. A service instance can be scheduled only to a specified node. If the specified node does not exist, the scheduling fails. preferred indicates weak affinity. A service instance tends to be scheduled to a specified node. If the specified node does not meet the scheduling conditions, the service instance will be scheduled to another node.
pool_infos	Array of AffinityPoolInfo objects	Configure an affinity policy for a specified cluster and specify the nodes in the cluster.

Table 8-61 AffinityPoolInfo

Parameter	Type	Description
pool_name	String	Cluster name. The cluster name must be in the outer pool_name.

Parameter	Type	Description
nodes	Array of AffinityNodeInfo objects	Affinity Node List

Table 8-62 AffinityNodeInfo

Parameter	Type	Description
name	String	Node name, which corresponds to the private IP address of the node.

Table 8-63 ServiceSpecificationDetails

Parameter	Type	Description
display_en	String	Flavor name.
display_cn	String	Flavor name, in Chinese.
category	String	Flavor type, which can be CPU (no accelerator cards), GPU (GPU accelerator cards), or NPU (NPU accelerator cards).
cpu_info	CpuDisplayInfo object	CPU details.
memory_info	MemoryDisplayInfo object	Memory details.
gpu_info	GpuDisplayInfo object	GPU details.
npu_info	NpuDisplayInfo object	NPU details.

Table 8-64 CpuDisplayInfo

Parameter	Type	Description
cpu	Double	Number of CPU cores.
arch	String	CPU architecture, which can be x86 or Arm.

Table 8-65 MemoryDisplayInfo

Parameter	Type	Description
memory	Integer	Memory capacity.
unit	String	Memory unit, for example, MB or GB.

Table 8-66 GpuDisplayInfo

Parameter	Type	Description
gpu	Double	Number of GPUs.
brand	String	GPU vendor.
version	String	GPU model.
memory	Integer	GPU memory capacity.
unit	String	GPU memory unit, for example, MB or GB.

Table 8-67 NpuDisplayInfo

Parameter	Type	Description
npu	Integer	Number of NPUs.
brand	String	NPU vendor.
version	String	NPU model.
memory	Integer	NPU memory.
unit	String	NPU memory unit, for example, MB or GB.

Table 8-68 Schedule

Parameter	Type	Description
duration	Integer	Value mapping a time unit. For example, if the task stops after two hours, set time_unit to HOURS and duration to 2 .
time_unit	String	Scheduling time unit. Possible values are DAYS , HOURS , and MINUTES .

Parameter	Type	Description
type	String	Scheduling type. Currently, the value can only be stop, indicating that the task automatically stops after a specified period of time.

Example Requests

GET https://{endpoint}/v1/{project_id}/services/{service_id}

Example Responses

Status code: 200

Service Details

```
{
  "service_id" : "f76f20ba-78f5-44e8-893a-37c8c600c02f",
  "service_name" : "service-demo",
  "tenant" : "xxxxx",
  "project" : "xxxxx",
  "owner" : "xxxxx",
  "publish_at" : 1585809231902,
  "update_time" : 1585809358259,
  "infer_type" : "real-time",
  "status" : "running",
  "progress" : 100,
  "access_address" : "https://xxxxx.apigw.xxxx.com/v1/infers/088458d9-5755-4110-97d8-1d21065ea10b/f76f20ba-78f5-44e8-893a-37c8c600c02f",
  "cluster_id" : "088458d9-5755-4110-97d8-1d21065ea10b",
  "workspace_id" : "0",
  "additional_properties" : { },
  "is_shared" : false,
  "invocation_times" : 0,
  "failed_times" : 0,
  "shared_count" : 0,
  "operation_time" : 1586249085447,
  "config" : [ {
    "model_id" : "044ebf3d-8bf4-48df-bf40-bad0e664c1e2",
    "model_name" : "jar-model",
    "model_version" : "1.0.1",
    "specification" : "custom",
    "custom_spec" : { },
    "status" : "notReady",
    "weight" : 100,
    "instance_count" : 1,
    "scaling" : false,
    "envs" : { },
    "additional_properties" : { },
    "support_debug" : false
  } ],
  "transition_at" : 1585809231902,
  "is_free" : false
}
```

Status Codes

Status Code	Description
200	Service Details

Error Codes

See [Error Codes](#).

8.7 Updating Service Configurations

Function

This API is used to update configurations of a model service. It can also be used to start or stop a service.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/{project_id}/services/{service_id}

Table 8-69 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .
service_id	Yes	String	Service ID

Request Parameters

Table 8-70 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API that is used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Table 8-71 Request body parameters

Parameter	Mandatory	Type	Description
schedule	No	Array of Schedule objects	Service scheduling configuration, which can be configured only for real-time services. By default, this parameter is not used. Services run for a long time.
description	No	String	Service description, which contains a maximum of 100 characters and cannot contain the following characters: <>=&". If this parameter is not set, no update is performed.
config	No	Array of ServiceConfig objects	Service configuration. If this parameter is not configured, the service is not updated.
status	No	String	Service status, which can be running or stopped . If this parameter is not configured, the service status is not changed. Either status or config can be modified. If both of them are used, modify status only.
additional_properties	No	Map<String, ServiceAdditionalProperties >	Additional service attribute, which facilitates service management

Parameter	Mandatory	Type	Description
load_balancer_policy	No	String	Backend ELB forwarding policy that can be set only for synchronous real-time services. The value can be ROUND_ROBIN (weighted round robin), LEAST_CONNECTIONS (weighted least connections), or SOURCE_IP (source IP address algorithm).
service_secrets	No	Array of ServiceSecret objects	Specifies the list of keys mounted to the service. If this parameter is not set, the key will not be updated.
priority	No	Integer	Preemption priority. The value ranges from 1 to 3. The scheduling of high-priority services is guaranteed by setting the preemption priority. When infer_type is set to real-time or batch, the preemption priority can be set.

Table 8-72 Schedule

Parameter	Mandatory	Type	Description
duration	Yes	Integer	Value mapping a time unit. For example, if the task stops after two hours, set time_unit to HOURS and duration to 2 .
time_unit	Yes	String	Scheduling time unit. Possible values are DAYS , HOURS , and MINUTES .
type	Yes	String	Scheduling type. Currently, the value can only be stop, indicating that the task automatically stops after a specified period of time.

Table 8-73 ServiceConfig

Parameter	Mandatory	Type	Description
custom_spec	No	CustomSpec object	Customized resource specification configuration. This parameter is returned only when specification is set to custom.
envs	No	Map<String,String>	Common parameter. (Optional) Environment variable key-value pair required for running a model. By default, this parameter is left blank.
specification	Yes	String	Common parameter. Resource flavor. You can query the supported service deployment flavors. The current version supports modelarts.vm.cpu.2u , modelarts.vm.gpu.pnt004 (must be requested), modelarts.vm.ai1.snt3 (must be requested), and custom (available only when the service is deployed in a dedicated resource pool). To request a flavor, submit a service ticket and obtain permissions from ModelArts O&M engineers. If this parameter is set to custom , the custom_spec parameter must be specified.

Parameter	Mandatory	Type	Description
weight	No	Integer	This parameter is mandatory for real-time . Weight of traffic allocated to a model. This parameter is mandatory only when infer_type is set to real-time . The sum of all weights must be equal to 100. If multiple model versions are configured with different traffic weights in a real-time service, ModelArts will continuously access the prediction API of the service and forward prediction requests to the model instances of the corresponding versions based on the weights.
deploy_timeout_in_seconds	No	Integer	Timeout interval for deploying a single model instance
model_id	Yes	String	Common parameters Model ID. You can obtain the value by calling the API for querying the AI application list.
src_path	No	String	Mandatory for batch services. OBS path to the input data of a batch job
req_uri	No	String	Mandatory for batch services. Inference API called in a batch task, which is the RESTful API exposed in the model image. You must select an API URL from the config.json file of the model for inference. If a built-in inference image of ModelArts is used, the API is displayed as <code>/</code> .

Parameter	Mandatory	Type	Description
mapping_type	No	String	The batch service type is mandatory. Mapping type of the input data. The value can be file or csv. • If file is selected, each inference request corresponds to a file in the input data directory. When this mode is used, req_uri corresponding to the model can have only one input parameter and the parameter type is file. • If csv is selected, each inference request corresponds to a row of data in the CSV file. If this mode is used, the file name extension in the input data directory must be .csv, and the mapping_rule parameter must be configured to indicate the CSV index corresponding to each parameter in the inference request body.

Parameter	Mandatory	Type	Description
cluster_id	No	String	Resource pool ID used for deploying a service. This parameter is optional. For real-time and batch services, the value is the ID of the old-version dedicated resource pool. After this parameter is configured, the network configuration of the cluster is used and the vpc_id parameter does not take effect. When using a dedicated resource pool to deploy a service, ensure that the cluster status is normal and this parameter has a lower priority than pool_name . When setting this parameter, you also need to set the cluster_id or pool_name parameter of the service level, and the priority of this parameter is higher than that of the cluster_id and pool_name parameters of the service level. If both cluster_id and pool_name are missing in config , the cluster_id and pool_name parameters of the service level are used. If none of them is configured, the shared resource pool is used. For edge services, the value is the edge resource pool ID. When using an edge resource pool to deploy a service, ensure that the resource pool status is normal. When setting this parameter, you also need to set the cluster_id parameter of the service level, and the priority of this parameter is higher than that of the cluster_id parameter of the service level. If this parameter is not set, the cluster_id parameter of the service level is used.

Parameter	Mandatory	Type	Description
pool_name	No	String	Resource pool ID of the elastic cluster in the AI dedicated resource pool used for service deployment. When using a dedicated resource pool to deploy a service, ensure that the cluster status is normal and this parameter has a higher priority than cluster_id . When setting this parameter, you also need to set cluster_id or pool_name of the service level, and the priority of this parameter is higher than that of cluster_id and pool_name of the service level. If neither cluster_id nor pool_name is configured in config , the cluster_id and pool_name parameters of the service level are used. If none of them is configured, the shared resource pool is used. This parameter is optional for real-time and batch services.
nodes	No	Array of strings	Edge node ID array. The node ID is the edge node ID on IEF, which can be obtained after the edge node is created on IEF. This parameter is optional for edge services.

Parameter	Mandatory	Type	Description
mapping_rule	No	Object	Optional for batch services. Mapping between input parameters and CSV data. This parameter is mandatory only when mapping_type is set to csv . The mapping rule is similar to the definition of the input parameters in the config.json file. You only need to configure the index parameters under each parameter of the string, number, integer, or boolean type, and specify the value of this parameter to the values of the index parameters in the CSV file to send an inference request. Use commas (,) to separate multiple pieces of CSV data. The values of the index parameters start from 0. If the value of the index parameter is -1, ignore this parameter. For details, see the sample of creating a batch service.
src_type	No	String	Mandatory for batch services. Data source type, which can be ManifestFile . By default, this parameter is left blank, indicating that only files in the src_path directory are read. If this parameter is set to ManifestFile , src_path must be set to a specific manifest path. Multiple data paths can be specified in the manifest file. For details, see the manifest inference specifications.
dest_path	No	String	Mandatory for batch services. OBS path to the output data of a batch job

Parameter	Mandatory	Type	Description
instance_count	Yes	Integer	Common parameter. Number of instances deployed in a model. The maximum number of instances is 128. To use more instances, submit a service ticket.
additional_properties	No	Map<String, ModelAdditionalProperties >	Additional attributes for model deployment, facilitating service instance management
affinity	No	ServiceAffinity object	Service Affinity Deployment

Table 8-74 CustomSpec

Parameter	Mandatory	Type	Description
gpu_p4	No	Float	Number of GPUs, which can be a decimal. The value cannot be smaller than 0, with the third decimal place is rounded off. This parameter is optional and is not used by default.
memory	Yes	Integer	Memory in MB, which must be an integer
cpu	Yes	Float	Number of CPU cores, which can be a decimal. The value cannot be smaller than 0.01, with the third decimal place is rounded off.
ascend_a310	No	Integer	Number of Ascend chips. This parameter is optional and is not used by default. Either this parameter or gpu is configured.

Table 8-75 ModelAdditionalProperties

Parameter	Mandatory	Type	Description
log_volume	No	Array of LogVolume objects	Host directory mounting. This parameter takes effect only if a dedicated resource pool is used. If a public resource pool is used to deploy services, this parameter cannot be configured. Otherwise, an error will occur.
max_surge	No	Float	The value must be greater than 0. If this parameter is not set, the default value 1 is used. If the value is less than 1, it indicates the percentage of instances to be added during the rolling upgrade. If the value is greater than 1, it indicates the maximum number of instances to be added during the rolling upgrade.
max_unavailable	No	Float	The value must be greater than 0. If this parameter is not set, the default value 0 is used. If the value is less than 1, it indicates the percentage of instances that can be scaled in during the rolling upgrade. If the value is greater than 1, it indicates the number of instances that can be scaled in during the rolling upgrade.
termination_grace_period_seconds	No	Integer	Graceful stop period of a container.
persistent_volumes	No	Array of PersistentVolumes objects	Persistent storage mounting.
dew_secret	No	DewSecret object	DEW secret.

Table 8-76 LogVolume

Parameter	Mandatory	Type	Description
host_path	Yes	String	Log path to be mapped on the host
mount_path	Yes	String	Path to the logs in the container

Table 8-77 PersistentVolumes

Parameter	Mandatory	Type	Description
name	No	String	Volume name.
mount_path	Yes	String	Mount path of a volume in the container. Example: /tmp. The container path must not be a system directory, such as / and /var/run. Otherwise, an exception occurs. It is a good practice to mount the container to an empty directory. If the directory is not empty, ensure that there are no files affecting container startup in the directory. Otherwise, such files will be replaced, resulting in failures to start the container and create the workload.
storage_type	No	String	Mount type: sfs_turbo.
source_addresses	No	String	Specifies the mounting source path. The value is the SFS Turbo ID when an EFS file is mounted.

Table 8-78 DewSecret

Parameter	Mandatory	Type	Description
secret_name	No	String	DEW secret name.

Table 8-79 ServiceAffinity

Parameter	Mandatory	Type	Description
node_affinity	No	NodeAffinity object	Set this parameter when node affinity is used.

Table 8-80 NodeAffinity

Parameter	Mandatory	Type	Description
mode	Yes	String	Node affinity mode. The value required indicates strong affinity. A service instance can be scheduled only to a specified node. If the specified node does not exist, the scheduling fails. preferred indicates weak affinity. A service instance tends to be scheduled to a specified node. If the specified node does not meet the scheduling conditions, the service instance will be scheduled to another node.
pool_infos	No	Array of AffinityPoolInfo objects	Configure an affinity policy for a specified cluster and specify the nodes in the cluster.

Table 8-81 AffinityPoolInfo

Parameter	Mandatory	Type	Description
pool_name	Yes	String	Cluster name. The cluster name must be in the outer pool_name.
nodes	Yes	Array of AffinityNodeInfo objects	Affinity Node List

Table 8-82 AffinityNodeInfo

Parameter	Mandatory	Type	Description
name	Yes	String	Node name, which corresponds to the private IP address of the node.

Table 8-83 ServiceAdditionalProperties

Parameter	Mandatory	Type	Description
smn_notification	Yes	Map<String, SmnNotification >	SMN message notification structure, which is used to notify the user of the service status change
log_report_channels	No	Array of LogReportPipeline objects	Log channel group. If this parameter is not specified or the array length is 0, LTS log interconnection is disabled. This function cannot be modified after being enabled.
websocket_upgrade	No	Boolean	Whether the service interface is upgraded to WebSocket. During service deployment, the default value is false . During service configuration update, the default value is the value set last time. ● false: Do not upgrade to WebSocket. ● true: Upgrade to WebSocket. This parameter cannot be modified after WebSocket is enabled. WebSocket cannot be enabled together with Traffic Limit.

Table 8-84 SmnNotification

Parameter	Mandatory	Type	Description
topic_urn	Yes	String	URN of an SMN topic

Parameter	Mandatory	Type	Description
events	Yes	Array of integers	Event ID. The options are as follows: • 1: failed • 3: running • 7: concerning • 11: pending

Table 8-85 LogReportPipeline

Parameter	Mandatory	Type	Description
type	Yes	String	Log pipeline type. Currently, only LTS is supported.
configuration	No	LtsConfiguration object	LTS log configuration.

Table 8-86 LtsConfiguration

Parameter	Mandatory	Type	Description
log_group_id	Yes	String	LTS log group ID. The value contains 64 characters.
log_stream_id	Yes	String	LTS log stream ID. The value contains 64 characters.

Table 8-87 ServiceSecret

Parameter	Mandatory	Type	Description
secretId	Yes	String	Specifies the key ID.
mount_path	Yes	String	Mount path.

Response Parameters

Status code: 200

The service is updated.

None

Example Requests

The following shows how to update a real-time service.

```
PUT https://{endpoint}/v1/{project_id}/services/{service_id}

{
  "description": "",
  "status": "running",
  "config": [ {
    "model_id": "xxx",
    "weight": "100",
    "specification": "modelarts.vm.cpu.2u",
    "instance_count": 1
  } ]
}
```

Example Responses

Status code: 200

The service is updated.

```
{ }
```

Status Codes

Status Code	Description
200	The service is updated.

Error Codes

See [Error Codes](#).

8.8 Deleting a Service

Function

This API is used to delete a model service. You can delete your own services only.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

```
DELETE /v1/{project_id}/services/{service_id}
```

Table 8-88 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .
service_id	Yes	String	Service ID. To delete multiple services in a batch, use commas (,) to separate multiple service_id values.

Request Parameters

Table 8-89 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API that is used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

The service is deleted.

None

Example Requests

The following shows how to delete the model service with ID **xxxxxx**.

```
DELETE https://endpoint/v1/{project_id}/services/xxxxxx
```

Example Responses

Status code: 200

The service is deleted.

```
{}
```


Status Codes

Status Code	Description
200	The service is deleted.

Error Codes

See [Error Codes](#).

8.9 Updating a Single Property of a Model Service

Function

This API is used to update a single property of a model service. Currently, only **instance_count** (number of instances of the model service) is supported. This operation can be performed only for real-time services in the running, alarm, or abnormal state.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/{project_id}/services/{service_id}/property

Table 8-90 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .
service_id	Yes	String	Service ID.

Request Parameters

Table 8-91 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token.

Table 8-92 Request body parameters

Parameter	Mandatory	Type	Description
changed_property	Yes	String	Property name. Currently, only instance_count (number of instances of the model service) is supported.
configs	No	Array of UpdateServiceConfig objects	Service configurations.

Table 8-93 UpdateServiceConfig

Parameter	Mandatory	Type	Description
changed_value	Yes	String	Property value. The value must be an integer. If changed_property is set to instance_count , this parameter value must be greater than or less than the number of current instances.
model_id	Yes	String	Model ID.

Response Parameters

Status code: 200

Table 8-94 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Tracing ID.

Table 8-95 Response body parameters

Parameter	Type	Description
update_time	String	Update time. This parameter is returned only when the service configuration upgrade is triggered. For example, if the config parameter is modified, the update result can be filtered from the service update records based on this time. This parameter is not returned when the description is modified or the service is started or stopped.
resource_ids	String	Updated resource IDs.

Status code: 401**Table 8-96** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Tracing ID.

Table 8-97 Response body parameters

Parameter	Type	Description
error_code	String	Internal service error code.
error_msg	String	Error message.

Example Requests

Update a single property of a model service.

```
PUT https://{endpoint}/v1/{project_id}/services/{service_id}/property
{
  "changed_property": "instance_count",
  "configs": [ {
    "model_id": "98240f41-6c69-437c-b894-9c488b1d9c43",
    "changed_value": 2
  } ]
}
```

Example Responses

Status code: 200

OK

```
{  
  "update_time" : 1712026426703  
}
```

Status code: 401

Unauthorized

```
{  
  "error_code" : "ModelArts.0203",  
  "error_msg" : "Invalid token."  
}
```

Status Codes

Status Code	Description
200	OK
401	Unauthorized

Error CodesSee [Error Codes](#).

8.10 Obtaining Service Event Logs

Function

This API is used to obtain service event logs, including service operation records, key actions during deployment, and deployment failure causes.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/services/{service_id}/events

Table 8-98 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .
service_id	Yes	String	Service ID

Table 8-99 Query Parameters

Parameter	Mandatory	Type	Description
event_type	No	String	Event type. Enums: • normal: normal events • abnormal: abnormal events
event_info	No	String	Event information. Only English information can be filtered. The following special characters are not supported: `(){}';,[]<>/?
start_time	No	Number	Start time for filtering events. By default, events are not filtered.
end_time	No	Number	End time for filtering events. By default, events are not filtered.
offset	No	Integer	Start page for pagination display. The default value is 0 .
limit	No	Integer	Maximum number of records returned on each page. Default value: 1000
sort_by	No	String	Specifies the sorting field. The default value is <code>occur_time</code> (event generation time).
order	No	String	Sorting order. Enums: • asc: ascending order • desc: descending order (default value)

Request Parameters

Table 8-100 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API that is used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 8-101 Response body parameters

Parameter	Type	Description
service_name	String	Service name
total_count	Integer	Total number of events that meet the search criteria when no paging is performed
service_id	String	Service ID
count	Integer	Number of events in the query result
events	Array of Events objects	Event logs of a service

Table 8-102 Events

Parameter	Type	Description
event_type	String	Event type. Options: • normal: normal events • abnormal: abnormal events
event_info	String	Event information, which mainly describes the the five phases of the deployment process. More information can be supplemented later. The five phases are image building, environment preparation, resource scheduling, image pulling, and model startup.
occur_time	Number	Time when an event occurs, in milliseconds calculated from 1970.1.1 0:0:0 UTC.

Example Requests

```
GET https://{endpoint}/v1/{project_id}/services/{service_id}/events
```

Example Responses

Status code: 200

Event logs of a service

```
{  
  "service_name": "service-07085",
```

```
"total_count" : 9,
"service_id" : "35de3ca9-1bca-4ae7-9cb0-914f30fa7d3e",
"count" : 9,
"events" : [ {
  "event_type" : "normal",
  "event_info" : "start to deploy service",
  "occur_time" : 1562597251764
}, {
  "event_type" : "normal",
  "event_info" : "building image for model [TF 3.0.0]",
  "occur_time" : 1562597251788
}, {
  "event_type" : "normal",
  "event_info" : "model (TF 3.0.0) build image success",
  "occur_time" : 1562597251805
}, {
  "event_type" : "normal",
  "event_info" : "preparing environment",
  "occur_time" : 1562597255744
}, {
  "event_type" : "normal",
  "event_info" : "[TF 3.0.0] prepare environment success",
  "occur_time" : 1562597275915
}, {
  "event_type" : "normal",
  "event_info" : "[TF 3.0.0] schedule resource success",
  "occur_time" : 1562597275921
}, {
  "event_type" : "normal",
  "event_info" : "[TF 3.0.0] pulling model image",
  "occur_time" : 1562597275928
}, {
  "event_type" : "normal",
  "event_info" : "[TF 3.0.0] pull image success",
  "occur_time" : 1562597332570
}, {
  "event_type" : "normal",
  "event_info" : "[TF 3.0.0] starting model",
  "occur_time" : 1562597332582
} ]
}
```

Status Codes

Status Code	Description
200	Event logs of a service

Error Codes

See [Error Codes](#).

8.11 Obtaining Service Update Logs

Function

This API is used to obtain the update logs of a real-time service.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/services/{service_id}/logs

Table 8-103 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .
service_id	Yes	String	Service ID

Table 8-104 Query Parameters

Parameter	Mandatory	Type	Description
update_time	No	Number	Update time for filtering. This parameter can be used to obtain the update logs of a real-time service. By default, update logs are not filtered.

Request Parameters

Table 8-105 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API that is used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 8-106 Response body parameters

Parameter	Type	Description
service_name	String	Service name
service_id	String	Service ID
logs	Array of Log objects	Service update records

Table 8-107 Log

Parameter	Type	Description
update_time	Number	Update time, in milliseconds calculated from 1970.1.1 0:0:0 UTC.
result	String	Update result. Options: • SUCCESS • FAIL • RUNNING
config	Array of ServiceLogConfig objects	Model running configurations
success_num	Number	Number of nodes that are successfully operated. This parameter is returned when infer_type is set to edge .
failed_num	Number	Number of nodes that fail to be operated. This parameter is returned when infer_type is set to edge .
result_detail	Array of UpdateResult objects	Operation result details. This parameter is returned when infer_type is set to edge .
cluster_id	String	ID of a dedicated resource pool
extend_config	Array of strings	Personalized configuration

Table 8-108 ServiceLogConfig

Parameter	Type	Description
model_id	String	Common parameters Model ID You can obtain the value by calling the API for querying the AI application list.
model_name	String	Model name

Parameter	Type	Description
model_version	String	Model version
weight	Integer	This parameter is mandatory for the real-time type. Traffic weight allocated to the model. This parameter is mandatory only when infer_type is set to real-time. The sum of multiple weights must be 100. When multiple model versions are configured in a real-time service and different traffic weight ratios are set, ModelArts forwards prediction requests to the corresponding model version instance based on the weight ratio when the prediction API of the service is continuously accessed.
specification	String	Resource specifications. This parameter is returned when infer_type is set to real-time or edge.
custom_spec	CustomSpec object	Custom resource specifications
envs	Map<String,String>	Environment variable key-value pair required for running a model
cluster_id	String	ID of a dedicated resource pool
instance_count	Integer	Number of instances deployed in a model. This parameter is returned when infer_type is set to real-time.
additional_properties	Map<String, ModelAdditionalProperties >	Additional properties for model deployment, facilitating service instance management.

Table 8-109 CustomSpec

Parameter	Type	Description
gpu_p4	Float	Number of GPUs, which can be a decimal. The value cannot be smaller than 0, with the third decimal place is rounded off. This parameter is optional and is not used by default.
memory	Integer	Memory in MB, which must be an integer

Parameter	Type	Description
cpu	Float	Number of CPU cores, which can be a decimal. The value cannot be smaller than 0.01, with the third decimal place is rounded off.
ascend_a310	Integer	Number of Ascend chips. This parameter is optional and is not used by default. Either this parameter or gpu is configured.

Table 8-110 ModelAdditionalProperties

Parameter	Type	Description
log_volume	Array of LogVolume objects	Host directory mounting. This parameter takes effect only if a dedicated resource pool is used. If a public resource pool is used to deploy services, this parameter cannot be configured. Otherwise, an error will occur.
max_surge	Float	The value must be greater than 0. If this parameter is not set, the default value 1 is used. If the value is less than 1, it indicates the percentage of instances to be added during the rolling upgrade. If the value is greater than 1, it indicates the maximum number of instances to be added during the rolling upgrade.
max_unavailable	Float	The value must be greater than 0. If this parameter is not set, the default value 0 is used. If the value is less than 1, it indicates the percentage of instances that can be scaled in during the rolling upgrade. If the value is greater than 1, it indicates the number of instances that can be scaled in during the rolling upgrade.
termination_grace_period_seconds	Integer	Graceful stop period of a container.
persistent_volumes	Array of PersistentVolume s objects	Persistent storage mounting.
dew_secret	DewSecret object	DEW secret.

Table 8-111 LogVolume

Parameter	Type	Description
host_path	String	Log path to be mapped on the host
mount_path	String	Path to the logs in the container

Table 8-112 PersistentVolumes

Parameter	Type	Description
name	String	Volume name.
mount_path	String	Mount path of a volume in the container. Example: /tmp. The container path must not be a system directory, such as / and /var/run. Otherwise, an exception occurs. It is a good practice to mount the container to an empty directory. If the directory is not empty, ensure that there are no files affecting container startup in the directory. Otherwise, such files will be replaced, resulting in failures to start the container and create the workload.
storage_type	String	Mount type: sfs_turbo.
source_address	String	Specifies the mounting source path. The value is the SFS Turbo ID when an EFS file is mounted.

Table 8-113 DewSecret

Parameter	Type	Description
secret_name	String	DEW secret name.

Table 8-114 UpdateResult

Parameter	Type	Description
result	Boolean	Operation result. true indicates that the operation is successful, and false indicates that the operation failed.
node_name	String	Name of an edge node

Parameter	Type	Description
operation	String	Operation. Options: • deploy • delete
node_id	String	Edge node ID You can obtain the value after creating an edge node on IEF.

Example Requests

GET https://{endpoint}/v1/{project_id}/services/{service_id}/logs

Example Responses

Status code: 200

Service update logs

```
{
  "service_name" : "mnist",
  "service_id" : "195c1f2d-136d-40af-a0f3-db5717d2634a",
  "logs" : [ {
    "result" : "SUCCESS",
    "update_time" : 1574770228888,
    "config" : [ {
      "model_version" : "0.0.1",
      "specification" : "modelarts.vm.cpu.2u",
      "model_name" : "mnist",
      "weight" : 100,
      "model_id" : "0e07b41b-173e-42db-8c16-8e1b44cc0d44",
      "instance_count" : 1
    } ]
  } ]
}
```

Status Codes

Status Code	Description
200	Service update logs

Error Codes

See [Error Codes](#).

8.12 Adding a Resource Tag

Function

This API is used to add tags to specified real-time services. If a tag to be added has the same key as an existing tag, the tag will overwrite the existing one.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/services/{resource_id}/tags/create

Table 8-115 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
resource_id	Yes	String	Resource ID (service ID)

Request Parameters

Table 8-116 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Definition: Enter application/json;charset=utf8 . Constraints: N/A Range: N/A Default Value: N/A
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Table 8-117 Request body parameters

Parameter	Mandatory	Type	Description
tags	Yes	Array of TmsTag objects	Definition: TMS tags. Constraints: N/A

Table 8-118 TmsTag

Parameter	Mandatory	Type	Description
key	Yes	String	Definition: Key of a TMS tag. Constraints: The value can contain at most 128 characters and cannot start or end with sys . Only letters, digits, spaces, and special characters ([:/=+-@) are allowed. Range: N/A Default Value: N/A
value	Yes	String	Definition: Value of a TMS tag. Constraints: The value can contain at most 255 characters. Only letters, digits, spaces, and special characters ([:/=+-@) are allowed. Range: N/A Default Value: N/A

Response Parameters

Status code: 204

The tag is added.

Status code: 400

Table 8-119 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A

Parameter	Type	Description
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 8-120** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 8-121** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 8-122** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

The following is an example of how to add tags to a specified service. The TMS tags have been configured by setting the keys to **test** and **model_version**, and setting the corresponding values to **service-gpu** and **0.1**.

```
https://{endpoint}/v1/{project_id}/services/a55eba18-1ebf-4e9a-8229-d2d3b593a3dc/tags/create
{
  "tags": [ {
    "key": "test",
    "value": "service-gpu"
  }, {
    "key": "model_version",
    "value": "0.1"
  } ]
}
```

Example Responses

None

Status Codes

Status Code	Description
204	The tag is added.
400	Invalid parameter
401	Authentication failed.
403	Insufficient permissions
404	Resources not found

Error Codes

See [Error Codes](#).

8.13 Deleting Resource Tags

Function

This API is used to delete tags of a real-time service. Tags can be deleted in batches.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/services/{resource_id}/tags/delete

Table 8-123 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
resource_id	Yes	String	Resource ID, for example, the ID of a real-time service

Request Parameters

Table 8-124 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Definition: Enter <code>application/json;charset=utf8</code> . Constraints: N/A Range: N/A Default Value: N/A
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Table 8-125 Request body parameters

Parameter	Mandatory	Type	Description
tags	Yes	Array of TmsTagForDelete objects	Definition: List of tags to be deleted. Constraints: N/A

Table 8-126 TmsTagForDelete

Parameter	Mandatory	Type	Description
key	Yes	String	Definition: Key of a TMS tag. Constraints: N/A Range: The value allows up to 128 characters, including letters, digits, spaces, and special characters (_.:+=-@). The value cannot start or end with a space or start with sys . Default Value: N/A
value	No	String	Definition: Value of a TMS tag. This parameter is optional. Constraints: N/A Range: The value allows up to 255 characters, including letters, digits, spaces, and special characters (_.:+=-@). Default Value: N/A

Response Parameters

Status code: 204

The tag is deleted.

Status code: 400

Table 8-127 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A

Parameter	Type	Description
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 8-128** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 8-129** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 8-130** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
https://{endpoint}/v1/{project_id}/services/a55eba18-1ebf-4e9a-8229-d2d3b593a3dc/tags/delete
```

```
{
  "tags": [ {
    "key": "dev",
    "value": "dev1"
  } ]
}
```

Example Responses

None

Status Codes

Status Code	Description
204	The tag is deleted.
400	Invalid parameter
401	Authentication failed.
403	Insufficient permissions
404	No resources available.

Error Codes

See [Error Codes](#).

8.14 Obtaining Inference Service Tags

Function

This API is used to obtain inference service tags in the current project. Tags in all workspaces are obtained by default. If you do not have the permission, no tag is returned.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/services/tms/tags

Table 8-131 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 8-132 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A
Content-Type	Yes	String	Definition: Enter application/json;charset=utf8 . Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 8-133 Response body parameters

Parameter	Type	Description
tags	Array of CombineTmsTags objects	Definition: Data structure of merged tags with the same key.

Table 8-134 CombineTmsTags

Parameter	Type	Description
key	String	Definition: Tag key. Range: The value allows up to 128 characters, including letters, digits, spaces, and the following special characters: _ . : = + - @. The value cannot start or end with a space or start with <i>sys</i> .
values	Array of strings	Definition: Merged tag values with the same key.

Status code: 400**Table 8-135** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 8-136** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403

Table 8-137 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

`https://{endpoint}/v1/{project_id}/services/tms/tags`

Example Responses

Status code: 200

All service tags of the project are returned.

```
{
  "tags": [ {
    "key": "model_version",
    "values": [ "0.1", "0.2" ]
  }, {
    "key": "conda_version",
    "values": [ "10.2", "11.0" ]
  } ]
}
```

Status Codes

Status Code	Description
200	All service tags of the project are returned.
400	Invalid parameter
401	Authentication failed.
403	Insufficient permissions

Error Codes

See [Error Codes](#).

8.15 Obtaining an Inference VPC Access Channel

Function

This API is used to obtain an inference VPC access channel.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/internal-channel-info

Table 8-138 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details, see Obtaining a Project ID and Name .

Request Parameters

Table 8-139 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token

Response Parameters

Status code: 200

Table 8-140 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Tracing ID

Table 8-141 Response body parameters

Parameter	Type	Description
dns_domain_name	String	Access domain name displayed in the usage guide and used to add private DNS resolution
vpcep_info	Array of InternalChannel-Detail objects	VPC access channel information

Table 8-142 InternalChannelDetail

Parameter	Type	Description
vpcep_service_id	String	VPCEP service ID of the VPC access channel
vpcep_service_name	String	VPCEP service name of the VPC access channel
service_port	Integer	Port of the VPC access channel

Status code: 401**Table 8-143** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Tracing ID

Table 8-144 Response body parameters

Parameter	Type	Description
error_code	String	Internal service error code.
error_msg	String	Error message.

Example Requests

Obtain the VPC access channel.

```
/v1/b722xxxxxxxxxxxxxxxxxxxxeb4674/internal-channel-info
```

Example Responses

Status code: 200

The inference VPC access channel is returned.

```
{
  "dns_domain_name" : "xxx.xxx.com",
  "vpcep_info" : [ {
    "vpcep_service_id" : "2275xxxx-c96f-4xxx-820c-c7xxxxxa7899",
    "vpcep_service_name" : "cn-nxxxx-x.vpcepname.2275xxxx-c96f-4xxx-820c-c7xxxxxa7899",
    "service_port" : 443
  } ]
}
```

Status code: 401

Authentication failed.

```
{
  "error_code" : "ModelArts.0203",
}
```

```
"error_msg" : "Invalid token."  
}
```

Status Codes

Status Code	Description
200	The inference VPC access channel is returned.
401	Authentication failed.

Error Codes

See [Error Codes](#).

9 Resource Management

9.1 Querying OS Configuration Parameters

Function

This API is used to obtain the configuration parameters of ModelArts OS, such as network CIDR and user resource quota. This API is used when you need to query the network configuration, resource allocation, or system management of ModelArts OS. Before using this API, ensure that you have the permission to access ModelArts OS and the service is running properly. After the query, the configuration parameters are returned for future resource planning and system optimization. If you do not have the required permission, the service is unavailable, or the request parameter is invalid, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/os-user-config

Table 9-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 9-2 Response body parameters

Parameter	Type	Description
networkCidrs	Array of strings	Definition: Network configuration item.
networkQuota	Integer	Definition: Quota of the number of networks that can be created. Range: N/A
poolQuota	Integer	Definition: Quota of the number of resource pools that can be created. Range: N/A
poolHighAvailable	Boolean	Definition: Whether resource pools with high availability can be created in the current environment or region Range • true: supported • false: not supported

Status code: 404

Table 9-3 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/os-user-config
```

Example Responses

Status code: 200

OK.

```
{
  "networkCidrs" : [ "192.168.0.0/24", "172.16.31.0/16" ],
  "networkQuota" : 15,
  "poolQuota" : 15,
  "poolHighAvailable" : true
}
```

Status Codes

Status Code	Description
200	OK.
404	Not Found.

Error Codes

See [Error Codes](#).

9.2 Querying a Plug-in Template

Function

This API is used to obtain details about a specified plug-in template. This API is used when you need to query the configuration, functions, or usage of a specific plug-in template. Before using this API, ensure that the plug-in template exists and you have the required permission. After the query, the details of the specified plug-in template are returned, including the configuration parameters and function description of the template, helping you develop and manage plug-ins. If the plug-in template does not exist or you do not have the access permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/plugintemplates/{plugintemplate_name}

Table 9-4 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
plugintemplate_name	Yes	String	Definition: Plug-in template name. Constraints: N/A Range • gpu-driver: GPU driver plug-in template • npu-driver: NPU driver plug-in template Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 9-5 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: • v1

Parameter	Type	Description
kind	String	Definition: Resource type. Range: • PluginTemplate: plugin template
metadata	PluginTemplateMetadata object	Definition: Metadata of the plugin template.
spec	PluginTemplateSpec object	Definition: Specifications of the plugin template.

Table 9-6 PluginTemplateMetadata

Parameter	Type	Description
name	String	Definition: Name of the plugin template. Range: N/A
annotations	Map<String,String>	Plugin template annotations in the format of key-value pairs.

Table 9-7 PluginTemplateSpec

Parameter	Type	Description
type	String	Plugin template type. Options: • npu-river: NPU driver • gpu-driver: GPU driver
description	String	Definition: Description of the plugin template. Range: N/A
versions	Map<String, PluginTemplateVersionV2 >	Definition: Description of the plugin template version.

Table 9-8 PluginTemplateVersionV2

Parameter	Type	Description
version	String	Version number of the plugin template.
creationtimestamp	String	Creation time.

Parameter	Type	Description
inputs	Object	Plugin installation parameters.
translate	Object	Translation information used by the GUI.
description	String	Version description.
detail	String	Version description.

Status code: 404

Table 9-9 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/plugintemplates/{plugintemplate_name}
```

Example Responses

Status code: 200

OK.

```
{
  "apiVersion": "v1",
  "kind": "PluginTemplate",
  "metadata": {
    "name": "npu-driver"
  },
  "spec": {
    "type": "npuDriver",
    "description": "npu driver",
    "versions": { }
  }
}
```

Status code: 404

Not Found.

```
{
  "error_code": "ModelArts.50005101",
  "error_msg": "Plugintemplate {name} not found."
}
```

Status Codes

Status Code	Description
200	OK.
404	Not Found.

Error Codes

See [Error Codes](#).

9.3 Obtaining Nodes in a Resource Pool

Function

This API is used to obtain the node list of a specified resource pool. This API is used when you need to obtain the details about a resource pool, such as the node distribution, status, or resource usage. Before using this API, ensure that the resource pool has been created and is available, and you have the required permission. After the query, the system returns the detailed information about the nodes in the resource pool, including the node ID, status, and resource usage, helping you manage and optimize resources. If the resource pool does not exist, you do not have the permission to access the resource pool, or the request parameters are invalid, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/pools/{pool_name}/nodes

Table 9-10 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
pool_name	Yes	String	Definition: Resource pool ID. The value is obtained from the metadata.name field in the resource pool details. <i>*Constraints:</i> The value can contain 36 to 63 characters. It must start with a lowercase letter and cannot end with a hyphen (-). Digits and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 9-11 Query Parameters

Parameter	Mandatory	Type	Description
continue	No	String	Definition: Offset parameter of the pagination query Constraints: Optional Range: The value is obtained from the metadata.continue field in the response to the last pagination query. An empty value indicates no offset. Default Value: N/A
limit	No	Integer	Definition: Number of resources returned in a single pagination query Constraints: N/A Range: 0 to 500 Default Value: 500

Request Parameters

None

Response Parameters

Status code: 200

Table 9-12 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: • v2: The current resource version is v2.
kind	String	Definition: Resource type. Range: • NodeList: nodes
metadata	NodeListMetadata object	Definition: Metadata of a node list.
items	Array of Node objects	Definition: Node resource list.

Table 9-13 NodeListMetadata

Parameter	Type	Description
continue	String	Definition: Offset parameter of the pagination query. Range: The value is obtained from the metadata.continue field in the response to the last pagination query. An empty value indicates no offset.
remainingItemCount	Long	Definition: Number of remaining resources in a pagination query. Default Value: N/A

Table 9-14 Node

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: • v2: The current resource version is v2.
kind	String	Definition: Resource type. Range: • Node: node
metadata	Object	Definition: Metadata of a node resource.

Parameter	Type	Description
spec	NodeSpec object	Definition: Specifications of a node resource.
status	NodeStatus object	Definition: Status of a node resource.

Table 9-15 NodeSpec

Parameter	Type	Description
flavor	String	Definition: ID of node resource specifications. Range: N/A
extendParams	Object	Definition: Custom configuration information of a node.
os	Os object	Definition: OS of a node.

Table 9-16 Os

Parameter	Type	Description
name	String	Definition: OS name. Range: N/A
imageld	String	Definition: OS image ID. Range: N/A
imageType	String	Definition: OS image type. Range: private: private image

Table 9-17 NodeStatus

Parameter	Type	Description
phase	String	Definition: Status of a node. Range: • Available: The node is available. • Creating: The node is being created. • Deleting: The node is being deleted. • Abnormal: The node is abnormal. • Checking: The node is performing a self-check.
az	String	Definition: AZ where a node is located. Range: N/A
privatelp	String	Definition: IP address of a node. Range: N/A
resources	NodeResource object	Definition: Resources of a node.
availableResources	NodeResource object	Definition: Available resources of a node.

Table 9-18 NodeResource

Parameter	Type	Description
cpu	String	Definition: Number of CPU cores on a node. Range: N/A
memory	String	Definition: Memory size of a node, in GiB. Range: N/A
nvidia.com/gpu	String	Definition: Number of GPUs on a node. Range: N/A
huawei.com/ascend-snt3	String	Definition: Number of snt3 NPUs on a node. Range: N/A

Parameter	Type	Description
huawei.com/ascend-snt9	String	Definition: Number of snt9 NPUs on a node. Range: N/A

Status code: 404

Table 9-19 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Obtain nodes in a resource pool.

```
GET https://{endpoint}/v2/{project_id}/pools/{pool_name}/nodes
{ }
```

Example Responses

Status code: 200

OK

```
{
  "kind" : "NodeList",
  "apiVersion" : "v2",
  "metadata" : { },
  "items" : [ {
    "kind" : "Node",
    "apiVersion" : "v2",
    "metadata" : {
      "name" : "os-node-created-zlncn",
      "creationTimestamp" : "2022-09-16T05:32:44Z"
    },
    "spec" : {
      "flavor" : "modelarts.vm.cpu.4ud"
    },
    "status" : {
      "phase" : "Available",
      "az" : "cn-north-7c",
      "privateIp" : "192.168.0.1",
      "resources" : {
        "cpu" : "3920m",
        "memory" : "6270Mi"
      },
      "availableResources" : {
        "cpu" : "2970m",
```

```
    "memory" : "4558Mi"
  }
}, {
  "kind" : "Node",
  "apiVersion" : "v2",
  "metadata" : {
    "name" : "os-node-created-4s522",
    "creationTimestamp" : "2022-09-16T03:20:53Z"
  },
  "spec" : {
    "flavor" : "modelarts.vm.cpu.4ud"
  },
  "status" : {
    "phase" : "Available",
    "az" : "cn-north-7c",
    "privateIp" : "192.168.0.2",
    "resources" : {
      "cpu" : "3920m",
      "memory" : "6270Mi"
    },
    "availableResources" : {
      "cpu" : "2970m",
      "memory" : "4558Mi"
    }
  }
}, {
  "kind" : "Node",
  "apiVersion" : "v2",
  "metadata" : {
    "name" : "os-node-created-v7hfj",
    "creationTimestamp" : "2022-09-16T09:16:37Z"
  },
  "spec" : {
    "flavor" : "modelarts.vm.cpu.4ud"
  },
  "status" : {
    "phase" : "Available",
    "az" : "cn-north-7c",
    "privateIp" : "192.168.0.3",
    "resources" : {
      "cpu" : "3920m",
      "memory" : "6270Mi"
    },
    "availableResources" : {
      "cpu" : "3720m",
      "memory" : "5670Mi"
    }
  }
}
}]
}
```

Status code: 404

Not found.

```
{
  "error_code" : "ModelArts.50015001",
  "error_msg" : "pool not found"
}
```

Status Codes

Status Code	Description
200	OK

Status Code	Description
404	Not found.

Error Codes

See [Error Codes](#).

9.4 Deleting nodes in batches

Function

This API is used to delete nodes from a specified resource pool in batches. This API is used when you need to delete redundant nodes, re-allocate resources, or remove faulty nodes from a resource pool. Before using this API, ensure that the resource pool has been created and is available, you have the required permission, and at least one node is retained in the resource pool. After the deletion, the specified nodes are permanently removed, and the remaining nodes in the resource pool continue to work. If the resource pool does not exist, the node does not exist, you do not have the permission to perform the operation, or the number of nodes in the resource pool is insufficient, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/pools/{pool_name}/nodes/batch-delete

Table 9-20 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
pool_name	Yes	String	Definition: Resource pool name. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 9-21 Request body parameters

Parameter	Mandatory	Type	Description
deleteNodeNames	Yes	Array of strings	Definition: List of names of nodes to be deleted. Constraints: N/A

Response Parameters

Status code: 200

OK.

Status code: 404

Table 9-22 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

The following is an example of how to delete nodes in batches.

```
POST /v2/{project_id}/pools/{pool_name}/nodes/batch-delete
{
  "deleteNodeNames" : [ "os-node-created-mnmc" ]
}
```

Example Responses

Status code: 404

Not Found.

```
{
  "error_code" : "ModelArts.50015001",
  "error_msg" : "pool not found"
}
```

Status Codes

Status Code	Description
200	OK.
404	Not Found.

Error Codes

See [Error Codes](#).

9.5 Querying a Trace List

Function

This API is used to obtain the event information recorded in the system. This API is used when you need to query the event records recorded in the system when monitoring the system status, locating faults, or auditing. Before using this API, ensure that you have the required permission and the event records exist in the system. After the query, the API returns the event list, including the event ID, type, time, and description. If you do not have the required permission, the event record does not exist, or the query parameter is incorrect, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/events

Table 9-23 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 9-24 Query Parameters

Parameter	Mandatory	Type	Description
resource	Yes	String	Definition: Type of the resource where the event is generated. The value can be pools , indicating the resource pool. Constraints: N/A Range: N/A Default Value: N/A
name	Yes	String	Definition: Name of the resource where the event is generated. Constraints: N/A Range: N/A Default Value: N/A
limit	No	Integer	Definition: Maximum number of records on each page. If this parameter is left blank or set to 0 , 500 records are returned by default. A maximum of 500 records are allowed on each page. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
continue	No	String	Definition: Marker of the previous page in pagination query. The value is a UUID string. This parameter is left blank when the first page is queried. Constraints: N/A Range: N/A Default Value: N/A
since	No	Integer	Definition: Timestamp of the event start time. Constraints: N/A Range: N/A Default Value: N/A
until	No	Integer	Definition: Timestamp of the event end time. Constraints: N/A Range: N/A Default Value: N/A
type	No	String	Definition: Event type. Constraints: N/A Range • Normal • Warning Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 9-25 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: • v1

Parameter	Type	Description
kind	String	Definition: Resource type. Range: • EventList: event list
metadata	EventListMeta object	Definition: Metadata of the event list.
items	Array of EventModel objects	Definition: Event list.

Table 9-26 EventListMeta

Parameter	Type	Description
continue	String	Definition: Pagination marker. Range: N/A
remainingItemCount	Integer	Definition: Number of remaining records on the current page. Range: N/A

Table 9-27 EventModel

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: • v1
kind	String	Definition: Resource type. Range: • Event: event
type	String	Definition: Event type. Range: • Normal: normal event • Warning: abnormal event
firstTimestamp	String	Definition: Time when an event occurs for the first time. Range: N/A

Parameter	Type	Description
lastTimestamp	String	Definition: Time when an event occurs for the last time. Range: N/A
count	Integer	Definition: Number of consecutive occurrences of an event. Range: N/A
reason	String	Definition: Cause of an event. Range: N/A
message	String	Definition: Event details. Range: N/A

Status code: 400

Table 9-28 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404

Table 9-29 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

This interface is used to query the trace list of resource pool pool-6f5da086876d4cd084d36f8bd3346036 by page.

```
/v1/{project_id}/events?  
resource=pools&name=pool-6f5da086876d4cd084d36f8bd3346036&limit=5&continue=cde36780-1120-4753  
-bf75-0edb9ebd5a9e
```

```
{ }
```

Example Responses

Status code: 200

OK.

```
{
  "kind" : "EventList",
  "apiVersion" : "v1",
  "metadata" : {
    "continue" : "52eddc13-cfad-42d3-ae4-92fea5813e7f"
  },
  "items" : [ {
    "kind" : "Event",
    "apiVersion" : "v1",
    "type" : "Warning",
    "firstTimestamp" : "2022-12-30T02:16:19Z",
    "lastTimestamp" : "2022-12-30T02:16:19Z",
    "count" : 1,
    "reason" : "PoolResourcesStatusChange",
    "message" : "Pool resources status changed, available/abnormal/creating/deleting count from 1/0/0/0 to 0/1/0/0, timestamp: 1672366579."
  }, {
    "kind" : "Event",
    "apiVersion" : "v1",
    "type" : "Normal",
    "firstTimestamp" : "2023-01-02T09:02:45Z",
    "lastTimestamp" : "2023-01-02T09:02:45Z",
    "count" : 1,
    "reason" : "PoolResourcesStatusChange",
    "message" : "Pool resources status changed, available/abnormal/creating/deleting count from 0/1/0/0 to 1/0/0/0, timestamp: 1672650165."
  }, {
    "kind" : "Event",
    "apiVersion" : "v1",
    "type" : "Warning",
    "firstTimestamp" : "2023-01-16T06:55:35Z",
    "lastTimestamp" : "2023-01-16T06:55:35Z",
    "count" : 1,
    "reason" : "PoolStatusChange",
    "message" : "Pool status changed, from Running to Abnormal, details: ."
  }, {
    "kind" : "Event",
    "apiVersion" : "v1",
    "type" : "Warning",
    "firstTimestamp" : "2023-01-16T06:57:51Z",
    "lastTimestamp" : "2023-01-16T06:57:51Z",
    "count" : 1,
    "reason" : "PoolResourcesStatusChange",
    "message" : "Pool resources status changed, available/abnormal/creating/deleting count from 1/0/0/0 to 0/1/0/0, timestamp: 1673852271."
  }, {
    "kind" : "Event",
    "apiVersion" : "v1",
    "type" : "Normal",
    "firstTimestamp" : "2023-01-29T02:29:04Z",
    "lastTimestamp" : "2023-01-29T02:29:04Z",
    "count" : 1,
    "reason" : "PoolStatusChange",
    "message" : "Pool status changed, from Abnormal to Running."
  } ]
}
```

Status code: 400

Bad Request.


```
{
  "error_code" : "ModelArts.50004000",
  "error_msg" : "Bad request."
}
```

Status code: 404

Not Found.

```
{
  "error_code" : "ModelArts.50015001",
  "error_msg" : "Pool {name} not found."
}
```

Status Codes

Status Code	Description
200	OK.
400	Bad Request.
404	Not Found.

Error Codes

See [Error Codes](#).

9.6 Creating Network Resources

Function

This API is used to create network resources in a system. This API is used when you need to create network resources, such as virtual networks, subnets, or routes, when you need to expand services, plan resources, or adjust the network architecture. Before using this API, ensure that you have the administrator permission and the system has sufficient resources to create network resources. After the creation, the network resources will be added to the system for future service configurations. If you do not have the required permission, the resources are insufficient, or the input parameter is incorrect, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/networks

Table 9-30 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 9-31 Request body parameters

Parameter	Mandatory	Type	Description
apiVersion	Yes	String	Definition: API version. Constraints: N/A Range: • v1 Default Value: N/A
kind	Yes	String	Definition: Resource type. Constraints: N/A Range: • Network Default Value: N/A
metadata	Yes	NetworkMetadataCreation object	Definition: Metadata of a network resource. Constraints: N/A
spec	Yes	NetworkSpec object	Definition: Description of a network resource. Constraints: N/A

Table 9-32 NetworkMetadataCreation

Parameter	Mandatory	Type	Description
labels	Yes	NetworkMetadataLabels object	Definition: Network resource tags. Constraints: N/A

Table 9-33 NetworkMetadataLabels

Parameter	Mandatory	Type	Description
os.modelarts/ name	Yes	String	Definition: Displayed name of a resource pool. <i>*Range:</i> The value can contain 4 to 32 characters. It must start with a lowercase letter and cannot end with a hyphen (-). Digits and hyphens (-) are allowed.
os.modelarts/ workspace.id	No	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc) Range: N/A

Table 9-34 NetworkSpec

Parameter	Mandatory	Type	Description
cidr	Yes	String	Definition: CIDR value of a network. Range • 172.16.0.0/12 to 172.16.0.0/24 • 192.168.0.0/16 to 192.168.0.0/24
connection	No	NetworkConnection object	Definition: Connection information between the current network and other resources.

Table 9-35 NetworkConnection

Parameter	Mandatory	Type	Description
peerConnectionList	No	Array of objects	Definition: Peering connections.

Response Parameters

Status code: 200

Table 9-36 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: v1: The current resource version is v1.
kind	String	Definition: Resource type. Range: Network
metadata	NetworkMetadata object	Definition: Metadata of a network resource.
spec	NetworkSpec object	Definition: Specifications of a network resource.
status	NetworkStatus object	Definition: Status of a network resource.

Table 9-37 NetworkMetadata

Parameter	Type	Description
name	String	Definition: Network resource ID. Range: N/A
creationTimestamp	String	Definition: Network creation time. For example, 2025-11-01T03:49:41Z . Range: N/A
labels	NetworkMetadataLabels object	Definition: Network labels.
annotations	NetworkMetadataAnnotations object	Definition: Network annotations.

Table 9-38 NetworkMetadataLabels

Parameter	Type	Description
os.modelarts/ name	String	Definition: Displayed name of a resource pool. <i>*Range:</i> The value can contain 4 to 32 characters. It must start with a lowercase letter and cannot end with a hyphen (-). Digits and hyphens (-) are allowed.
os.modelarts/ workspace.id	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc) Range: N/A

Table 9-39 NetworkMetadataAnnotations

Parameter	Type	Description
os.modelarts/ description	String	Definition: Network description. Range: The value cannot contain these characters: !<>=&'".

Table 9-40 NetworkSpec

Parameter	Type	Description
cidr	String	Definition: CIDR value of a network. Range • 172.16.0.0/12 to 172.16.0.0/24 • 192.168.0.0/16 to 192.168.0.0/24
connection	NetworkConnection object	Definition: Connection information between the current network and other resources.

Table 9-41 NetworkConnection

Parameter	Type	Description
peerConnectionList	Array of objects	Definition: Peering connections.

Table 9-42 NetworkStatus

Parameter	Type	Description
phase	String	Definition: Current status of a network resource. Range: • Creating: The network is being created. • Active: The network is functional. • Abnormal: The network is abnormal.
connectionStatus	NetworkConnect ionStatus object	Definition: Connection status between the network and other cloud services.

Table 9-43 NetworkConnectionStatus

Parameter	Type	Description
peerConnectionSt atus	Array of PeerConnectionS tatus objects	Definition: Status of peering connections.
sfsTurboStatus	Array of SfsTurboConnecti onStatus objects	Definition: Status of SFS Turbo accessible to the network.

Table 9-44 PeerConnectionStatus

Parameter	Type	Description
peerVpcId	String	Definition: VPC ID of the peer end. Range: N/A
peerSubnetId	String	Definition: Subnet ID of the peer end. Range: N/A
defaultGateWay	Boolean	Definition: Specifies whether to create a default route. Range: false (default value, indicating that no default route is created)

Parameter	Type	Description
phase	String	Definition: Connection status of the network. Range: • Connecting: The network is being connected. • Active: The network is connected properly. • Abnormal: The network connection is abnormal.

Table 9-45 SfsTurboConnectionStatus

Parameter	Type	Description
name	String	Definition: Name of the SFS Turbo instance. Range: N/A
sfsId	String	Definition: ID of the SFS Turbo instance. Range: N/A
connectionType	String	Definition: association mode. Range: • VpcPort: passthrough through attached NICs • Peering: connection through VPC peering
ipAddr	String	Definition: Access address of SFS Turbo. Range: N/A
status	String	Definition: Connection status of SFS Turbo. Range: • Active: The SFS connection is normal. • Abnormal: The SFS connection is abnormal. • Creating: The SFS connection is being set up. • Deleting: The SFS connection is being deleted.

Status code: 400**Table 9-46** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

The following is an example of how to create a network whose resource type is **Network**, network name is **network-7a03**, and CIDR block is **192.168.128.0/17**.

```
POST {endpoint}/v1/{project_id}/networks

{
  "apiVersion": "v1",
  "kind": "Network",
  "metadata": {
    "labels": {
      "os.modelarts/name": "network-7a03",
      "os.modelarts/workspace.id": "0"
    }
  },
  "spec": {
    "cidr": "192.168.128.0/17"
  }
}
```

Example Responses

Status code: 200

OK

```
{
  "kind": "Network",
  "apiVersion": "v1",
  "metadata": {
    "name": "network-7a03-86c13962597848eeb29c5861153a391f",
    "creationTimestamp": "2022-09-16T09:44:59Z",
    "labels": {
      "os.modelarts/name": "network-7a03",
      "os.modelarts/workspace.id": "0"
    },
    "annotations": { }
  },
  "spec": {
    "cidr": "192.168.128.0/17",
    "connection": { }
  },
  "status": {
    "phase": ""
  }
}
```

Status code: 400

Bad request.

```
{
  "error_code" : "ModelArts.50004000",
  "error_msg" : "Bad request."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad request.

Error Codes

See [Error Codes](#).

9.7 Obtaining Network Resources

Function

This API is used to obtain information about created network resources in the system. This API is used when you need to query the network resource list recorded in the system when monitoring network status, planning resources, locating network faults, or auditing. Before using this API, ensure that you have the required permission and the network resources exist in the system. After the query, the API returns the network resource list, including the resource ID, type, status, and creation time. If you do not have the required permission, the network resources do not exist in the system, or the query parameter is incorrect, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/networks

Table 9-47 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 9-48 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Definition: Number of resources returned in a single pagination query Constraints: N/A Range: 0 to 500 Default Value: 500
continue	No	String	Definition: Offset parameter of the pagination query. The value is obtained from the metadata.continue field in the response to the last pagination query. An empty value indicates no offset. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 9-49 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: • v1: The current resource version is v1.
kind	String	Definition: Resource type. Range: • NetworkList: networks
metadata	NetworkListMetadata object	Definition: Metadata of network resources.
items	Array of Network objects	Definition: Network resource list.

Table 9-50 NetworkListMetadata

Parameter	Type	Description
continue	String	Definition: Next query position in pagination query. Range: N/A
remainingItemCount	Integer	Definition: Number of remaining resources. Range: N/A

Table 9-51 Network

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: • v1: The current resource version is v1.
kind	String	Definition: Resource type. Range: • Network
metadata	NetworkMetadata object	Definition: Metadata of a network resource.
spec	NetworkSpec object	Definition: Specifications of a network resource.

Parameter	Type	Description
status	NetworkStatus object	Definition: Status of a network resource.

Table 9-52 NetworkMetadata

Parameter	Type	Description
name	String	Definition: Network resource ID. Range: N/A
creationTimestamp	String	Definition: Network creation time. For example, 2025-11-01T03:49:41Z . Range: N/A
labels	NetworkMetadataLabels object	Definition: Network labels.
annotations	NetworkMetadataAnnotations object	Definition: Network annotations.

Table 9-53 NetworkMetadataLabels

Parameter	Type	Description
os.modelarts/name	String	Definition: Displayed name of a resource pool. <i>*Range:</i> The value can contain 4 to 32 characters. It must start with a lowercase letter and cannot end with a hyphen (-). Digits and hyphens (-) are allowed.
os.modelarts/workspace.id	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc) Range: N/A

Table 9-54 NetworkMetadataAnnotations

Parameter	Type	Description
os.modelarts/ description	String	Definition: Network description. Range: The value cannot contain these characters: !<>=&"".

Table 9-55 NetworkSpec

Parameter	Type	Description
cidr	String	Definition: CIDR value of a network. Range • 172.16.0.0/12 to 172.16.0.0/24 • 192.168.0.0/16 to 192.168.0.0/24
connection	NetworkConnection object	Definition: Connection information between the current network and other resources.

Table 9-56 NetworkConnection

Parameter	Type	Description
peerConnectionList	Array of objects	Definition: Peering connections.

Table 9-57 NetworkStatus

Parameter	Type	Description
phase	String	Definition: Current status of a network resource. Range: • Creating: The network is being created. • Active: The network is functional. • Abnormal: The network is abnormal.
connectionStatus	NetworkConnectionStatus object	Definition: Connection status between the network and other cloud services.

Table 9-58 NetworkConnectionStatus

Parameter	Type	Description
peerConnectionStatus	Array of PeerConnectionStatus objects	Definition: Status of peering connections.
sfsTurboStatus	Array of SfsTurboConnectionStatus objects	Definition: Status of SFS Turbo accessible to the network.

Table 9-59 PeerConnectionStatus

Parameter	Type	Description
peerVpcId	String	Definition: VPC ID of the peer end. Range: N/A
peerSubnetId	String	Definition: Subnet ID of the peer end. Range: N/A
defaultGateWay	Boolean	Definition: Specifies whether to create a default route. Range: false (default value, indicating that no default route is created)
phase	String	Definition: Connection status of the network. Range: • Connecting: The network is being connected. • Active: The network is connected properly. • Abnormal: The network connection is abnormal.

Table 9-60 SfsTurboConnectionStatus

Parameter	Type	Description
name	String	Definition: Name of the SFS Turbo instance. Range: N/A
sfsId	String	Definition: ID of the SFS Turbo instance. Range: N/A

Parameter	Type	Description
connectionType	String	Definition: association mode. Range: • VpcPort: passthrough through attached NICs • Peering: connection through VPC peering
ipAddr	String	Definition: Access address of SFS Turbo. Range: N/A
status	String	Definition: Connection status of SFS Turbo. Range: • Active: The SFS connection is normal. • Abnormal: The SFS connection is abnormal. • Creating: The SFS connection is being set up. • Deleting: The SFS connection is being deleted.

Example Requests

Obtain resource pools.

```
GET https://{endpoint}/v2/{project_id}/networks
{ }
```

Example Responses

Status code: 200

OK

```
{
  "kind" : "NetworkList",
  "apiVersion" : "v1",
  "metadata" : { },
  "items" : [ {
    "kind" : "Network",
    "apiVersion" : "v1",
    "metadata" : {
      "name" : "network-7a03-86c13962597848eeb29c5861153a391f",
      "creationTimestamp" : "2022-09-16T09:44:59Z",
      "labels" : {
        "os.modelarts/name" : "network-7a03",
        "os.modelarts/workspace.id" : "0"
      },
      "annotations" : { }
    },
  },
}
```

```
"spec" : {  
  "cidr" : "192.168.128.0/17",  
  "connection" : { }  
},  
"status" : {  
  "phase" : "Active",  
  "connectionStatus" : { }  
}  
}]  
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

9.8 Obtaining a Network Resource

Function

This API is used to obtain the details of a specified network resource. This API is used when you need to query details about a specified network resource, such as its configuration, status, or attributes. Before using this API, ensure that you have the required permission and the specified network resource exists in the system. After the query, the API returns the details of the specified network resource, including the resource ID, type, status, and configuration parameters. If the specified network resource does not exist, you do not have the operation permission, or the input parameters are incorrect, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/networks/{network_name}

Table 9-61 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
network_name	Yes	String	Definition: Network ID. The value is obtained from the metadata.name field in the network details. <i>*Constraints.</i> The value can contain 36 to 63 characters. It must start with a lowercase letter and cannot end with a hyphen (-). Digits and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 9-62 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: v1: The current resource version is v1.
kind	String	Definition: Resource type. Range: Network
metadata	NetworkMetadata object	Definition: Metadata of a network resource.

Parameter	Type	Description
spec	NetworkSpec object	Definition: Specifications of a network resource.
status	NetworkStatus object	Definition: Status of a network resource.

Table 9-63 NetworkMetadata

Parameter	Type	Description
name	String	Definition: Network resource ID. Range: N/A
creationTimestamp	String	Definition: Network creation time. For example, 2025-11-01T03:49:41Z . Range: N/A
labels	NetworkMetadataLabels object	Definition: Network labels.
annotations	NetworkMetadataAnnotations object	Definition: Network annotations.

Table 9-64 NetworkMetadataLabels

Parameter	Type	Description
os.modelarts/name	String	Definition: Displayed name of a resource pool. <i>*Range:</i> The value can contain 4 to 32 characters. It must start with a lowercase letter and cannot end with a hyphen (-). Digits and hyphens (-) are allowed.
os.modelarts/workspace.id	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc) Range: N/A

Table 9-65 NetworkMetadataAnnotations

Parameter	Type	Description
os.modelarts/ description	String	Definition: Network description. Range: The value cannot contain these characters: !<>=&"".

Table 9-66 NetworkSpec

Parameter	Type	Description
cidr	String	Definition: CIDR value of a network. Range • 172.16.0.0/12 to 172.16.0.0/24 • 192.168.0.0/16 to 192.168.0.0/24
connection	NetworkConnection object	Definition: Connection information between the current network and other resources.

Table 9-67 NetworkConnection

Parameter	Type	Description
peerConnectionList	Array of objects	Definition: Peering connections.

Table 9-68 NetworkStatus

Parameter	Type	Description
phase	String	Definition: Current status of a network resource. Range: • Creating: The network is being created. • Active: The network is functional. • Abnormal: The network is abnormal.
connectionStatus	NetworkConnectionStatus object	Definition: Connection status between the network and other cloud services.

Table 9-69 NetworkConnectionStatus

Parameter	Type	Description
peerConnectionStatus	Array of PeerConnectionStatus objects	Definition: Status of peering connections.
sfsTurboStatus	Array of SfsTurboConnectionStatus objects	Definition: Status of SFS Turbo accessible to the network.

Table 9-70 PeerConnectionStatus

Parameter	Type	Description
peerVpcId	String	Definition: VPC ID of the peer end. Range: N/A
peerSubnetId	String	Definition: Subnet ID of the peer end. Range: N/A
defaultGateWay	Boolean	Definition: Specifies whether to create a default route. Range: false (default value, indicating that no default route is created)
phase	String	Definition: Connection status of the network. Range: • Connecting: The network is being connected. • Active: The network is connected properly. • Abnormal: The network connection is abnormal.

Table 9-71 SfsTurboConnectionStatus

Parameter	Type	Description
name	String	Definition: Name of the SFS Turbo instance. Range: N/A
sfsId	String	Definition: ID of the SFS Turbo instance. Range: N/A

Parameter	Type	Description
connectionType	String	Definition: association mode. Range: • VpcPort: passthrough through attached NICs • Peering: connection through VPC peering
ipAddr	String	Definition: Access address of SFS Turbo. Range: N/A
status	String	Definition: Connection status of SFS Turbo. Range: • Active: The SFS connection is normal. • Abnormal: The SFS connection is abnormal. • Creating: The SFS connection is being set up. • Deleting: The SFS connection is being deleted.

Status code: 404

Table 9-72 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Obtain details about a network.

```
GET https://{endpoint}/v1/{project_id}/networks/{network_name}
{ }
```

Example Responses

Status code: 200

OK

```
{
  "kind": "Network",
  "apiVersion": "v1",
  "metadata": {
    "name": "network-7a03-86c13962597848eeb29c5861153a391f",
    "creationTimestamp": "2022-09-16T09:44:59Z",
    "labels": {
      "os.modelarts/name": "network-7a03",
      "os.modelarts/workspace.id": "0"
    },
    "annotations": { }
  },
  "spec": {
    "cidr": "192.168.128.0/17",
    "connection": { }
  },
  "status": {
    "phase": "Active",
    "connectionStatus": { }
  }
}
```

Status code: 404

Not found.

```
{
  "error_code": "ModelArts.50025001",
  "error_msg": "Network not exist."
}
```

Status Codes

Status Code	Description
200	OK
404	Not found.

Error Codes

See [Error Codes](#).

9.9 Deleting a Network Resource

Function

This API is used to remove specified network resources. This API is used when you need to delete a specified network resource when the network resource is no longer required, the configuration is incorrect, or resources need to be cleared. Before using this API, ensure that the network resource exists and you have the administrator permissions. After the deletion, the specified network resource is permanently removed, and related configurations and associations are cleared. If the specified network resource does not exist, you do not have the operation

permission, or the resource is depended on by other resources, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/networks/{network_name}

Table 9-73 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
network_name	Yes	String	Definition: Network resource name. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 9-74 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: v1: The current resource version is v1.

Parameter	Type	Description
kind	String	Definition: Resource type. Range: • Network
metadata	NetworkMetadata object	Definition: Metadata of a network resource.
spec	NetworkSpec object	Definition: Specifications of a network resource.
status	NetworkStatus object	Definition: Status of a network resource.

Table 9-75 NetworkMetadata

Parameter	Type	Description
name	String	Definition: Network resource ID. Range: N/A
creationTimestamp	String	Definition: Network creation time. For example, 2025-11-01T03:49:41Z . Range: N/A
labels	NetworkMetadataLabels object	Definition: Network labels.
annotations	NetworkMetadataAnnotations object	Definition: Network annotations.

Table 9-76 NetworkMetadataLabels

Parameter	Type	Description
os.modelarts/name	String	Definition: Displayed name of a resource pool. <i>*Range:</i> The value can contain 4 to 32 characters. It must start with a lowercase letter and cannot end with a hyphen (-). Digits and hyphens (-) are allowed.

Parameter	Type	Description
os.modelarts/ workspace.id	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc) Range: N/A

Table 9-77 NetworkMetadataAnnotations

Parameter	Type	Description
os.modelarts/ description	String	Definition: Network description. Range: The value cannot contain these characters: !<>=&".

Table 9-78 NetworkSpec

Parameter	Type	Description
cidr	String	Definition: CIDR value of a network. Range 172.16.0.0/12 to 172.16.0.0/24 192.168.0.0/16 to 192.168.0.0/24
connection	NetworkConnection object	Definition: Connection information between the current network and other resources.

Table 9-79 NetworkConnection

Parameter	Type	Description
peerConnectionList	Array of objects	Definition: Peering connections.

Table 9-80 NetworkStatus

Parameter	Type	Description
phase	String	Definition: Current status of a network resource. Range: • Creating: The network is being created. • Active: The network is functional. • Abnormal: The network is abnormal.
connectionStatus	NetworkConnect ionStatus object	Definition: Connection status between the network and other cloud services.

Table 9-81 NetworkConnectionStatus

Parameter	Type	Description
peerConnectionSt atus	Array of PeerConnectionS tatus objects	Definition: Status of peering connections.
sfsTurboStatus	Array of SfsTurboConnecti onStatus objects	Definition: Status of SFS Turbo accessible to the network.

Table 9-82 PeerConnectionStatus

Parameter	Type	Description
peerVpcId	String	Definition: VPC ID of the peer end. Range: N/A
peerSubnetId	String	Definition: Subnet ID of the peer end. Range: N/A
defaultGateWay	Boolean	Definition: Specifies whether to create a default route. Range: false (default value, indicating that no default route is created)

Parameter	Type	Description
phase	String	Definition: Connection status of the network. Range: • Connecting: The network is being connected. • Active: The network is connected properly. • Abnormal: The network connection is abnormal.

Table 9-83 SfsTurboConnectionStatus

Parameter	Type	Description
name	String	Definition: Name of the SFS Turbo instance. Range: N/A
sfsId	String	Definition: ID of the SFS Turbo instance. Range: N/A
connectionType	String	Definition: association mode. Range: • VpcPort: passthrough through attached NICs • Peering: connection through VPC peering
ipAddr	String	Definition: Access address of SFS Turbo. Range: N/A
status	String	Definition: Connection status of SFS Turbo. Range: • Active: The SFS connection is normal. • Abnormal: The SFS connection is abnormal. • Creating: The SFS connection is being set up. • Deleting: The SFS connection is being deleted.

Status code: 404**Table 9-84** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Delete a network.

```
DELETE https://{endpoint}/v1/{project_id}/networks/{network_name}
{ }
```

Example Responses**Status code: 200**

OK

```
{
  "kind": "Network",
  "apiVersion": "v1",
  "metadata": {
    "name": "network-7a03-86c13962597848eeb29c5861153a391f",
    "creationTimestamp": "2022-09-16T09:44:59Z",
    "deletionTimestamp": "2022-09-16T10:06:27Z",
    "labels": {
      "os.modelarts/name": "network-7a03",
      "os.modelarts/workspace.id": "0"
    },
    "annotations": { }
  },
  "spec": {
    "cidr": "192.168.128.0/17",
    "connection": {
      "peerConnectionList": [ {
        "peerVpcId": "03e4f4d7-fc62-409b-9c52-df885525e30b",
        "peerSubnetId": "42aeebc3-f7c7-45aa-b884-e6e9ac2f841d",
        "defaultGateWay": false
      } ]
    }
  },
  "status": {
    "phase": "Active",
    "connectionStatus": {
      "peerConnectionStatus": [ {
        "peerVpcId": "03e4f4d7-fc62-409b-9c52-df885525e30b",
        "peerSubnetId": "42aeebc3-f7c7-45aa-b884-e6e9ac2f841d",
        "defaultGateWay": false,
        "phase": "Active"
      } ]
    }
  }
}
```

Status code: 404

Not found.

```
{
  "error_code" : "ModelArts.50025001",
  "error_msg" : "Network not exist."
}
```

Status Codes

Status Code	Description
200	OK
404	Not found.

Error Codes

See [Error Codes](#).

9.10 Updating a Network Resource

Function

This API is used to update the configuration information of a specified network resource. This API is used when you need to update the details of a specified network resource, such as adjusting attributes, fixing configuration errors, or optimizing resource settings. Before using this API, ensure that the network resource exists and you have the administrator permissions. After the update, the configuration information of the specified network resource is modified, and the latest resource status and attributes are displayed. If the specified network resource does not exist, you do not have the operation permission, or the input parameters are incorrect, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PATCH /v1/{project_id}/networks/{network_name}

Table 9-85 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
network_name	Yes	String	Definition: Network resource name. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 9-86 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Message body type (format). Options: • application/merge-patch+json

Table 9-87 Request body parameters

Parameter	Mandatory	Type	Description
metadata	No	NetworkMetadataUpdate object	Definition: Metadata update information of the network resource. Constraints: N/A
spec	No	NetworkSpecUpdate object	Definition: Description update information of the network resource. Constraints: N/A

Table 9-88 NetworkMetadataUpdate

Parameter	Mandatory	Type	Description
annotations	No	NetworkMetadataAnnotations object	Definition: Resource annotations. Constraints: N/A

Table 9-89 NetworkMetadataAnnotations

Parameter	Mandatory	Type	Description
os.modelarts/ description	No	String	Definition: Network description. Range: The value cannot contain these characters: ! <>=&"".

Table 9-90 NetworkSpecUpdate

Parameter	Mandatory	Type	Description
connection	No	NetworkConnection object	Definition: Network connection update information. Constraints: N/A

Table 9-91 NetworkConnection

Parameter	Mandatory	Type	Description
peerConnectionList	No	Array of objects	Definition: Peering connections.

Response Parameters

Status code: 200

Table 9-92 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: • v1: The current resource version is v1.
kind	String	Definition: Resource type. Range: • Network
metadata	NetworkMetadata object	Definition: Metadata of a network resource.
spec	NetworkSpec object	Definition: Specifications of a network resource.
status	NetworkStatus object	Definition: Status of a network resource.

Table 9-93 NetworkMetadata

Parameter	Type	Description
name	String	Definition: Network resource ID. Range: N/A
creationTimestamp	String	Definition: Network creation time. For example, 2025-11-01T03:49:41Z . Range: N/A
labels	NetworkMetadataLabels object	Definition: Network labels.
annotations	NetworkMetadataAnnotations object	Definition: Network annotations.

Table 9-94 NetworkMetadataLabels

Parameter	Type	Description
os.modelarts/ name	String	Definition: Displayed name of a resource pool. <i>*Range:</i> The value can contain 4 to 32 characters. It must start with a lowercase letter and cannot end with a hyphen (-). Digits and hyphens (-) are allowed.
os.modelarts/ workspace.id	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc) Range: N/A

Table 9-95 NetworkMetadataAnnotations

Parameter	Type	Description
os.modelarts/ description	String	Definition: Network description. Range: The value cannot contain these characters: !<>=&".

Table 9-96 NetworkSpec

Parameter	Type	Description
cidr	String	Definition: CIDR value of a network. Range 172.16.0.0/12 to 172.16.0.0/24 192.168.0.0/16 to 192.168.0.0/24
connection	NetworkConnection object	Definition: Connection information between the current network and other resources.

Table 9-97 NetworkConnection

Parameter	Type	Description
peerConnectionList	Array of objects	Definition: Peering connections.

Table 9-98 NetworkStatus

Parameter	Type	Description
phase	String	Definition: Current status of a network resource. Range: • Creating: The network is being created. • Active: The network is functional. • Abnormal: The network is abnormal.
connectionStatus	NetworkConnect ionStatus object	Definition: Connection status between the network and other cloud services.

Table 9-99 NetworkConnectionStatus

Parameter	Type	Description
peerConnectionSt atus	Array of PeerConnectionS tatus objects	Definition: Status of peering connections.
sfsTurboStatus	Array of SfsTurboConnecti onStatus objects	Definition: Status of SFS Turbo accessible to the network.

Table 9-100 PeerConnectionStatus

Parameter	Type	Description
peerVpcId	String	Definition: VPC ID of the peer end. Range: N/A
peerSubnetId	String	Definition: Subnet ID of the peer end. Range: N/A
defaultGateWay	Boolean	Definition: Specifies whether to create a default route. Range: false (default value, indicating that no default route is created)

Parameter	Type	Description
phase	String	Definition: Connection status of the network. Range: • Connecting: The network is being connected. • Active: The network is connected properly. • Abnormal: The network connection is abnormal.

Table 9-101 SfsTurboConnectionStatus

Parameter	Type	Description
name	String	Definition: Name of the SFS Turbo instance. Range: N/A
sfsId	String	Definition: ID of the SFS Turbo instance. Range: N/A
connectionType	String	Definition: association mode. Range: • VpcPort: passthrough through attached NICs • Peering: connection through VPC peering
ipAddr	String	Definition: Access address of SFS Turbo. Range: N/A
status	String	Definition: Connection status of SFS Turbo. Range: • Active: The SFS connection is normal. • Abnormal: The SFS connection is abnormal. • Creating: The SFS connection is being set up. • Deleting: The SFS connection is being deleted.

Status code: 400**Table 9-102** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 9-103** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Interconnect with a VPC.

```
PATCH https://{endpoint}/v1/{project_id}/networks/{network_name}
```

```
{
  "spec": {
    "connection": {
      "peerConnectionList": [ {
        "peerVpcId": "03e4f4d7-fc62-409b-9c52-df885525e30b",
        "peerSubnetId": "42aeabc3-f7c7-45aa-b884-e6e9ac2f841d",
        "defaultGateWay": false
      } ]
    }
  }
}
```

Example Responses

Status code: 200

OK

```
{
  "kind": "Network",
  "apiVersion": "v1",
  "metadata": {
    "name": "network-7a03-86c13962597848eeb29c5861153a391f",
    "creationTimestamp": "2022-09-16T09:44:59Z",
    "labels": {
```

```
{
  "os.modelarts/name" : "network-7a03",
  "os.modelarts/workspace.id" : "0"
},
"annotations" : { }
},
"spec" : {
  "cidr" : "192.168.128.0/17",
  "connection" : {
    "peerConnectionList" : [ {
      "peerVpcId" : "03e4f4d7-fc62-409b-9c52-df885525e30b",
      "peerSubnetId" : "42aeebc3-f7c7-45aa-b884-e6e9ac2f841d",
      "defaultGateWay" : false
    } ]
  }
},
"status" : {
  "phase" : "Active",
  "connectionStatus" : { }
}
}
```

Status code: 400

Bad request

```
{
  "error_code" : "ModelArts.50004000",
  "error_msg" : "Bad request."
}
```

Status code: 404

Not found.

```
{
  "error_code" : "ModelArts.50025001",
  "error_msg" : "Network not exist."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad request
404	Not found.

Error Codes

See [Error Codes](#).

9.11 Querying the Real-Time Resource Usage

Function

This API is used to obtain the real-time usage of all resource pools in the current project. This API is used when you need to query the real-time usage of resource

pools when monitoring resource usage, optimizing resources, planning capacity, or troubleshooting faults. The resource usage includes the usage of CPU, memory, and storage resources. Before using this API, ensure that you have the required permission and there is a running resource pool. After the query, the API returns the real-time usage data of the resource pool, including the usage percentage, resource type, and timestamp. If you do not have the required permission, the resource pool does not exist, or the system cannot obtain the real-time data, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/metrics/runtime/pools

Table 9-104 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 9-105 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: Resource version. Range: os.modelarts.xxxxx/v2
kind	String	Definition: Resource type. Range: PoolMetricsList

Parameter	Type	Description
items	Array of MetricsItem objects	Definition: Metric list.

Table 9-106 MetricsItem

Parameter	Type	Description
table	Object	Definition: Resource list.
metadata	ResourceMetrics-Metadata object	Definition: Resource metric metadata.

Table 9-107 ResourceMetricsMetadata

Parameter	Type	Description
name	String	Definition: Name of a resource metric. Range: N/A
labels	Object	Definition: Tags of a resource metric.

Example Requests

GET https://{endpoint}/v2/{project_id}/metrics/runtime/pools

Example Responses

Status code: 200

OK.

```
{
  "apiVersion": "v2",
  "kind": "PoolMetricsList",
  "items": [ {
    "table": {
      "allocated": {
        "value": {
          "cpu": 5,
          "memory": "15548Mi",
          "tnt004": "1073m"
        },
        "timestamp": "2022-03-30T07:09:10Z",
        "window": "1m"
      },
      "capacity": {
        "value": {
          "cpu": 16,
          "memory": "64Gi",
          "tnt004": 2
        },
        "maxValue": {
```

```
{
  "cpu" : 16,
  "memory" : "64Gi",
  "tnt004" : 2
},
"timestamp" : "2022-03-30T07:09:10Z",
"window" : "1m"
}
},
"metadata" : {
  "name" : "hougang-rse-pool"
}
}]
}
```

Status Codes

Status Code	Description
200	OK.

Error Codes

See [Error Codes](#).

9.12 Creating Resource Pools

Function

This API is used to create a resource pool in the system. This API is used when you need to allocate resources for new services, optimize resource management, or isolate resources. You can use this API to create a resource pool to manage compute, storage, and network resources. Before using this API, ensure that you have the administrator permission and the system has sufficient resources to create resource pools. After the creation, the resource pool will be added to the system and be available for future resource allocation and management. If you do not have the required permission, the system resources are insufficient, or the input parameter is incorrect, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/pools

Table 9-108 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 9-109 Request header parameters

Parameter	Mandatory	Type	Description
X-ModelArts-User-ID	No	String	Definition: Tenant ID. If there is a tenant ID, it will be used for workspace authentication. Constraints: N/A Range: N/A Default Value: N/A

Table 9-110 Request body parameters

Parameter	Mandatory	Type	Description
apiVersion	Yes	String	Definition: API version. Constraints: N/A Range: • v2 Default Value: N/A
kind	Yes	String	Definition: Resource type. Constraints: N/A Range: • Pool: resource pool Default Value: N/A
metadata	Yes	PoolMetadataCreation object	Definition: Resource pool metadata. Constraints: N/A

Parameter	Mandatory	Type	Description
spec	No	PoolSpecCreation object	Definition: Resource pool description. Constraints: N/A

Table 9-111 PoolMetadataCreation

Parameter	Mandatory	Type	Description
labels	Yes	PoolLabelsCreation object	Definition: Tags of a resource pool. Constraints: N/A
annotations	No	PoolAnnotationsCreation object	Definition: Comments of a resource pool. Constraints: N/A

Table 9-112 PoolLabelsCreation

Parameter	Mandatory	Type	Description
os.modelarts/ name	Yes	String	Definition: Name of the resource pool specified by you. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ workspace.id	No	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc) Constraints: N/A Range: If no workspace is created, the default value is 0 . If a workspace is created and used, use the actual value. Default Value: N/A
os.modelarts/ node.prefix	No	String	Definition: Prefix of the node name. Constraints: N/A Range: N/A Default Value: N/A

Table 9-113 PoolAnnotationsCreation

Parameter	Mandatory	Type	Description
os.modelarts/ description	No	String	Definition: Resource pool description. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ billing.mode	No	String	Definition: Billing mode. Constraints: N/A Range: • 0: pay-per-use • 1: yearly/monthly Default Value: N/A
os.modelarts/ period.num	No	String	Definition: Subscription period on a yearly/monthly basis, for example, 2. This parameter is mandatory when the billing mode is yearly/monthly. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ period.type	No	String	Definition: Subscription type on a yearly/monthly basis. This parameter is mandatory when the billing mode is yearly/monthly. Constraints: N/A Range: • 2: month • 3: year Default Value: N/A
os.modelarts/ auto.renew	No	String	Definition: Specifies whether to automatically renew the subscription. Constraints: N/A Range: • 0: auto-renewal disabled • 1: auto-renewal enabled Default Value: 0

Parameter	Mandatory	Type	Description
os.modelarts/ auto.pay	No	String	Definition: Specifies whether to automatically pay for the subscription. This parameter is only valid when you purchase a yearly/monthly resource. Constraints: N/A Range: • true: automatic payment • false: manual payment (default value) Default Value: N/A
os.modelarts/ promotion.info	No	String	Definition: Discount selected on CBC. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ service.console.url	No	String	Definition: URL of the page displayed after the subscription order is paid. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ order.id	No	String	Definition: Order ID, which is mandatory for creating a yearly/monthly resource pool or changing the billing mode. Constraints: N/A Range: N/A Default Value: N/A

Table 9-114 PoolSpecCreation

Parameter	Mandatory	Type	Description
type	Yes	String	Definition: Resource pool type. Constraints: N/A Range: • Dedicate: physical resource pool, which uses a separate network and supports network connection, custom drivers, and custom job types. • Logical: logical resource pool. There is no independent network and network connectivity is not supported. Logical resource pools can be created and scaled faster than physical resource pools. Default Value: N/A
scope	Yes	Array of strings	Definition: Job types supported by a resource pool. Constraints: N/A Range: Select at least one type when you create a standard resource pool. All options are supported by physical resource pools. Options: • Train: training job • Infer: inference job • Notebook: notebook job Default Value: N/A
resources	Yes	Array of PoolResource Flavor objects	Definition: Resource specifications in a resource pool, including resource specifications and the number of resources for each specification. Constraints: N/A

Parameter	Mandatory	Type	Description
network	Yes	network object	Definition: Network parameters of a resource pool. This parameter is mandatory when you create a physical resource pool. Constraints: N/A
jobFlavors	No	Array of strings	Definition: Job specifications supported by a resource pool, which are specified by the job specification name Constraints: N/A
driver	No	PoolDriver object	Definition: Resource pool driver information. Constraints: N/A

Table 9-115 PoolResourceFlavor

Parameter	Mandatory	Type	Description
flavor	Yes	String	Definition: Resource flavor, for example, modelarts.vm.gpu.tnt004 . Constraints: N/A Range: N/A Default Value: N/A
count	Yes	Integer	Definition: Committed resources of the flavor. Constraints: N/A Range: N/A Default Value: N/A
maxCount	No	Integer	Definition: Elastic resources of the flavor. The value must be the same as that of count in the physical pool. Constraints: N/A Range: N/A Default Value: N/A
extendParams	No	extendParams object	Definition: Custom configuration parameters. Constraints: N/A

Parameter	Mandatory	Type	Description
os	No	Os object	Definition: Custom OS image information. Constraints: N/A

Table 9-116 extendParams

Parameter	Mandatory	Type	Description
dockerBaseSize	No	String	Definition: Container engine space of a node in a specified resource pool. The value 0 indicates that the size is not limited. Constraints: N/A Range: N/A Default Value: N/A

Table 9-117 Os

Parameter	Mandatory	Type	Description
name	No	String	Definition: OS name. Range: N/A
imageId	No	String	Definition: OS image ID. Range: N/A
imageType	No	String	Definition: OS image type. Range: • private: private image

Table 9-118 network

Parameter	Mandatory	Type	Description
name	No	String	Definition: Network name, which is the value of metadata.name in the network details. When you create a network with a specified name, the system will automatically create subnets for you. By default, the first subnet will be used. Constraints: N/A Range: N/A Default Value: N/A

Table 9-119 PoolDriver

Parameter	Mandatory	Type	Description
gpuVersion	No	String	Definition: Default GPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains GPU specifications. Range: N/A
npuVersion	No	String	Definition: Default NPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains NPU specifications. Range: N/A
updateStrategy	No	String	Definition: Driver upgrade policy of a resource pool. Range: • force: forcible upgrade. The node drivers are upgraded immediately, which may affect jobs running on the node. • idle: secure upgrade. The drivers are upgraded when no job is running on the node.

Response Parameters

Status code: 200

Table 9-120 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: • v2: The current resource version is v2.
kind	String	Definition: Resource type. Range: • Pool: resource pool
metadata	PoolMetadata object	Definition: Metadata of the resource pool.
spec	PoolSpecModel object	Definition: Specifications of a resource pool.
status	PoolStatus object	Definition: Status of a resource pool.

Table 9-121 PoolMetadata

Parameter	Type	Description
name	String	Definition: Resource pool ID. Range: N/A
creationTimestamp	String	Definition: Time when a resource pool is created. For example, 2025-11-01T03:49:41Z . Range: N/A
labels	PoolMetaLabels object	Definition: Tags of a resource pool.
annotations	PoolMetaAnnotations object	Definition: Comments of a resource pool. Constraints: N/A Range: N/A Default Value: N/A

Table 9-122 PoolMetaLabels

Parameter	Type	Description
os.modelarts/ name	String	Definition: Displayed name of a resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ workspace.id	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc,hk) Constraints: N/A Range: N/A Default Value: 0
os.modelarts/ node.prefix	String	Definition: Custom node prefix. This parameter is optional. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ resource.id	String	Definition: Resource ID used for resource pool billing. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tenant.domain.id	String	Definition: ID of the tenant to which a resource pool belongs. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tenant.project.id	String	Definition: ID of the tenant project that a resource pool belongs to. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ enterprise.project.i d	String	Definition: ID of the enterprise project that a resource pool belongs to. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts.pool/ biz	String	Definition: Business type of a resource pool. The value can be public or private . Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ create-from	String	Definition: Source of a resource pool, for example, admin-console , indicating that the resource pool is created by the administrator on the ModelArts console. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ nobilling	String	Definition: Indicates whether the resource pool is charged. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ order.name	String	Definition: Last order job record associated with the resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ region	String	Definition: Region where the resource pool is located. Constraints: N/A Range: N/A Default Value: N/A

Table 9-123 PoolMetaAnnotations

Parameter	Type	Description
os.modelarts/ description	String	Definition: Resource pool description. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts/ billing.mode	String	Definition: Billing mode. Constraints: N/A Range: • 0: pay-per-use • 1: yearly/monthly Default Value: N/A
os.modelarts/ period.num	String	Definition: Subscription period of a yearly/monthly resource pool. Constraints: This parameter is used together with the os.modelarts/period.type field. Range: N/A Default Value: N/A
os.modelarts/ period.type	String	Definition: Subscription type of a yearly/monthly resource pool. Constraints: This parameter is used together with the os.modelarts/period.num field. Range: • 2: monthly • 3: yearly Default Value: N/A
os.modelarts/ auto.renew	String	Definition: Auto-renewal status of a yearly/monthly resource pool. Constraints: N/A Range: • 0: Auto-renewal is disabled. • 1: Auto-renewal is enabled. Default Value: 0
os.modelarts/ promotion.info	String	Definition: Discount information selected when a yearly/monthly resource pool is purchased. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts/ service.console.url	String	Definition: URL to which you are redirected after the order of a yearly/monthly resource pool is paid. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ order.id	String	Definition: Order ID transferred when a yearly/monthly resource pool is purchased. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ flavor.resource.ids	String	Definition: Resource ID of the resource specifications in a yearly/monthly resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tms.tags	String	Definition: Resource tags of a resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/ scheduler.queue.st ategy	String	Definition: Policy of the resource pool scheduling queue, which is used to define task scheduling rules. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/ subpools.count	String	Definition: Number of logical subpools in a resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tenant.domain.na me	String	Definition: Tenant account of the resource pool. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts.pool/scope.external.dependency.train	String	Definition: External dependency ID of the training job. Constraints: N/A Range: N/A Default Value: N/A

Table 9-124 PoolSpecModel

Parameter	Type	Description
type	String	Definition: Resource pool type. Constraints: N/A Range: • Dedicate: physical resource pool, which uses a separate network and supports network connection, custom drivers, and custom job types. • Logical: logical resource pool. There is no independent network and network connectivity is not supported. Logical resource pools can be created and scaled faster than physical resource pools. Default Value: N/A
scope	Array of strings	Definition: Job types supported by a resource pool.
resources	Array of resources objects	Definition: Resource specifications in a resource pool, including resource specifications and the number of resources for each specification.
containernetwork	containernetworkk object	Kubernetes container network.
network	network object	Definition: Network parameters of a resource pool.
jobFlavors	Array of strings	Definition: Job specifications supported by a resource pool. The value is the job specification name.
driver	PoolDriver object	Definition: Resource pool driver information.

Parameter	Type	Description
controlMode	Integer	Definition: Restriction status of a resource pool. Multiple statuses are allowed. For example, 9 indicates that it is frozen and changing its billing mode to yearly/monthly is restricted. Range: • 0: not restricted • 1: Changing to the yearly/monthly billing is restricted. • 2: Modifying specifications is restricted. • 4: The service is restricted. • 8: The resource pool is frozen. • 16: The resource pool is frozen by the public security department (cannot be unsubscribed).

Table 9-125 resources

Parameter	Type	Description
flavor	String	Definition: Resource flavor ID. Range: N/A
count	Integer	Definition: Number of resource specification instances in a resource pool. Range: N/A
maxCount	Integer	Elastic resource amount of the resource specifications. The value must be the same as that of count in the physical pool.
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the resource specification instances to be created in a resource pool.
extendParams	extendParams object	Definition: Custom parameters of a resource pool.
os	Os object	Definition: OS image information of nodes in a resource pool.
dataVolumes	dataVolumes object	List of custom cloud data disks. The list cannot be modified after being specified.

Parameter	Type	Description
volumeGroupConfigs	volumeGroupConfigs object	Advanced disk configurations.

Table 9-126 extendParams

Parameter	Type	Description
dockerBaseSize	String	Definition: Container engine space of a node created in a resource pool. The value 0 indicates that the size is not limited. Constraints: N/A Range: N/A Default Value: N/A
volumeGroup	String	Disk group name.
runtime	String	Model runtime environment.

Table 9-127 Os

Parameter	Type	Description
name	String	Definition: OS name. Range: N/A
imageId	String	Definition: OS image ID. Range: N/A
imageType	String	Definition: OS image type. Range: • private: private image

Table 9-128 dataVolumes

Parameter	Type	Description
volumeType	String	Disk type.. Options: • SSD: ultra-high I/O disk • GPSSD: general-purpose SSD • SAS: high I/O disk
size	String	Disk size, in GiB.

Parameter	Type	Description
count	String	Number of disks.
extendParams	extendParams object	Custom disk configuration.

Table 9-129 extendParams

Parameter	Type	Description
billing	String	Indicates whether the storage instance is billed. If this parameter is left blank, the storage instance is not billed. This field cannot be specified or modified by users.
volumeGroup	String	Name of a disk group, which is used to divide storage space. Options: • vgpaas: container disk. • default: common data disk, which is mounted in default mode. • vguser{num}: common data disk, which is mounted to a specified path. The group name varies depending on the path, for example, vguser1 and vguser2. • vg-everest-localvolume-persistent: common data disk, which is used as the persistent storage volume. • vg-everest-localvolume-ephemeral: common data disk, which is used as a temporary storage volume.

Table 9-130 volumeGroupConfigs

Parameter	Type	Description
volumeGroup	String	Disk group name. Index of the volume group in the dataVolumes.
dockerThinPool	String	Percentage of container disks to data disks on nodes in a resource pool. This parameter can be specified only when volumeGroup is vgpaas (container disk).

Parameter	Type	Description
lvmConfig	lvmConfig object	LVM configuration management.

Table 9-131 lvmConfig

Parameter	Type	Description
lvType	String	LVM write mode. Options: • linear: linear mode. • striped: striped mode in which multiple disks are used to form a strip to improve disk performance.

Table 9-132 containernetwork

Parameter	Type	Description
mode	String	Container network model. Options: • overlay_l2: an overlay_l2 network (container tunnel network) built for containers by using OpenVSwitch (OVS). • vpc-router: an underlay_l2 network built for containers by using IPvlan and custom VPC routes. • eni: Cloud Native Network 2.0. This model deeply integrates the native ENI capability of VPC, uses the VPC CIDR block to allocate container addresses, and supports passthrough networking. You can use this model when creating a CCE Turbo cluster.

Table 9-133 network

Parameter	Type	Description
name	String	Definition: Network ID. Range: N/A

Table 9-134 PoolDriver

Parameter	Type	Description
gpuVersion	String	Definition: Default GPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains GPU specifications. Range: N/A
npuVersion	String	Definition: Default NPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains NPU specifications. Range: N/A
updateStrategy	String	Definition: Driver upgrade policy of a resource pool. Range: • force: forcible upgrade. The node drivers are upgraded immediately, which may affect jobs running on the node. • idle: secure upgrade. The drivers are upgraded when no job is running on the node.

Table 9-135 PoolStatus

Parameter	Type	Description
phase	String	Definition: Resource pool status. Range: • Creating: The resource pool is being created. • Running: The resource pool is running. • Abnormal: The resource pool is abnormal. • Deleting: The resource pool is being deleted. • Error: An error occurred in the resource pool.
message	String	Definition: Prompt information about the resource pool status. Range: N/A

Parameter	Type	Description
resources	resources object	Definition: Resource information in different states of the resource pool.
scope	Array of scope objects	Definition: Status of the service type supported by the resource pool.
driver	driver object	Definition: Resource pool driver status.
parent	String	Definition: ID of the parent resource pool to which a resource pool belongs. The physical pool is empty. Range: N/A
root	String	Definition: ID of the root resource pool. Range: N/A
clusters	clusters object	Resource pool cluster information. This parameter is available only for privileged pools.

Table 9-136 resources

Parameter	Type	Description
creating	PoolResourceFlavorCount object	Definition: Resource information in creating states of the resource pool.
available	PoolResourceFlavorCount object	Definition: Resource information in available states of the resource pool.
abnormal	PoolResourceFlavorCount object	Definition: Resource information in abnormal states of the resource pool.
deleting	PoolResourceFlavorCount object	Definition: Resource information in deleting states of the resource pool.

Table 9-137 PoolResourceFlavorCount

Parameter	Type	Description
flavor	String	Definition: Resource flavor ID. Range: N/A
count	Integer	Definition: Number of resource specification instances in a resource pool. Range: N/A

Parameter	Type	Description
maxCount	Integer	Definition: Number of elastic resource specification instances in a resource pool. The value of this parameter in a physical pool is the same as that of count . Range: N/A
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the resource specification instances to be created in a resource pool.
nodePool	String	Definition: Node pool ID. Range: N/A

Table 9-138 PoolNodeAz

Parameter	Type	Description
az	String	Definition: AZ name. Range: N/A
count	Integer	Definition: Number of AZ resource instances. Range: N/A

Table 9-139 scope

Parameter	Type	Description
scopeType	String	Definition: Service type of the resource pool. Range: • Train: training jobs • Infer: inference jobs • Notebook: notebook jobs

Parameter	Type	Description
state	String	Definition: Service type status of the resource pool. Range: • Enabling: The service is being enabled. • Enabled: The service has been enabled. • Disabling: The service is being disabled. • Disabled: The service has been disabled.

Table 9-140 driver

Parameter	Type	Description
gpu	PoolDriverStatus object	Definition: GPU driver status of a resource pool. Range: N/A
npu	PoolDriverStatus object	Definition: NPU driver status of a resource pool. Range: N/A

Table 9-141 PoolDriverStatus

Parameter	Type	Description
version	String	Definition: Current driver version of a resource pool. Range: N/A
state	String	Definition: Current driver status of a resource pool. Range: • Creating: The driver is being installed. • Upgrading: The driver is being upgraded. • Running: The driver is running. • Abnormal: The driver is abnormal.

Table 9-142 clusters

Parameter	Type	Description
name	String	Cluster name.
clusterFlavor	String	Cluster flavor of a standard pool.
type	String	Type of the resource pool cluster.
version	String	Cluster version.
plugins	plugins object	Name of the plugin supported by the cluster.

Table 9-143 plugins

Parameter	Type	Description
name	String	Name of the plugin supported by the cluster.

Status code: 400**Table 9-144** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 409**Table 9-145** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

The following is an example of how to create a dedicated resource pool whose resource type is **Pool**, pool name is **pool-001**, pool type is **Dedicate** (physical resource pool), and supported job type is **Train**.

```
POST https://{endpoint}/v2/{project_id}/pools

{
  "kind": "Pool",
  "apiVersion": "v2",
  "metadata": {
    "labels": {
      "os.modelarts/name": "pool-001",
      "os.modelarts/workspace.id": "0"
    },
    "annotations": {
      "os.modelarts/description": "",
      "os.modelarts/billing.mode": "0"
    }
  },
  "spec": {
    "type": "Dedicate",
    "scope": [ "Train" ],
    "network": {
      "name": "net-0123-86c13962597848eeb29c5861153a391f"
    },
    "resources": [ {
      "flavor": "modelarts.vm.gpu.tnt004",
      "count": 2
    } ],
    "driver": {
      "gpuVersion": "440.31"
    }
  }
}
```

Example Responses

Status code: 400

Bad request

```
{
  "error_code": "ModelArts.50004000",
  "error_msg": "Bad request"
}
```

Status code: 409

Already exists

```
{
  "error_code": "ModelArts.50015000",
  "error_msg": "Pool already exists."
}
```

Status Codes

Status Code	Description
200	OK

Status Code	Description
400	Bad request
409	Already exists

Error Codes

See [Error Codes](#).

9.13 Obtaining Resource Pools

Function

This API is used to obtain information about resource pools created in the system. This API is used when you need to query the resource pool list recorded in the system when monitoring resource pool status, planning resources, managing resource allocation, or auditing. Before using this API, ensure that you have the required permission and the resource pool exists in the system. After the query, the API returns the resource pool list, including the resource pool ID, name, type, status, and resource quota. If you do not have the required permission, the resource pools do not exist in the system, or the query parameter is incorrect, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/pools

Table 9-146 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 9-147 Query Parameters

Parameter	Mandatory	Type	Description
workspaceId	No	String	Definition: Workspace ID.[For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc,hk) If no workspace is created, the default value is 0 . If a workspace is created and used, use the actual value. Constraints: N/A Range: N/A Default Value: 0
labelSelector	No	String	Definition: Resource pool tag filtering Constraints: N/A Range: N/A Default Value: N/A
status	No	String	Definition: Resource pool status Constraints: N/A Range: The options are as follows: • created: The resource pool is successfully created. • failed: The resource pool failed to be created. The failure record is retained for three days. • creating: The resource pool is being created. Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 9-148 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: • v2: The current resource version is v2.
kind	String	Definition: Resource type. Range: • PoolList: Resource pool list.
items	Array of PoolModel objects	Definition: Resource list.

Table 9-149 PoolModel

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: • v2: The current resource version is v2.
kind	String	Definition: Resource type. Range: • Pool: resource pool
metadata	PoolMetadata object	Definition: Metadata of the resource pool.
spec	PoolSpecModel object	Definition: Specifications of a resource pool.
status	PoolStatus object	Definition: Status of a resource pool.

Table 9-150 PoolMetadata

Parameter	Type	Description
name	String	Definition: Resource pool ID. Range: N/A
creationTimestamp	String	Definition: Time when a resource pool is created. For example, 2025-11-01T03:49:41Z . Range: N/A

Parameter	Type	Description
labels	PoolMetaLabels object	Definition: Tags of a resource pool.
annotations	PoolMetaAnnotations object	Definition: Comments of a resource pool. Constraints: N/A Range: N/A Default Value: N/A

Table 9-151 PoolMetaLabels

Parameter	Type	Description
os.modelarts/ name	String	Definition: Displayed name of a resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ workspace.id	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc,hk) Constraints: N/A Range: N/A Default Value: 0
os.modelarts/ node.prefix	String	Definition: Custom node prefix. This parameter is optional. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ resource.id	String	Definition: Resource ID used for resource pool billing. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tenant.domain.id	String	Definition: ID of the tenant to which a resource pool belongs. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts/ tenant.project.id	String	Definition: ID of the tenant project that a resource pool belongs to. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ enterprise.project.id	String	Definition: ID of the enterprise project that a resource pool belongs to. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/ biz	String	Definition: Business type of a resource pool. The value can be public or private . Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ create-from	String	Definition: Source of a resource pool, for example, admin-console , indicating that the resource pool is created by the administrator on the ModelArts console. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ nobilling	String	Definition: Indicates whether the resource pool is charged. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ order.name	String	Definition: Last order job record associated with the resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ region	String	Definition: Region where the resource pool is located. Constraints: N/A Range: N/A Default Value: N/A

Table 9-152 PoolMetaAnnotations

Parameter	Type	Description
os.modelarts/ description	String	Definition: Resource pool description. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ billing.mode	String	Definition: Billing mode. Constraints: N/A Range: • 0: pay-per-use • 1: yearly/monthly Default Value: N/A
os.modelarts/ period.num	String	Definition: Subscription period of a yearly/monthly resource pool. Constraints: This parameter is used together with the os.modelarts/period.type field. Range: N/A Default Value: N/A
os.modelarts/ period.type	String	Definition: Subscription type of a yearly/monthly resource pool. Constraints: This parameter is used together with the os.modelarts/period.num field. Range: • 2: monthly • 3: yearly Default Value: N/A
os.modelarts/ auto.renew	String	Definition: Auto-renewal status of a yearly/monthly resource pool. Constraints: N/A Range: • 0: Auto-renewal is disabled. • 1: Auto-renewal is enabled. Default Value: 0

Parameter	Type	Description
os.modelarts/ promotion.info	String	Definition: Discount information selected when a yearly/monthly resource pool is purchased. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ service.console.url	String	Definition: URL to which you are redirected after the order of a yearly/monthly resource pool is paid. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ order.id	String	Definition: Order ID transferred when a yearly/monthly resource pool is purchased. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ flavor.resource.ids	String	Definition: Resource ID of the resource specifications in a yearly/monthly resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tms.tags	String	Definition: Resource tags of a resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/ scheduler.queue.st ategy	String	Definition: Policy of the resource pool scheduling queue, which is used to define task scheduling rules. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/ subpools.count	String	Definition: Number of logical subpools in a resource pool. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts/ tenant.domain.name	String	Definition: Tenant account of the resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/ scope.external.dependency.train	String	Definition: External dependency ID of the training job. Constraints: N/A Range: N/A Default Value: N/A

Table 9-153 PoolSpecModel

Parameter	Type	Description
type	String	Definition: Resource pool type. Constraints: N/A Range: • Dedicate: physical resource pool, which uses a separate network and supports network connection, custom drivers, and custom job types. • Logical: logical resource pool. There is no independent network and network connectivity is not supported. Logical resource pools can be created and scaled faster than physical resource pools. Default Value: N/A
scope	Array of strings	Definition: Job types supported by a resource pool.
resources	Array of resources objects	Definition: Resource specifications in a resource pool, including resource specifications and the number of resources for each specification.
containernetwork	containernetworkk object	Kubernetes container network.
network	network object	Definition: Network parameters of a resource pool.

Parameter	Type	Description
jobFlavors	Array of strings	Definition: Job specifications supported by a resource pool. The value is the job specification name.
driver	PoolDriver object	Definition: Resource pool driver information.
controlMode	Integer	Definition: Restriction status of a resource pool. Multiple statuses are allowed. For example, 9 indicates that it is frozen and changing its billing mode to yearly/monthly is restricted. Range: • 0: not restricted • 1: Changing to the yearly/monthly billing is restricted. • 2: Modifying specifications is restricted. • 4: The service is restricted. • 8: The resource pool is frozen. • 16: The resource pool is frozen by the public security department (cannot be unsubscribed).

Table 9-154 resources

Parameter	Type	Description
flavor	String	Definition: Resource flavor ID. Range: N/A
count	Integer	Definition: Number of resource specification instances in a resource pool. Range: N/A
maxCount	Integer	Elastic resource amount of the resource specifications. The value must be the same as that of count in the physical pool.
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the resource specification instances to be created in a resource pool.
extendParams	extendParams object	Definition: Custom parameters of a resource pool.

Parameter	Type	Description
os	Os object	Definition: OS image information of nodes in a resource pool.
dataVolumes	dataVolumes object	List of custom cloud data disks. The list cannot be modified after being specified.
volumeGroupConfigs	volumeGroupConfigs object	Advanced disk configurations.

Table 9-155 extendParams

Parameter	Type	Description
dockerBaseSize	String	Definition: Container engine space of a node created in a resource pool. The value 0 indicates that the size is not limited. Constraints: N/A Range: N/A Default Value: N/A
volumeGroup	String	Disk group name.
runtime	String	Model runtime environment.

Table 9-156 Os

Parameter	Type	Description
name	String	Definition: OS name. Range: N/A
imageId	String	Definition: OS image ID. Range: N/A
imageType	String	Definition: OS image type. Range: private: private image

Table 9-157 dataVolumes

Parameter	Type	Description
volumeType	String	Disk type.. Options: • SSD: ultra-high I/O disk • GPSSD: general-purpose SSD • SAS: high I/O disk
size	String	Disk size, in GiB.
count	String	Number of disks.
extendParams	extendParams object	Custom disk configuration.

Table 9-158 extendParams

Parameter	Type	Description
billing	String	Indicates whether the storage instance is billed. If this parameter is left blank, the storage instance is not billed. This field cannot be specified or modified by users.
volumeGroup	String	Name of a disk group, which is used to divide storage space. Options: • vgpaas: container disk. • default: common data disk, which is mounted in default mode. • vguser{num}: common data disk, which is mounted to a specified path. The group name varies depending on the path, for example, vguser1 and vguser2. • vg-everest-localvolume-persistent: common data disk, which is used as the persistent storage volume. • vg-everest-localvolume-ephemeral: common data disk, which is used as a temporary storage volume.

Table 9-159 volumeGroupConfigs

Parameter	Type	Description
volumeGroup	String	Disk group name. Index of the volume group in the dataVolumes.
dockerThinPool	String	Percentage of container disks to data disks on nodes in a resource pool. This parameter can be specified only when volumeGroup is vgpaas (container disk).
lvmConfig	lvmConfig object	LVM configuration management.

Table 9-160 lvmConfig

Parameter	Type	Description
lvType	String	LVM write mode. Options: • linear: linear mode. • striped: striped mode in which multiple disks are used to form a strip to improve disk performance.

Table 9-161 containernetwork

Parameter	Type	Description
mode	String	Container network model. Options: overlay_l2 : an overlay_l2 network (container tunnel network) built for containers by using OpenVSwitch (OVS). • vpc-router: an underlay_l2 network built for containers by using IPvlan and custom VPC routes. • eni: Cloud Native Network 2.0. This model deeply integrates the native ENI capability of VPC, uses the VPC CIDR block to allocate container addresses, and supports passthrough networking. You can use this model when creating a CCE Turbo cluster.

Table 9-162 network

Parameter	Type	Description
name	String	Definition: Network ID. Range: N/A

Table 9-163 PoolDriver

Parameter	Type	Description
gpuVersion	String	Definition: Default GPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains GPU specifications. Range: N/A
npuVersion	String	Definition: Default NPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains NPU specifications. Range: N/A
updateStrategy	String	Definition: Driver upgrade policy of a resource pool. Range: • force: forcible upgrade. The node drivers are upgraded immediately, which may affect jobs running on the node. • idle: secure upgrade. The drivers are upgraded when no job is running on the node.

Table 9-164 PoolStatus

Parameter	Type	Description
phase	String	Definition: Resource pool status. Range: • Creating: The resource pool is being created. • Running: The resource pool is running. • Abnormal: The resource pool is abnormal. • Deleting: The resource pool is being deleted. • Error: An error occurred in the resource pool.
message	String	Definition: Prompt information about the resource pool status. Range: N/A
resources	resources object	Definition: Resource information in different states of the resource pool.
scope	Array of scope objects	Definition: Status of the service type supported by the resource pool.
driver	driver object	Definition: Resource pool driver status.
parent	String	Definition: ID of the parent resource pool to which a resource pool belongs. The physical pool is empty. Range: N/A
root	String	Definition: ID of the root resource pool. Range: N/A
clusters	clusters object	Resource pool cluster information. This parameter is available only for privileged pools.

Table 9-165 resources

Parameter	Type	Description
creating	PoolResourceFlavorCount object	Definition: Resource information in creating states of the resource pool.

Parameter	Type	Description
available	PoolResourceFlavorCount object	Definition: Resource information in available states of the resource pool.
abnormal	PoolResourceFlavorCount object	Definition: Resource information in abnormal states of the resource pool.
deleting	PoolResourceFlavorCount object	Definition: Resource information in deleting states of the resource pool.

Table 9-166 PoolResourceFlavorCount

Parameter	Type	Description
flavor	String	Definition: Resource flavor ID. Range: N/A
count	Integer	Definition: Number of resource specification instances in a resource pool. Range: N/A
maxCount	Integer	Definition: Number of elastic resource specification instances in a resource pool. The value of this parameter in a physical pool is the same as that of count . Range: N/A
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the resource specification instances to be created in a resource pool.
nodePool	String	Definition: Node pool ID. Range: N/A

Table 9-167 PoolNodeAz

Parameter	Type	Description
az	String	Definition: AZ name. Range: N/A
count	Integer	Definition: Number of AZ resource instances. Range: N/A

Table 9-168 scope

Parameter	Type	Description
scopeType	String	Definition: Service type of the resource pool. Range: • Train: training jobs • Infer: inference jobs • Notebook: notebook jobs
state	String	Definition: Service type status of the resource pool. Range: • Enabling: The service is being enabled. • Enabled: The service has been enabled. • Disabling: The service is being disabled. • Disabled: The service has been disabled.

Table 9-169 driver

Parameter	Type	Description
gpu	PoolDriverStatus object	Definition: GPU driver status of a resource pool. Range: N/A
npu	PoolDriverStatus object	Definition: NPU driver status of a resource pool. Range: N/A

Table 9-170 PoolDriverStatus

Parameter	Type	Description
version	String	Definition: Current driver version of a resource pool. Range: N/A

Parameter	Type	Description
state	String	Definition: Current driver status of a resource pool. Range: • Creating: The driver is being installed. • Upgrading: The driver is being upgraded. • Running: The driver is running. • Abnormal: The driver is abnormal.

Table 9-171 clusters

Parameter	Type	Description
name	String	Cluster name.
clusterFlavor	String	Cluster flavor of a standard pool.
type	String	Type of the resource pool cluster.
version	String	Cluster version.
plugins	plugins object	Name of the plugin supported by the cluster.

Table 9-172 plugins

Parameter	Type	Description
name	String	Name of the plugin supported by the cluster.

Example Requests

Obtain resource pools.

```
GET https://{endpoint}/v2/{project_id}/pools
{ }
```

Example Responses

Status code: 200

OK

```
{
  "kind" : "PoolList",
```

```
"apiVersion" : "v2",
"items" : [ {
  "kind" : "Pool",
  "apiVersion" : "v2",
  "metadata" : {
    "name" : "auto-pool-os-86c13962597848eeb29c5861153a391f",
    "creationTimestamp" : "2022-09-16T03:10:40Z",
    "labels" : {
      "os.modelarts/name" : "auto-pool-os",
      "os.modelarts/workspace.id" : "0",
      "os.modelarts/resource.id" : "maos-auto-pool-os-72w8d"
    },
    "annotations" : {
      "os.modelarts/description" : "",
      "os.modelarts/billing.mode" : "0"
    }
  },
  "spec" : {
    "type" : "Dedicate",
    "scope" : [ "Train", "Infer" ],
    "resources" : [ {
      "flavor" : "modelarts.vm.cpu.4ud",
      "count" : 2
    } ],
    "network" : {
      "name" : "network-maos-86c13962597848eeb29c5861153a391f"
    }
  },
  "status" : {
    "phase" : "Running",
    "root" : "auto-pool-os-86c13962597848eeb29c5861153a391f",
    "scope" : [ {
      "scopeType" : "Train",
      "state" : "Enabled"
    }, {
      "scopeType" : "Infer",
      "state" : "Enabled"
    } ],
    "resources" : {
      "available" : [ {
        "flavor" : "modelarts.vm.cpu.4ud",
        "count" : 2,
        "azs" : [ {
          "az" : "cn-north-7c",
          "count" : 2
        } ]
      } ]
    }
  }
} ]
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

9.14 Obtaining a Resource Pool

Function

This API is used to obtain the details of a specified resource pool. This API is used when you need to query details about a specified resource pool, such as its configuration, status, resource usage, or resource management. Before using this API, ensure that you have the required permission and the specified resource pool exists in the system. After the query, the API returns the resource pool details, including the resource pool ID, name, type, status, resource quota, and usage. If the specified resource pool does not exist, the user does not have the permission to perform the operation, or the input parameters are incorrect, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/pools/{pool_name}

Table 9-173 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool ID. The value is obtained from the metadata.name field in the resource pool details. Constraints: N/A <i>*Range:</i> The value can contain 36 to 63 characters. It must start with a lowercase letter and cannot end with a hyphen (-). Digits and hyphens (-) are allowed. Default Value: N/A

Request Parameters

Table 9-174 Request header parameters

Parameter	Mandatory	Type	Description
X-ModelArts-User-ID	No	String	Definition: Tenant ID. This ID is used for authentication when this parameter is transferred. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200**Table 9-175** Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: • v2: The current resource version is v2.
kind	String	Definition: Resource type. Range: • Pool: resource pool
metadata	PoolMetadata object	Definition: Metadata of the resource pool.
spec	PoolSpecModel object	Definition: Specifications of a resource pool.
status	PoolStatus object	Definition: Status of a resource pool.

Table 9-176 PoolMetadata

Parameter	Type	Description
name	String	Definition: Resource pool ID. Range: N/A

Parameter	Type	Description
creationTimestamp	String	Definition: Time when a resource pool is created. For example, 2025-11-01T03:49:41Z . Range: N/A
labels	PoolMetaLabels object	Definition: Tags of a resource pool.
annotations	PoolMetaAnnotations object	Definition: Comments of a resource pool. Constraints: N/A Range: N/A Default Value: N/A

Table 9-177 PoolMetaLabels

Parameter	Type	Description
os.modelarts/ name	String	Definition: Displayed name of a resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ workspace.id	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc,hk) Constraints: N/A Range: N/A Default Value: 0
os.modelarts/ node.prefix	String	Definition: Custom node prefix. This parameter is optional. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ resource.id	String	Definition: Resource ID used for resource pool billing. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts/ tenant.domain.id	String	Definition: ID of the tenant to which a resource pool belongs. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tenant.project.id	String	Definition: ID of the tenant project that a resource pool belongs to. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ enterprise.project.i d	String	Definition: ID of the enterprise project that a resource pool belongs to. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/ biz	String	Definition: Business type of a resource pool. The value can be public or private . Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ create-from	String	Definition: Source of a resource pool, for example, admin-console , indicating that the resource pool is created by the administrator on the ModelArts console. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ nobilling	String	Definition: Indicates whether the resource pool is charged. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ order.name	String	Definition: Last order job record associated with the resource pool. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts/ region	String	Definition: Region where the resource pool is located. Constraints: N/A Range: N/A Default Value: N/A

Table 9-178 PoolMetaAnnotations

Parameter	Type	Description
os.modelarts/ description	String	Definition: Resource pool description. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ billing.mode	String	Definition: Billing mode. Constraints: N/A Range: • 0: pay-per-use • 1: yearly/monthly Default Value: N/A
os.modelarts/ period.num	String	Definition: Subscription period of a yearly/monthly resource pool. Constraints: This parameter is used together with the os.modelarts/period.type field. Range: N/A Default Value: N/A
os.modelarts/ period.type	String	Definition: Subscription type of a yearly/monthly resource pool. Constraints: This parameter is used together with the os.modelarts/period.num field. Range: • 2: monthly • 3: yearly Default Value: N/A

Parameter	Type	Description
os.modelarts/ auto.renew	String	Definition: Auto-renewal status of a yearly/monthly resource pool. Constraints: N/A Range: • 0: Auto-renewal is disabled. • 1: Auto-renewal is enabled. Default Value: 0
os.modelarts/ promotion.info	String	Definition: Discount information selected when a yearly/monthly resource pool is purchased. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ service.console.url	String	Definition: URL to which you are redirected after the order of a yearly/monthly resource pool is paid. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ order.id	String	Definition: Order ID transferred when a yearly/monthly resource pool is purchased. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ flavor.resource.ids	String	Definition: Resource ID of the resource specifications in a yearly/monthly resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tms.tags	String	Definition: Resource tags of a resource pool. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts.pool/scheduler.queue.strategy	String	Definition: Policy of the resource pool scheduling queue, which is used to define task scheduling rules. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/subpools.count	String	Definition: Number of logical subpools in a resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/tenant.domain.name	String	Definition: Tenant account of the resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/scope.external.dependency.train	String	Definition: External dependency ID of the training job. Constraints: N/A Range: N/A Default Value: N/A

Table 9-179 PoolSpecModel

Parameter	Type	Description
type	String	Definition: Resource pool type. Constraints: N/A Range: • Dedicate: physical resource pool, which uses a separate network and supports network connection, custom drivers, and custom job types. • Logical: logical resource pool. There is no independent network and network connectivity is not supported. Logical resource pools can be created and scaled faster than physical resource pools. Default Value: N/A

Parameter	Type	Description
scope	Array of strings	Definition: Job types supported by a resource pool.
resources	Array of resources objects	Definition: Resource specifications in a resource pool, including resource specifications and the number of resources for each specification.
containernetwork	containernetworkk object	Kubernetes container network.
network	network object	Definition: Network parameters of a resource pool.
jobFlavors	Array of strings	Definition: Job specifications supported by a resource pool. The value is the job specification name.
driver	PoolDriver object	Definition: Resource pool driver information.
controlMode	Integer	Definition: Restriction status of a resource pool. Multiple statuses are allowed. For example, 9 indicates that it is frozen and changing its billing mode to yearly/monthly is restricted. Range: • 0: not restricted • 1: Changing to the yearly/monthly billing is restricted. • 2: Modifying specifications is restricted. • 4: The service is restricted. • 8: The resource pool is frozen. • 16: The resource pool is frozen by the public security department (cannot be unsubscribed).

Table 9-180 resources

Parameter	Type	Description
flavor	String	Definition: Resource flavor ID. Range: N/A

Parameter	Type	Description
count	Integer	Definition: Number of resource specification instances in a resource pool. Range: N/A
maxCount	Integer	Elastic resource amount of the resource specifications. The value must be the same as that of count in the physical pool.
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the resource specification instances to be created in a resource pool.
extendParams	extendParams object	Definition: Custom parameters of a resource pool.
os	Os object	Definition: OS image information of nodes in a resource pool.
dataVolumes	dataVolumes object	List of custom cloud data disks. The list cannot be modified after being specified.
volumeGroupConfigs	volumeGroupConfigs object	Advanced disk configurations.

Table 9-181 extendParams

Parameter	Type	Description
dockerBaseSize	String	Definition: Container engine space of a node created in a resource pool. The value 0 indicates that the size is not limited. Constraints: N/A Range: N/A Default Value: N/A
volumeGroup	String	Disk group name.
runtime	String	Model runtime environment.

Table 9-182 Os

Parameter	Type	Description
name	String	Definition: OS name. Range: N/A
imageId	String	Definition: OS image ID. Range: N/A
imageType	String	Definition: OS image type. Range: • private: private image

Table 9-183 dataVolumes

Parameter	Type	Description
volumeType	String	Disk type.. Options: • SSD: ultra-high I/O disk • GPSSD: general-purpose SSD • SAS: high I/O disk
size	String	Disk size, in GiB.
count	String	Number of disks.
extendParams	extendParams object	Custom disk configuration.

Table 9-184 extendParams

Parameter	Type	Description
billing	String	Indicates whether the storage instance is billed. If this parameter is left blank, the storage instance is not billed. This field cannot be specified or modified by users.

Parameter	Type	Description
volumeGroup	String	Name of a disk group, which is used to divide storage space. Options: • vgpaas: container disk. • default: common data disk, which is mounted in default mode. • vguser{num}: common data disk, which is mounted to a specified path. The group name varies depending on the path, for example, vguser1 and vguser2. • vg-everest-localvolume-persistent: common data disk, which is used as the persistent storage volume. • vg-everest-localvolume-ephemeral: common data disk, which is used as a temporary storage volume.

Table 9-185 volumeGroupConfigs

Parameter	Type	Description
volumeGroup	String	Disk group name. Index of the volume group in the dataVolumes.
dockerThinPool	String	Percentage of container disks to data disks on nodes in a resource pool. This parameter can be specified only when volumeGroup is vgpaas (container disk).
lvmConfig	lvmConfig object	LVM configuration management.

Table 9-186 lvmConfig

Parameter	Type	Description
lvType	String	LVM write mode. Options: • linear: linear mode. • striped: striped mode in which multiple disks are used to form a strip to improve disk performance.

Table 9-187 containernetwork

Parameter	Type	Description
mode	String	Container network model. Options: overlay_l2 : an overlay_l2 network (container tunnel network) built for containers by using OpenVSwitch (OVS). • vpc-router: an underlay_l2 network built for containers by using IPvlan and custom VPC routes. • eni: Cloud Native Network 2.0. This model deeply integrates the native ENI capability of VPC, uses the VPC CIDR block to allocate container addresses, and supports passthrough networking. You can use this model when creating a CCE Turbo cluster.

Table 9-188 network

Parameter	Type	Description
name	String	Definition: Network ID. Range: N/A

Table 9-189 PoolDriver

Parameter	Type	Description
gpuVersion	String	Definition: Default GPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains GPU specifications. Range: N/A
npuVersion	String	Definition: Default NPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains NPU specifications. Range: N/A

Parameter	Type	Description
updateStrategy	String	Definition: Driver upgrade policy of a resource pool. Range: • force: forcible upgrade. The node drivers are upgraded immediately, which may affect jobs running on the node. • idle: secure upgrade. The drivers are upgraded when no job is running on the node.

Table 9-190 PoolStatus

Parameter	Type	Description
phase	String	Definition: Resource pool status. Range: • Creating: The resource pool is being created. • Running: The resource pool is running. • Abnormal: The resource pool is abnormal. • Deleting: The resource pool is being deleted. • Error: An error occurred in the resource pool.
message	String	Definition: Prompt information about the resource pool status. Range: N/A
resources	resources object	Definition: Resource information in different states of the resource pool.
scope	Array of scope objects	Definition: Status of the service type supported by the resource pool.
driver	driver object	Definition: Resource pool driver status.
parent	String	Definition: ID of the parent resource pool to which a resource pool belongs. The physical pool is empty. Range: N/A

Parameter	Type	Description
root	String	Definition: ID of the root resource pool. Range: N/A
clusters	clusters object	Resource pool cluster information. This parameter is available only for privileged pools.

Table 9-191 resources

Parameter	Type	Description
creating	PoolResourceFlavorCount object	Definition: Resource information in creating states of the resource pool.
available	PoolResourceFlavorCount object	Definition: Resource information in available states of the resource pool.
abnormal	PoolResourceFlavorCount object	Definition: Resource information in abnormal states of the resource pool.
deleting	PoolResourceFlavorCount object	Definition: Resource information in deleting states of the resource pool.

Table 9-192 PoolResourceFlavorCount

Parameter	Type	Description
flavor	String	Definition: Resource flavor ID. Range: N/A
count	Integer	Definition: Number of resource specification instances in a resource pool. Range: N/A
maxCount	Integer	Definition: Number of elastic resource specification instances in a resource pool. The value of this parameter in a physical pool is the same as that of count . Range: N/A
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the resource specification instances to be created in a resource pool.

Parameter	Type	Description
nodePool	String	Definition: Node pool ID. Range: N/A

Table 9-193 PoolNodeAz

Parameter	Type	Description
az	String	Definition: AZ name. Range: N/A
count	Integer	Definition: Number of AZ resource instances. Range: N/A

Table 9-194 scope

Parameter	Type	Description
scopeType	String	Definition: Service type of the resource pool. Range: • Train: training jobs • Infer: inference jobs • Notebook: notebook jobs
state	String	Definition: Service type status of the resource pool. Range: • Enabling: The service is being enabled. • Enabled: The service has been enabled. • Disabling: The service is being disabled. • Disabled: The service has been disabled.

Table 9-195 driver

Parameter	Type	Description
gpu	PoolDriverStatus object	Definition: GPU driver status of a resource pool. Range: N/A
npu	PoolDriverStatus object	Definition: NPU driver status of a resource pool. Range: N/A

Table 9-196 PoolDriverStatus

Parameter	Type	Description
version	String	Definition: Current driver version of a resource pool. Range: N/A
state	String	Definition: Current driver status of a resource pool. Range: • Creating: The driver is being installed. • Upgrading: The driver is being upgraded. • Running: The driver is running. • Abnormal: The driver is abnormal.

Table 9-197 clusters

Parameter	Type	Description
name	String	Cluster name.
clusterFlavor	String	Cluster flavor of a standard pool.
type	String	Type of the resource pool cluster.
version	String	Cluster version.
plugins	plugins object	Name of the plugin supported by the cluster.

Table 9-198 plugins

Parameter	Type	Description
name	String	Name of the plugin supported by the cluster.

Status code: 404**Table 9-199** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Obtain details about a resource pool.

```
GET https://{endpoint}/v2/{project_id}/pools/{pool_name}
{ }
```

Example Responses

Status code: 200

OK

```
{
  "kind" : "Pool",
  "apiVersion" : "v2",
  "metadata" : {
    "name" : "auto-pool-os-86c13962597848eeb29c5861153a391f",
    "creationTimestamp" : "2022-09-16T03:10:40Z",
    "labels" : {
      "os.modelarts/name" : "auto-pool-os",
      "os.modelarts/workspace.id" : "0",
      "os.modelarts/resource.id" : "maos-auto-pool-os-72w8d"
    },
    "annotations" : {
      "os.modelarts/description" : "",
      "os.modelarts/billing.mode" : "0"
    }
  },
  "spec" : {
    "type" : "Dedicate",
    "scope" : [ "Train", "Infer" ],
    "resources" : [ {
      "flavor" : "modelarts.vm.cpu.4ud",
      "count" : 2
    } ],
    "network" : {
```

```
{
  "name": "network-maos-86c13962597848eeb29c5861153a391f"
},
"status": {
  "phase": "Running",
  "root": "auto-pool-os-86c13962597848eeb29c5861153a391f",
  "scope": [ {
    "scopeType": "Train",
    "state": "Enabled"
  }, {
    "scopeType": "Infer",
    "state": "Enabled"
  } ],
  "resources": {
    "available": [ {
      "flavor": "modelarts.vm.cpu.4ud",
      "count": 2,
      "azs": [ {
        "az": "cn-north-7c",
        "count": 2
      } ]
    } ]
  }
}
```

Status code: 404

Not found.

```
{
  "error_code": "ModelArts.50015001",
  "error_msg": "pool not found"
}
```

Status Codes

Status Code	Description
200	OK
404	Not found.

Error Codes

See [Error Codes](#).

9.15 Deleting a Resource Pool

Function

This API is used to delete a specified resource pool. This API is used when you need to delete a specified resource pool when the resource pool is no longer required, the configuration is incorrect, or resources need to be cleared. Before using this API, ensure that the resource pool exists and you have the administrator permissions. After the deletion, the specified resource pool is permanently removed, and related resources and configurations are cleared. If the resource pool

does not exist, you do not have the operation permission, or the resource pool is depended on by other resources, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v2/{project_id}/pools/{pool_name}

Table 9-200 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool name generated by the system. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 9-201 Request header parameters

Parameter	Mandatory	Type	Description
X-ModelArts-User-ID	No	String	Definition: Tenant ID. If there is a tenant ID, it will be used for workspace authentication. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 9-202 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: v2
kind	String	Definition: Resource type. Range: Pool: resource pool
metadata	PoolMetadataDeletion object	Metadata of a resource pool.
spec	PoolSpecModel object	Description of a resource pool.
status	PoolStatus object	Status of a resource pool.

Table 9-203 PoolMetadataDeletion

Parameter	Type	Description
name	String	Definition: Automatically generated resource pool name, which is equivalent to pool ID . Range: N/A
creationTimestamp	String	Definition: Timestamp, for example, 2021-11-01T03:49:41Z . Range: N/A
deletionTimestamp	String	Definition: Timestamp, for example, 2021-11-01T03:49:41Z . Range: N/A
labels	PoolMetaLabels object	Resource pool labels.
annotations	PoolMetaAnnotations object	Resource pool annotations.

Table 9-204 PoolMetaLabels

Parameter	Type	Description
os.modelarts/ name	String	Definition: Displayed name of a resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ workspace.id	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc,hk) Constraints: N/A Range: N/A Default Value: 0
os.modelarts/ node.prefix	String	Definition: Custom node prefix. This parameter is optional. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ resource.id	String	Definition: Resource ID used for resource pool billing. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tenant.domain.id	String	Definition: ID of the tenant to which a resource pool belongs. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tenant.project.id	String	Definition: ID of the tenant project that a resource pool belongs to. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ enterprise.project.i d	String	Definition: ID of the enterprise project that a resource pool belongs to. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts.pool/ biz	String	Definition: Business type of a resource pool. The value can be public or private . Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ create-from	String	Definition: Source of a resource pool, for example, admin-console , indicating that the resource pool is created by the administrator on the ModelArts console. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ nobilling	String	Definition: Indicates whether the resource pool is charged. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ order.name	String	Definition: Last order job record associated with the resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ region	String	Definition: Region where the resource pool is located. Constraints: N/A Range: N/A Default Value: N/A

Table 9-205 PoolMetaAnnotations

Parameter	Type	Description
os.modelarts/ description	String	Definition: Resource pool description. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts/ billing.mode	String	Definition: Billing mode. Constraints: N/A Range: 0: pay-per-use 1: yearly/monthly Default Value: N/A
os.modelarts/ period.num	String	Definition: Subscription period of a yearly/monthly resource pool. Constraints: This parameter is used together with the os.modelarts/period.type field. Range: N/A Default Value: N/A
os.modelarts/ period.type	String	Definition: Subscription type of a yearly/monthly resource pool. Constraints: This parameter is used together with the os.modelarts/period.num field. Range: 2: monthly 3: yearly Default Value: N/A
os.modelarts/ auto.renew	String	Definition: Auto-renewal status of a yearly/monthly resource pool. Constraints: N/A Range: 0: Auto-renewal is disabled. 1: Auto-renewal is enabled. Default Value: 0
os.modelarts/ promotion.info	String	Definition: Discount information selected when a yearly/monthly resource pool is purchased. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts/ service.console.url	String	Definition: URL to which you are redirected after the order of a yearly/monthly resource pool is paid. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ order.id	String	Definition: Order ID transferred when a yearly/monthly resource pool is purchased. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ flavor.resource.ids	String	Definition: Resource ID of the resource specifications in a yearly/monthly resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tms.tags	String	Definition: Resource tags of a resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/ scheduler.queue.st rategy	String	Definition: Policy of the resource pool scheduling queue, which is used to define task scheduling rules. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/ subpools.count	String	Definition: Number of logical subpools in a resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tenant.domain.na me	String	Definition: Tenant account of the resource pool. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts.pool/scope.external.dependency.train	String	Definition: External dependency ID of the training job. Constraints: N/A Range: N/A Default Value: N/A

Table 9-206 PoolSpecModel

Parameter	Type	Description
type	String	Definition: Resource pool type. Constraints: N/A Range: • Dedicate: physical resource pool, which uses a separate network and supports network connection, custom drivers, and custom job types. • Logical: logical resource pool. There is no independent network and network connectivity is not supported. Logical resource pools can be created and scaled faster than physical resource pools. Default Value: N/A
scope	Array of strings	Definition: Job types supported by a resource pool.
resources	Array of resources objects	Definition: Resource specifications in a resource pool, including resource specifications and the number of resources for each specification.
containernetwork	containernetwork object	Kubernetes container network.
network	network object	Definition: Network parameters of a resource pool.
jobFlavors	Array of strings	Definition: Job specifications supported by a resource pool. The value is the job specification name.
driver	PoolDriver object	Definition: Resource pool driver information.

Parameter	Type	Description
controlMode	Integer	Definition: Restriction status of a resource pool. Multiple statuses are allowed. For example, 9 indicates that it is frozen and changing its billing mode to yearly/monthly is restricted. Range: • 0: not restricted • 1: Changing to the yearly/monthly billing is restricted. • 2: Modifying specifications is restricted. • 4: The service is restricted. • 8: The resource pool is frozen. • 16: The resource pool is frozen by the public security department (cannot be unsubscribed).

Table 9-207 resources

Parameter	Type	Description
flavor	String	Definition: Resource flavor ID. Range: N/A
count	Integer	Definition: Number of resource specification instances in a resource pool. Range: N/A
maxCount	Integer	Elastic resource amount of the resource specifications. The value must be the same as that of count in the physical pool.
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the resource specification instances to be created in a resource pool.
extendParams	extendParams object	Definition: Custom parameters of a resource pool.
os	Os object	Definition: OS image information of nodes in a resource pool.
dataVolumes	dataVolumes object	List of custom cloud data disks. The list cannot be modified after being specified.

Parameter	Type	Description
volumeGroupConfigs	volumeGroupConfigs object	Advanced disk configurations.

Table 9-208 extendParams

Parameter	Type	Description
dockerBaseSize	String	Definition: Container engine space of a node created in a resource pool. The value 0 indicates that the size is not limited. Constraints: N/A Range: N/A Default Value: N/A
volumeGroup	String	Disk group name.
runtime	String	Model runtime environment.

Table 9-209 Os

Parameter	Type	Description
name	String	Definition: OS name. Range: N/A
imageId	String	Definition: OS image ID. Range: N/A
imageType	String	Definition: OS image type. Range: private: private image

Table 9-210 dataVolumes

Parameter	Type	Description
volumeType	String	Disk type.. Options: SSD: ultra-high I/O disk GPSSD: general-purpose SSD SAS: high I/O disk
size	String	Disk size, in GiB.

Parameter	Type	Description
count	String	Number of disks.
extendParams	extendParams object	Custom disk configuration.

Table 9-211 extendParams

Parameter	Type	Description
billing	String	Indicates whether the storage instance is billed. If this parameter is left blank, the storage instance is not billed. This field cannot be specified or modified by users.
volumeGroup	String	Name of a disk group, which is used to divide storage space. Options: • vgpaas: container disk. • default: common data disk, which is mounted in default mode. • vguser{num}: common data disk, which is mounted to a specified path. The group name varies depending on the path, for example, vguser1 and vguser2. • vg-everest-localvolume-persistent: common data disk, which is used as the persistent storage volume. • vg-everest-localvolume-ephemeral: common data disk, which is used as a temporary storage volume.

Table 9-212 volumeGroupConfigs

Parameter	Type	Description
volumeGroup	String	Disk group name. Index of the volume group in the dataVolumes.
dockerThinPool	String	Percentage of container disks to data disks on nodes in a resource pool. This parameter can be specified only when volumeGroup is vgpaas (container disk).

Parameter	Type	Description
lvmConfig	lvmConfig object	LVM configuration management.

Table 9-213 lvmConfig

Parameter	Type	Description
lvType	String	LVM write mode. Options: • linear: linear mode. • striped: striped mode in which multiple disks are used to form a strip to improve disk performance.

Table 9-214 containernetwork

Parameter	Type	Description
mode	String	Container network model. Options: • overlay_l2: an overlay_l2 network (container tunnel network) built for containers by using OpenVSwitch (OVS). • vpc-router: an underlay_l2 network built for containers by using IPvlan and custom VPC routes. • eni: Cloud Native Network 2.0. This model deeply integrates the native ENI capability of VPC, uses the VPC CIDR block to allocate container addresses, and supports passthrough networking. You can use this model when creating a CCE Turbo cluster.

Table 9-215 network

Parameter	Type	Description
name	String	Definition : Network ID. Range : N/A

Table 9-216 PoolDriver

Parameter	Type	Description
gpuVersion	String	Definition: Default GPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains GPU specifications. Range: N/A
npuVersion	String	Definition: Default NPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains NPU specifications. Range: N/A
updateStrategy	String	Definition: Driver upgrade policy of a resource pool. Range: • force: forcible upgrade. The node drivers are upgraded immediately, which may affect jobs running on the node. • idle: secure upgrade. The drivers are upgraded when no job is running on the node.

Table 9-217 PoolStatus

Parameter	Type	Description
phase	String	Definition: Resource pool status. Range: • Creating: The resource pool is being created. • Running: The resource pool is running. • Abnormal: The resource pool is abnormal. • Deleting: The resource pool is being deleted. • Error: An error occurred in the resource pool.
message	String	Definition: Prompt information about the resource pool status. Range: N/A

Parameter	Type	Description
resources	resources object	Definition: Resource information in different states of the resource pool.
scope	Array of scope objects	Definition: Status of the service type supported by the resource pool.
driver	driver object	Definition: Resource pool driver status.
parent	String	Definition: ID of the parent resource pool to which a resource pool belongs. The physical pool is empty. Range: N/A
root	String	Definition: ID of the root resource pool. Range: N/A
clusters	clusters object	Resource pool cluster information. This parameter is available only for privileged pools.

Table 9-218 resources

Parameter	Type	Description
creating	PoolResourceFlavorCount object	Definition: Resource information in creating states of the resource pool.
available	PoolResourceFlavorCount object	Definition: Resource information in available states of the resource pool.
abnormal	PoolResourceFlavorCount object	Definition: Resource information in abnormal states of the resource pool.
deleting	PoolResourceFlavorCount object	Definition: Resource information in deleting states of the resource pool.

Table 9-219 PoolResourceFlavorCount

Parameter	Type	Description
flavor	String	Definition: Resource flavor ID. Range: N/A
count	Integer	Definition: Number of resource specification instances in a resource pool. Range: N/A

Parameter	Type	Description
maxCount	Integer	Definition: Number of elastic resource specification instances in a resource pool. The value of this parameter in a physical pool is the same as that of count . Range: N/A
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the resource specification instances to be created in a resource pool.
nodePool	String	Definition: Node pool ID. Range: N/A

Table 9-220 PoolNodeAz

Parameter	Type	Description
az	String	Definition: AZ name. Range: N/A
count	Integer	Definition: Number of AZ resource instances. Range: N/A

Table 9-221 scope

Parameter	Type	Description
scopeType	String	Definition: Service type of the resource pool. Range: • Train: training jobs • Infer: inference jobs • Notebook: notebook jobs

Parameter	Type	Description
state	String	Definition: Service type status of the resource pool. Range: • Enabling: The service is being enabled. • Enabled: The service has been enabled. • Disabling: The service is being disabled. • Disabled: The service has been disabled.

Table 9-222 driver

Parameter	Type	Description
gpu	PoolDriverStatus object	Definition: GPU driver status of a resource pool. Range: N/A
npu	PoolDriverStatus object	Definition: NPU driver status of a resource pool. Range: N/A

Table 9-223 PoolDriverStatus

Parameter	Type	Description
version	String	Definition: Current driver version of a resource pool. Range: N/A
state	String	Definition: Current driver status of a resource pool. Range: • Creating: The driver is being installed. • Upgrading: The driver is being upgraded. • Running: The driver is running. • Abnormal: The driver is abnormal.

Table 9-224 clusters

Parameter	Type	Description
name	String	Cluster name.
clusterFlavor	String	Cluster flavor of a standard pool.
type	String	Type of the resource pool cluster.
version	String	Cluster version.
plugins	plugins object	Name of the plugin supported by the cluster.

Table 9-225 plugins

Parameter	Type	Description
name	String	Name of the plugin supported by the cluster.

Status code: 404**Table 9-226** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Delete a resource pool.

```
DELETE https://{endpoint}/v2/{project_id}/pools/{pool_name}
{ }
```

Example Responses

Status code: 200

OK

```
{
  "kind" : "Pool",
  "apiVersion" : "v2",
  "metadata" : {
```

```
{
  "name" : "auto-pool-os-86c13962597848eeb29c5861153a391f",
  "creationTimestamp" : "2022-09-16T03:10:40Z",
  "labels" : {
    "os.modelarts/name" : "auto-pool-os",
    "os.modelarts/workspace.id" : "0",
    "os.modelarts/resource.id" : "maos-auto-pool-os-72w8d"
  },
  "annotations" : {
    "os.modelarts/description" : "",
    "os.modelarts/billing.mode" : "0"
  },
  "spec" : {
    "type" : "Dedicate",
    "scope" : [ "Train", "Infer" ],
    "resources" : [ {
      "flavor" : "modelarts.vm.cpu.4ud",
      "count" : 2
    } ],
    "network" : {
      "name" : "network-maos-86c13962597848eeb29c5861153a391f"
    }
  },
  "status" : {
    "phase" : "Running",
    "root" : "auto-pool-os-86c13962597848eeb29c5861153a391f",
    "scope" : [ {
      "scopeType" : "Train",
      "state" : "Enabled"
    }, {
      "scopeType" : "Infer",
      "state" : "Enabled"
    } ],
    "resources" : {
      "available" : [ {
        "flavor" : "modelarts.vm.cpu.4ud",
        "count" : 2,
        "azs" : [ {
          "az" : "cn-north-7c",
          "count" : 2
        } ]
      } ]
    }
  }
}
```

Status code: 404

Not found.

```
{
  "error_code" : "ModelArts.50015001",
  "error_msg" : "pool not found"
}
```

Status Codes

Status Code	Description
200	OK
404	Not found.

Error Codes

See [Error Codes](#).

9.16 Updating a Resource Pool

Function

This API is used to update the configuration and capacity of a specified resource pool. This API is used when you need to update the information about a resource pool when the resource pool capacity needs to be expanded, the configuration needs to be adjusted, or the performance needs to be optimized. Before using this API, ensure that the resource pool exists and you have the administrator permissions. After the update, the configuration and capacity of the resource pool will be updated, and the related resources and configurations will be adjusted. If the resource pool does not exist, the user does not have the permission to perform the operation, or the resource pool cannot be updated, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PATCH /v2/{project_id}/pools/{pool_name}

Table 9-227 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool name generated by the system. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 9-228 Request header parameters

Parameter	Mandatory	Type	Description
X-ModelArts-User-ID	No	String	Definition: Tenant ID. If there is a tenant ID, it will be used for workspace authentication. Constraints: N/A Range: N/A Default Value: N/A
Content-Type	Yes	String	Message body type (format). Options: • application/merge-patch+json

Table 9-229 Request body parameters

Parameter	Mandatory	Type	Description
metadata	No	PoolMetadataUpdate object	Definition: Resource pool metadata.
spec	No	PoolSpecUpdate object	Definition: Resource pool description.

Table 9-230 PoolMetadataUpdate

Parameter	Mandatory	Type	Description
annotations	No	annotations object	Definition: Comments of a resource pool.

Table 9-231 annotations

Parameter	Mandatory	Type	Description
os.modelarts/ description	No	String	Definition: Description of a resource pool, specifying the application scenarios of the resource pool. The following special characters are not allowed: !<>=&"" Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ order.id	No	String	Definition: Order ID, which is required when you create or modify a yearly/monthly order. Constraints: N/A Range: N/A Default Value: N/A

Table 9-232 PoolSpecUpdate

Parameter	Mandatory	Type	Description
scope	No	Array of strings	Definition: Type of the job to be updated. Constraints: N/A Range: • Train: training job • Infer: inference job • Notebook: notebook job Default Value: N/A
resources	No	Array of resources objects	Definition: Updated resource flavors.
jobFlavors	No	Array of strings	Definition: Job flavors supported by a resource pool. Constraints: N/A Range: N/A Default Value: N/A
driver	No	PoolDriver object	Definition: Resource pool driver information.

Table 9-233 resources

Parameter	Mandatory	Type	Description
flavor	Yes	String	Definition: Resource flavor. Constraints: N/A Range: N/A Default Value: N/A
count	Yes	Integer	Definition: Number of resources of the flavor. Constraints: N/A Range: N/A Default Value: N/A
azs	No	Array of PoolNodeAz objects	Definition: Updated AZs.

Table 9-234 PoolNodeAz

Parameter	Mandatory	Type	Description
az	Yes	String	Definition: AZ name. Range: N/A
count	Yes	Integer	Definition: Number of AZ resource instances. Range: N/A

Table 9-235 PoolDriver

Parameter	Mandatory	Type	Description
gpuVersion	No	String	Definition: Default GPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains GPU specifications. Range: N/A

Parameter	Mandatory	Type	Description
npuVersion	No	String	Definition: Default NPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains NPU specifications. Range: N/A
updateStrategy	No	String	Definition: Driver upgrade policy of a resource pool. Range: • force: forcible upgrade. The node drivers are upgraded immediately, which may affect jobs running on the node. • idle: secure upgrade. The drivers are upgraded when no job is running on the node.

Response Parameters

Status code: 200

Table 9-236 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: • v2: The current resource version is v2.
kind	String	Definition: Resource type. Range: • Pool: resource pool
metadata	PoolMetadata object	Definition: Metadata of the resource pool.
spec	PoolSpecModel object	Definition: Specifications of a resource pool.
status	PoolStatus object	Definition: Status of a resource pool.

Table 9-237 PoolMetadata

Parameter	Type	Description
name	String	Definition: Resource pool ID. Range: N/A
creationTimestamp	String	Definition: Time when a resource pool is created. For example, 2025-11-01T03:49:41Z . Range: N/A
labels	PoolMetaLabels object	Definition: Tags of a resource pool.
annotations	PoolMetaAnnotations object	Definition: Comments of a resource pool. Constraints: N/A Range: N/A Default Value: N/A

Table 9-238 PoolMetaLabels

Parameter	Type	Description
os.modelarts/name	String	Definition: Displayed name of a resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/workspace.id	String	Definition: Workspace ID. [For details about how to obtain the ID, see Querying the Workspace List .] (tag:hc,hk) Constraints: N/A Range: N/A Default Value: 0
os.modelarts/node.prefix	String	Definition: Custom node prefix. This parameter is optional. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts/ resource.id	String	Definition: Resource ID used for resource pool billing. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tenant.domain.id	String	Definition: ID of the tenant to which a resource pool belongs. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tenant.project.id	String	Definition: ID of the tenant project that a resource pool belongs to. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ enterprise.project.i d	String	Definition: ID of the enterprise project that a resource pool belongs to. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/ biz	String	Definition: Business type of a resource pool. The value can be public or private . Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ create-from	String	Definition: Source of a resource pool, for example, admin-console , indicating that the resource pool is created by the administrator on the ModelArts console. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ nobilling	String	Definition: Indicates whether the resource pool is charged. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts/ order.name	String	Definition: Last order job record associated with the resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ region	String	Definition: Region where the resource pool is located. Constraints: N/A Range: N/A Default Value: N/A

Table 9-239 PoolMetaAnnotations

Parameter	Type	Description
os.modelarts/ description	String	Definition: Resource pool description. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ billing.mode	String	Definition: Billing mode. Constraints: N/A Range: • 0: pay-per-use • 1: yearly/monthly Default Value: N/A
os.modelarts/ period.num	String	Definition: Subscription period of a yearly/monthly resource pool. Constraints: This parameter is used together with the os.modelarts/period.type field. Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts/ period.type	String	Definition: Subscription type of a yearly/monthly resource pool. Constraints: This parameter is used together with the os.modelarts/period.num field. Range: • 2: monthly • 3: yearly Default Value: N/A
os.modelarts/ auto.renew	String	Definition: Auto-renewal status of a yearly/monthly resource pool. Constraints: N/A Range: • 0: Auto-renewal is disabled. • 1: Auto-renewal is enabled. Default Value: 0
os.modelarts/ promotion.info	String	Definition: Discount information selected when a yearly/monthly resource pool is purchased. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ service.console.url	String	Definition: URL to which you are redirected after the order of a yearly/monthly resource pool is paid. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ order.id	String	Definition: Order ID transferred when a yearly/monthly resource pool is purchased. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ flavor.resource.ids	String	Definition: Resource ID of the resource specifications in a yearly/monthly resource pool. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts/ tms.tags	String	Definition: Resource tags of a resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/ scheduler.queue.st ategy	String	Definition: Policy of the resource pool scheduling queue, which is used to define task scheduling rules. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/ subpools.count	String	Definition: Number of logical subpools in a resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ tenant.domain.na me	String	Definition: Tenant account of the resource pool. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts.pool/ scope.external.dep endency.train	String	Definition: External dependency ID of the training job. Constraints: N/A Range: N/A Default Value: N/A

Table 9-240 PoolSpecModel

Parameter	Type	Description
type	String	Definition: Resource pool type. Constraints: N/A Range: • Dedicate: physical resource pool, which uses a separate network and supports network connection, custom drivers, and custom job types. • Logical: logical resource pool. There is no independent network and network connectivity is not supported. Logical resource pools can be created and scaled faster than physical resource pools. Default Value: N/A
scope	Array of strings	Definition: Job types supported by a resource pool.
resources	Array of resources objects	Definition: Resource specifications in a resource pool, including resource specifications and the number of resources for each specification.
containernetwork	containernetworkk object	Kubernetes container network.
network	network object	Definition: Network parameters of a resource pool.
jobFlavors	Array of strings	Definition: Job specifications supported by a resource pool. The value is the job specification name.
driver	PoolDriver object	Definition: Resource pool driver information.

Parameter	Type	Description
controlMode	Integer	Definition: Restriction status of a resource pool. Multiple statuses are allowed. For example, 9 indicates that it is frozen and changing its billing mode to yearly/monthly is restricted. Range: • 0: not restricted • 1: Changing to the yearly/monthly billing is restricted. • 2: Modifying specifications is restricted. • 4: The service is restricted. • 8: The resource pool is frozen. • 16: The resource pool is frozen by the public security department (cannot be unsubscribed).

Table 9-241 resources

Parameter	Type	Description
flavor	String	Definition: Resource flavor ID. Range: N/A
count	Integer	Definition: Number of resource specification instances in a resource pool. Range: N/A
maxCount	Integer	Elastic resource amount of the resource specifications. The value must be the same as that of count in the physical pool.
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the resource specification instances to be created in a resource pool.
extendParams	extendParams object	Definition: Custom parameters of a resource pool.
os	Os object	Definition: OS image information of nodes in a resource pool.
dataVolumes	dataVolumes object	List of custom cloud data disks. The list cannot be modified after being specified.

Parameter	Type	Description
volumeGroupConfigs	volumeGroupConfigs object	Advanced disk configurations.

Table 9-242 extendParams

Parameter	Type	Description
dockerBaseSize	String	Definition: Container engine space of a node created in a resource pool. The value 0 indicates that the size is not limited. Constraints: N/A Range: N/A Default Value: N/A
volumeGroup	String	Disk group name.
runtime	String	Model runtime environment.

Table 9-243 Os

Parameter	Type	Description
name	String	Definition: OS name. Range: N/A
imageId	String	Definition: OS image ID. Range: N/A
imageType	String	Definition: OS image type. Range: • private: private image

Table 9-244 dataVolumes

Parameter	Type	Description
volumeType	String	Disk type.. Options: • SSD: ultra-high I/O disk • GPSSD: general-purpose SSD • SAS: high I/O disk
size	String	Disk size, in GiB.

Parameter	Type	Description
count	String	Number of disks.
extendParams	extendParams object	Custom disk configuration.

Table 9-245 extendParams

Parameter	Type	Description
billing	String	Indicates whether the storage instance is billed. If this parameter is left blank, the storage instance is not billed. This field cannot be specified or modified by users.
volumeGroup	String	Name of a disk group, which is used to divide storage space. Options: • vgpaas: container disk. • default: common data disk, which is mounted in default mode. • vguser{num}: common data disk, which is mounted to a specified path. The group name varies depending on the path, for example, vguser1 and vguser2. • vg-everest-localvolume-persistent: common data disk, which is used as the persistent storage volume. • vg-everest-localvolume-ephemeral: common data disk, which is used as a temporary storage volume.

Table 9-246 volumeGroupConfigs

Parameter	Type	Description
volumeGroup	String	Disk group name. Index of the volume group in the dataVolumes.
dockerThinPool	String	Percentage of container disks to data disks on nodes in a resource pool. This parameter can be specified only when volumeGroup is vgpaas (container disk).

Parameter	Type	Description
lvmConfig	lvmConfig object	LVM configuration management.

Table 9-247 lvmConfig

Parameter	Type	Description
lvType	String	LVM write mode. Options: • linear: linear mode. • striped: striped mode in which multiple disks are used to form a strip to improve disk performance.

Table 9-248 containernetwork

Parameter	Type	Description
mode	String	Container network model. Options: • overlay_l2: an overlay_l2 network (container tunnel network) built for containers by using OpenVSwitch (OVS). • vpc-router: an underlay_l2 network built for containers by using IPvlan and custom VPC routes. • eni: Cloud Native Network 2.0. This model deeply integrates the native ENI capability of VPC, uses the VPC CIDR block to allocate container addresses, and supports passthrough networking. You can use this model when creating a CCE Turbo cluster.

Table 9-249 network

Parameter	Type	Description
name	String	Definition: Network ID. Range: N/A

Table 9-250 PoolDriver

Parameter	Type	Description
gpuVersion	String	Definition: Default GPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains GPU specifications. Range: N/A
npuVersion	String	Definition: Default NPU driver version of a resource pool. This parameter is only valid when the physical resource pool contains NPU specifications. Range: N/A
updateStrategy	String	Definition: Driver upgrade policy of a resource pool. Range: • force: forcible upgrade. The node drivers are upgraded immediately, which may affect jobs running on the node. • idle: secure upgrade. The drivers are upgraded when no job is running on the node.

Table 9-251 PoolStatus

Parameter	Type	Description
phase	String	Definition: Resource pool status. Range: • Creating: The resource pool is being created. • Running: The resource pool is running. • Abnormal: The resource pool is abnormal. • Deleting: The resource pool is being deleted. • Error: An error occurred in the resource pool.
message	String	Definition: Prompt information about the resource pool status. Range: N/A

Parameter	Type	Description
resources	resources object	Definition: Resource information in different states of the resource pool.
scope	Array of scope objects	Definition: Status of the service type supported by the resource pool.
driver	driver object	Definition: Resource pool driver status.
parent	String	Definition: ID of the parent resource pool to which a resource pool belongs. The physical pool is empty. Range: N/A
root	String	Definition: ID of the root resource pool. Range: N/A
clusters	clusters object	Resource pool cluster information. This parameter is available only for privileged pools.

Table 9-252 resources

Parameter	Type	Description
creating	PoolResourceFlavorCount object	Definition: Resource information in creating states of the resource pool.
available	PoolResourceFlavorCount object	Definition: Resource information in available states of the resource pool.
abnormal	PoolResourceFlavorCount object	Definition: Resource information in abnormal states of the resource pool.
deleting	PoolResourceFlavorCount object	Definition: Resource information in deleting states of the resource pool.

Table 9-253 PoolResourceFlavorCount

Parameter	Type	Description
flavor	String	Definition: Resource flavor ID. Range: N/A
count	Integer	Definition: Number of resource specification instances in a resource pool. Range: N/A

Parameter	Type	Description
maxCount	Integer	Definition: Number of elastic resource specification instances in a resource pool. The value of this parameter in a physical pool is the same as that of count . Range: N/A
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the resource specification instances to be created in a resource pool.
nodePool	String	Definition: Node pool ID. Range: N/A

Table 9-254 PoolNodeAz

Parameter	Type	Description
az	String	Definition: AZ name. Range: N/A
count	Integer	Definition: Number of AZ resource instances. Range: N/A

Table 9-255 scope

Parameter	Type	Description
scopeType	String	Definition: Service type of the resource pool. Range: • Train: training jobs • Infer: inference jobs • Notebook: notebook jobs

Parameter	Type	Description
state	String	Definition: Service type status of the resource pool. Range: • Enabling: The service is being enabled. • Enabled: The service has been enabled. • Disabling: The service is being disabled. • Disabled: The service has been disabled.

Table 9-256 driver

Parameter	Type	Description
gpu	PoolDriverStatus object	Definition: GPU driver status of a resource pool. Range: N/A
npu	PoolDriverStatus object	Definition: NPU driver status of a resource pool. Range: N/A

Table 9-257 PoolDriverStatus

Parameter	Type	Description
version	String	Definition: Current driver version of a resource pool. Range: N/A
state	String	Definition: Current driver status of a resource pool. Range: • Creating: The driver is being installed. • Upgrading: The driver is being upgraded. • Running: The driver is running. • Abnormal: The driver is abnormal.

Table 9-258 clusters

Parameter	Type	Description
name	String	Cluster name.
clusterFlavor	String	Cluster flavor of a standard pool.
type	String	Type of the resource pool cluster.
version	String	Cluster version.
plugins	plugins object	Name of the plugin supported by the cluster.

Table 9-259 plugins

Parameter	Type	Description
name	String	Name of the plugin supported by the cluster.

Status code: 400**Table 9-260** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 9-261** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Expand the capacity of a resource pool.

```
PATCH https://{endpoint}/v2/{project_id}/pools/{pool_name}

{
  "spec": {
    "resources": [ {
      "flavor": "modelarts.vm.cpu.4ud",
      "count": 3
    } ]
  }
}
```

Example Responses

Status code: 200

OK

```
{
  "kind": "Pool",
  "apiVersion": "v2",
  "metadata": {
    "name": "auto-pool-os-86c13962597848eeb29c5861153a391f",
    "creationTimestamp": "2022-09-16T03:10:40Z",
    "labels": {
      "os.modelarts/name": "auto-pool-os",
      "os.modelarts/workspace.id": "0",
      "os.modelarts/resource.id": "maos-auto-pool-os-72w8d"
    },
    "annotations": {
      "os.modelarts/description": "",
      "os.modelarts/billing.mode": "0"
    }
  },
  "spec": {
    "type": "Dedicate",
    "scope": [ "Train", "Infer" ],
    "resources": [ {
      "flavor": "modelarts.vm.cpu.4ud",
      "count": 3
    } ],
    "network": {
      "name": "network-maos-86c13962597848eeb29c5861153a391f"
    }
  },
  "status": {
    "phase": "Running",
    "root": "auto-pool-os-86c13962597848eeb29c5861153a391f",
    "scope": [ {
      "scopeType": "Train",
      "state": "Enabled"
    }, {
      "scopeType": "Infer",
      "state": "Enabled"
    } ],
    "resources": {
      "creating": [ {
        "flavor": "modelarts.vm.cpu.4ud",
        "count": 1,
        "azs": [ {
          "az": "cn-north-7c",
          "count": 1
        } ]
      } ],
      "available": [ {
```

```
{
  "flavor" : "modelarts.vm.cpu.4ud",
  "count" : 2,
  "azs" : [ {
    "az" : "cn-north-7c",
    "count" : 2
  } ]
}
```

Status code: 400

Bad request

```
{
  "error_code" : "ModelArts.50004000",
  "error_msg" : "Bad request"
}
```

Status code: 404

Not found.

```
{
  "error_code" : "ModelArts.50015001",
  "error_msg" : "pool not found"
}
```

Status Codes

Status Code	Description
200	OK
400	Bad request
404	Not found.

Error Codes

See [Error Codes](#).

9.17 Monitoring a Resource Pool

Function

This API is used to obtain the real-time or historical monitoring information about a specified resource pool. This API is used when you need to obtain the monitoring data of a resource pool in real time, such as resource usage, performance status, or historical data. Before using this API, ensure that the resource pool exists and you have the administrator permissions. After the API is called, the system returns the monitoring information of the resource pool, including the resource usage, performance metrics, and historical trends. If the resource pool does not exist, the user does not have the permission to perform the operation, or the resource pool is unavailable, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/pools/{pool_name}/monitor

Table 9-262 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool ID. The value is obtained from the metadata.name field in the resource pool details. Constraints: N/A <i>*Range:</i> The value can contain 36 to 63 characters. It must start with a lowercase letter and cannot end with a hyphen (-). Digits and hyphens (-) are allowed. Default Value: N/A

Table 9-263 Query Parameters

Parameter	Mandatory	Type	Description
time_range	No	String	Definition: Time range for obtaining the monitored information of a resource pool, in the format of <i>startTimeInMillis.endTimeInMillis.durationInMinutes</i>. Specifically, <i>startTimeInMillis</i> indicates start time (UTC) of the query, in milliseconds. If this parameter is set to -1, the server calculates the start time as follows: $endTimeInMillis - durationInMinutes \times 60 \times 1000$. <i>endTimeInMillis</i> indicates end time (UTC) of the query, in milliseconds. If this parameter is set to -1, the server calculates the end time as follows: $startTimeInMillis + durationInMinutes \times 60 \times 1000$. If the calculated end time is later than the current system time, the current system time is used. <i>durationInMinutes</i> indicates the query time span, in minutes. The value must be greater than 0, and also greater than or equal to the result of $(endTimeInMillis - startTimeInMillis) / (60 \times 1000) - 1$. If both the start time and end time are set to -1, the system sets the end time to the current UTC time (in milliseconds) and calculates the start time as follows: $endTimeInMillis - durationInMinutes \times 60 \times 1000$. For example, -1.-1.60 indicates the latest 60 minutes. Constraints: In a single request, the following condition must be met: $durationInMinutes \times 60 / \text{period} \leq 1,440$ Range: N/A

Parameter	Mandatory	Type	Description
			Default Value: -1.-1.60 Query time range. The default value is -1.-1.60. The format is <i>startTimeInMillis.endTimeInMillis.durationInMinutes</i>. Details about the parameter are as follows: • startTimeInMillis: Start time (UTC) of the query, in milliseconds. If this parameter is set to -1, the server calculates the start time as follows: $endTimeInMillis - durationInMinutes \times 60 \times 1000$. • endTimeInMillis: End time (UTC) of the query, in milliseconds. If this parameter is set to -1, the server calculates the end time as follows: $startTimeInMillis + durationInMinutes \times 60 \times 1000$. If the calculated end time is later than the current system time, the current system time is used. • durationInMinutes: time span, in minutes. The value must be greater than 0, and also greater than or equal to the result of $(endTimeInMillis - startTimeInMillis) / (60 \times 1000) - 1$. If both the start time and end time are set to -1, the system sets the end time to the current UTC time (in milliseconds) and calculates the start time as follows: $endTimeInMillis - durationInMinutes \times 60 \times 1000$. For example, -1.-1.60 indicates the latest 60 minutes. Constraint: In a single request, the following condition must be met:

Parameter	Mandatory	Type	Description
			$durationInMinutes \times 60 / period \leq 1440$
statistics	No	String	Definition: Statistical method of resource pool monitoring information at a specified time granularity Constraints: N/A Range: The options are as follows: • maximum: maximum value statistics (default setting) • minimum: minimum value statistics • sum: sum statistics • average: average value statistics • sampleCount: sampling statistics Default Value: maximum
period	No	String	Definition: Time granularity for obtaining the monitored information of a resource pool, in seconds Constraints: N/A Range: The options are as follows: • 60: The granularity is 1 minute, which is the default value. • 300: The granularity is 5 minutes. • 900: The granularity is 15 minutes. • 3600: The granularity is 1 hour. Default Value: 60

Request Parameters

None

Response Parameters

Status code: 200

Table 9-264 Response body parameters

Parameter	Type	Description
metrics	Array of metrics objects	Definition: Monitoring metric data of a resource pool.

Table 9-265 metrics

Parameter	Type	Description
metric	metric object	Definition: Metric description.
dataPoints	Array of dataPoints objects	Definition: Monitoring metric data.

Table 9-266 metric

Parameter	Type	Description
dimensions	Array of dimensions objects	Definition: Metric dimension information.
metricName	String	Definition: Metric name. Range: • cpuUsage: CPU usage • memUsedRate: memory usage • gpuUtil: GPU usage • gpuMemUsage: used GPU memory • npuUtil: NPU usage • npuMemUsage: used NPU memory • diskCapacity: disk capacity • diskAvailableCapacity: available disk capacity • diskUsedRate: disk usage

Parameter	Type	Description
namespace	String	Definition: Metric namespace. Range: • PAAS.CONTAINER: namespace of component, instance, process, and container metrics • PAAS.NODE: namespace of host, network, disk, and file system metrics • PAAS.SLA: namespace of SLA metrics • PAAS.AGGR: namespace of cluster metrics • CUSTOMMETRICS: default namespace of custom metrics

Table 9-267 dimensions

Parameter	Type	Description
name	String	Definition: Metric dimension name. Range: metric name. Options: • clusterId: cluster ID
value	String	Definition: Metric dimension value. Range: N/A

Table 9-268 dataPoints

Parameter	Type	Description
timestamp	Integer	Definition: Metric data timestamp, in ms. Range: N/A
unit	String	Definition: Metric data unit. Range: • Percent: percentage • Megabytes: MB
statistics	Array of statistics objects	Definition: Metric data value.

Table 9-269 statistics

Parameter	Type	Description
statistic	String	Definition: Statistical method of resource pool monitoring information at a specified time granularity. Range: • maximum: maximum value (default setting) • minimum: minimum value • sum: sum • average: average value • sampleCount: sampling statistics
value	Float	Definition: Metric value. The value -1 indicates that no metric data is available. Range: N/A

Status code: 404**Table 9-270** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Obtain the monitored resource pool information.

```
GET https://{endpoint}/v2/{project_id}/pools/{pool_name}/monitor
{ }
```

Example Responses

Status code: 200

OK

```
{
  "metrics" : [ {
    "metric" : {
      "dimensions" : [ {
        "name" : "clusterId",
```

```
    "value" : "83df17f1-d74c-11ec-a070-0255ac1000c3"
  },
  "metricName" : "cpuUsage",
  "namespace" : "PAAS.AGGR"
},
"dataPoints" : [ {
  "timestamp" : 1655193600000,
  "unit" : "Percent",
  "statistics" : [ {
    "statistic" : "average",
    "value" : 7.944
  } ]
}, {
  "timestamp" : 1655197200000,
  "unit" : "Percent",
  "statistics" : [ {
    "statistic" : "average",
    "value" : 7.88
  } ]
} ]
}, {
  "metric" : {
    "dimensions" : [ {
      "name" : "clusterId",
      "value" : "83df17f1-d74c-11ec-a070-0255ac1000c3"
    } ],
    "metricName" : "memUsedRate",
    "namespace" : "PAAS.AGGR"
  },
  "dataPoints" : [ {
    "timestamp" : 1655193600000,
    "unit" : "Percent",
    "statistics" : [ {
      "statistic" : "average",
      "value" : 13.83
    } ]
  }, {
    "timestamp" : 1655197200000,
    "unit" : "Percent",
    "statistics" : [ {
      "statistic" : "average",
      "value" : 13.836
    } ]
  } ]
}, {
  "metric" : {
    "dimensions" : [ {
      "name" : "clusterId",
      "value" : "83df17f1-d74c-11ec-a070-0255ac1000c3"
    } ],
    "metricName" : "gpuUtil",
    "namespace" : "PAAS.AGGR"
  },
  "dataPoints" : [ {
    "timestamp" : 1655193600000,
    "unit" : "Percent",
    "statistics" : [ {
      "statistic" : "average",
      "value" : -1
    } ]
  }, {
    "timestamp" : 1655197200000,
    "unit" : "Percent",
    "statistics" : [ {
      "statistic" : "average",
      "value" : -1
    } ]
  } ]
}, {
```

```
"metric" : {
  "dimensions" : [ {
    "name" : "clusterId",
    "value" : "83df17f1-d74c-11ec-a070-0255ac1000c3"
  } ],
  "metricName" : "gpuMemUsage",
  "namespace" : "PAAS.AGGR"
},
"dataPoints" : [ {
  "timestamp" : 1655193600000,
  "unit" : "Percent",
  "statistics" : [ {
    "statistic" : "average",
    "value" : -1
  } ]
}, {
  "timestamp" : 1655197200000,
  "unit" : "Percent",
  "statistics" : [ {
    "statistic" : "average",
    "value" : -1
  } ]
} ],
{
  "metric" : {
    "dimensions" : [ {
      "name" : "clusterId",
      "value" : "83df17f1-d74c-11ec-a070-0255ac1000c3"
    } ],
    "metricName" : "npuUtil",
    "namespace" : "PAAS.AGGR"
  },
  "dataPoints" : [ {
    "timestamp" : 1655193600000,
    "unit" : "",
    "statistics" : [ {
      "statistic" : "average",
      "value" : -1
    } ]
  }, {
    "timestamp" : 1655197200000,
    "unit" : "",
    "statistics" : [ {
      "statistic" : "average",
      "value" : -1
    } ]
  } ]
}, {
  "metric" : {
    "dimensions" : [ {
      "name" : "clusterId",
      "value" : "83df17f1-d74c-11ec-a070-0255ac1000c3"
    } ],
    "metricName" : "npuMemUsage",
    "namespace" : "PAAS.AGGR"
  },
  "dataPoints" : [ {
    "timestamp" : 1655193600000,
    "unit" : "",
    "statistics" : [ {
      "statistic" : "average",
      "value" : -1
    } ]
  }, {
    "timestamp" : 1655197200000,
    "unit" : "",
    "statistics" : [ {
      "statistic" : "average",
      "value" : -1
    } ]
  } ]
}
```

```
    }]  
  }]  
}, {  
  "metric": {  
    "dimensions": [ {  
      "name": "clusterId",  
      "value": "83df17f1-d74c-11ec-a070-0255ac1000c3"  
    } ],  
    "metricName": "diskAvailableCapacity",  
    "namespace": "PAAS.AGGR"  
  },  
  "dataPoints": [ {  
    "timestamp": 1655193600000,  
    "unit": "Megabytes",  
    "statistics": [ {  
      "statistic": "average",  
      "value": 834383.4  
    } ]  
  }, {  
    "timestamp": 1655197200000,  
    "unit": "Megabytes",  
    "statistics": [ {  
      "statistic": "average",  
      "value": 834379.2  
    } ]  
  } ]  
}, {  
  "metric": {  
    "dimensions": [ {  
      "name": "clusterId",  
      "value": "83df17f1-d74c-11ec-a070-0255ac1000c3"  
    } ],  
    "metricName": "diskCapacity",  
    "namespace": "PAAS.AGGR"  
  },  
  "dataPoints": [ {  
    "timestamp": 1655193600000,  
    "unit": "Megabytes",  
    "statistics": [ {  
      "statistic": "average",  
      "value": 1105920  
    } ]  
  }, {  
    "timestamp": 1655197200000,  
    "unit": "Megabytes",  
    "statistics": [ {  
      "statistic": "average",  
      "value": 1105920  
    } ]  
  } ]  
}, {  
  "metric": {  
    "dimensions": [ {  
      "name": "clusterId",  
      "value": "83df17f1-d74c-11ec-a070-0255ac1000c3"  
    } ],  
    "metricName": "diskUsedRate",  
    "namespace": "PAAS.AGGR"  
  },  
  "dataPoints": [ {  
    "timestamp": 1655193600000,  
    "unit": "Percent",  
    "statistics": [ {  
      "statistic": "average",  
      "value": 24.553  
    } ]  
  }, {  
    "timestamp": 1655197200000,  
    "unit": "Percent",
```

```
"statistics" : [ {  
  "statistic" : "average",  
  "value" : 24.553  
}]  
}]  
}]  
}]  
}
```

Status code: 404

Not found.

```
{  
  "error_code" : "ModelArts.50015001",  
  "error_msg" : "pool not found"  
}
```

Status Codes

Status Code	Description
200	OK
404	Not found.

Error Codes

See [Error Codes](#).

9.18 Resource Pool Statistics

Function

This API is used to obtain the statistics of a specified resource pool. This API is used when you need to obtain the resource usage, allocation, or usage of a resource pool. Before using this API, ensure that the resource pool exists and you have the administrator permissions. After the API is called, the system returns the statistics of the resource pool, including the total resource usage, allocated resources, usage, and resource allocation trend. If the resource pool does not exist, the user does not have the permission to perform the operation, or the resource pool is unavailable, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/statistics/pools

Table 9-271 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 9-272 Query Parameters

Parameter	Mandatory	Type	Description
workspaceId	No	String	Definition: Workspace. The default value is 0 . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 9-273 Response body parameters

Parameter	Type	Description
statistics	statistics object	Definition: Resource pool statistics.
operationTime	String	Definition: Time when the statistics are collected. Range: N/A

Table 9-274 statistics

Parameter	Type	Description
status	status object	Definition: Statistics about resource pools in different statuses.

Table 9-275 status

Parameter	Type	Description
creating	Integer	Definition: Statistics about resource pools that are being created. Range: N/A
created	Integer	Definition: Number of resource pools that are successfully created. Range: N/A
failed	Integer	Definition: Number of resource pools that failed to be created in the last three days. The maximum value is 500 . Range: N/A
pending	Integer	Definition: Number of resource pools in the waiting status, usually yearly/monthly pools that have not been paid. Range: N/A

Status code: 500**Table 9-276** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

This interface is used to query resource pool monitoring information.

```
GET https://{endpoint}/v2/{project_id}/pools
{ }
```

Example Responses

Status code: 200

OK.

```
{
  "statistics" : {
    "status" : {
```



```
{
  "created" : 3,
  "creating" : 0,
  "failed" : 1,
  "pending" : 0
},
"operationTime" : "2022-12-05 11:15:59.329633162 +0000 UTC"
}
```

Status code: 500

Internal error

```
{
  "error_code" : "ModelArts.50005000",
  "error_msg" : "internal error"
}
```

Status Codes

Status Code	Description
200	OK.
500	Internal error

Error Codes

See [Error Codes](#).

9.19 Obtaining Resource Specifications

Function

This API is used to obtain available resource specifications. This API is used when you need to view or select resource specifications to create resource pools, allocate resources, or learn available resource specifications. Before using this API, ensure that you have the required permissions (such as administrator permissions or resource management permissions). After the API is called, the system returns the resource specifications, including the specification ID, name, number of CPUs, memory size, and storage capacity. If you do not have the required permission or the resource specifications are not configured, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/resourceflavors

Table 9-277 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 9-278 Query Parameters

Parameter	Mandatory	Type	Description
continue	No	String	Definition: Offset parameter of the pagination query Constraints: N/A Range: The value is obtained from the metadata.continue field in the response to the last pagination query. An empty value indicates no offset. Default Value: N/A
limit	No	Integer	Definition: Number of resources returned in a single pagination query Constraints: N/A Range: 0 to 500 Default Value: 500
labelSelector	No	String	Definition: Tag filtering query Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 9-279 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version of a resource. Range: • v1: The current resource version is v1.
kind	String	Definition: Resource type. Range: • ResourceFlavorList: resource flavors
metadata	metadata object	Definition: Metadata of a resource flavor list.
items	Array of ResourceFlavor objects	Definition: Resource flavor list. Range: N/A

Table 9-280 metadata

Parameter	Type	Description
continue	String	Definition: Offset parameter of the pagination query. Range: The value is obtained from the metadata.continue field in the response to the last pagination query. An empty value indicates no offset.
remainingItemCount	Integer	Definition: Number of remaining resources in a pagination query. Default Value: N/A

Table 9-281 ResourceFlavor

Parameter	Type	Description
apiVersion	String	Definition: API version of a resource. Range: • v1: The current resource version is v1.
kind	String	Definition: Resource type. Range: • ResourceFlavor: resource flavor

Parameter	Type	Description
metadata	metadata object	Definition: Metadata of a resource flavor.
spec	ResourceFlavorSpec object	Definition: Specifications of a resource flavor.
status	ResourceFlavorStatus object	Definition: Status of a resource flavor.

Table 9-282 metadata

Parameter	Type	Description
name	String	Definition: Resource flavor ID. Constraints: N/A Range: N/A Default Value: N/A
labels	ResourceFlavorLabel object	Definition: Tags of a resource flavor.
annotations	ResourceFlavorAnnotation object	Definition: Comments of a resource flavor.

Table 9-283 ResourceFlavorLabel

Parameter	Type	Description
os.modelarts/scope	String	Definition: Job types supported by the resource flavor. Use periods (.) to separate multiple job types. Constraints: N/A Range: N/A Default Value: N/A

Table 9-284 ResourceFlavorAnnotation

Parameter	Type	Description
os.modelarts.flavor/image.filter	String	Definition: Filter criteria of private images supported by the resource flavor. Constraints: N/A Range: N/A Default Value: N/A

Table 9-285 ResourceFlavorSpec

Parameter	Type	Description
type	String	Definition: Resource flavor type. Range: • Dedicate: physical resource flavor Physical resource flavors can be used to create node resources. [- Logical: logical resource flavor] (tag:hcs0)
cpuArch	String	Definition: Compute architecture of a resource flavor. Range: • x86: x86 architecture • arm64: Arm architecture
cpu	String	Definition: Number of CPU cores of a resource flavor. Range: N/A
memory	String	Definition: Memory size of a resource flavor, in GiB. Range: N/A
gpu	gpu object	Definition: GPU resource information of a resource flavor.
npu	npu object	Definition: NPU information of a resource flavor. Constraints: N/A Range: N/A Default Value: N/A
dataVolume	Array of dataVolume objects	Definition: Storage resource information of a resource flavor.

Parameter	Type	Description
billingModes	Array of integers	Definition: Billing mode supported by a resource flavor.
billingCode	String	Definition: Billing code of a resource flavor. Range: N/A
jobFlavors	Array of strings	Definition: List of job types supported by a resource flavor.

Table 9-286 gpu

Parameter	Type	Description
type	String	Definition: Type of GPUs of a resource flavor. Range: N/A
size	String	Definition: Number of GPUs of a resource flavor. Range: N/A

Table 9-287 npu

Parameter	Type	Description
type	String	Definition: Type of NPUs of a resource flavor. Range: N/A
size	String	Definition: Number of NPUs of a resource flavor. Range: N/A

Table 9-288 dataVolume

Parameter	Type	Description
volumeType	String	Definition: Disk type. Range: • SSD: ultra-high I/O disk • GPSSD: general-purpose SSD • SAS: high I/O disk

Parameter	Type	Description
size	String	Definition: Disk size, in GiB. Range: N/A

Table 9-289 ResourceFlavorStatus

Parameter	Type	Description
phase	Map<String,String>	Definition: Capacity status of a resource flavor. The value is in the key-value pair format. The key is the AZ code, and the value is the resource status of the AZ. The options are as follows: • normal: normal • soldout

Status code: 401**Table 9-290** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 9-291** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

This API is used to obtain resource specifications.

```
GET https://{endpoint}/v1/{project_id}/resourceflavors
{ }
```

Example Responses

Status code: 200

OK

```
{
  "kind" : "ResourceFlavorList",
  "apiVersion" : "v1",
  "metadata" : { },
  "items" : [ {
    "kind" : "ResourceFlavor",
    "apiVersion" : "v1",
    "metadata" : {
      "name" : "modelarts.vm.cpu8u32g",
      "labels" : { }
    },
    "spec" : {
      "cpuArch" : "x86",
      "cpu" : "8",
      "memory" : "32Gi",
      "type" : "Dedicate",
      "billingCode" : "modelarts.vm.cpu.8ud",
      "billingModes" : [ 0 ]
    },
    "status" : {
      "phase" : {
        "cn-north-7a" : "soldout",
        "cn-north-7b" : "soldout",
        "cn-north-7c" : "normal"
      }
    }
  }
]
}
```

Status code: 401

Authorization failed.

```
{
  "error_code" : "ModelArts.50001000",
  "error_msg" : "token is invalid"
}
```

Status code: 404

Not found.

```
{
  "error_code" : "ModelArts.50005101",
  "error_msg" : "Resourceflavor not found."
}
```

Status Codes

Status Code	Description
200	OK
401	Authorization failed.

Status Code	Description
404	Not found.

Error Codes

See [Error Codes](#).

9.20 Obtain Jobs in a Resource Pool

Function

This API is used to obtain the job list in a specified dedicated resource pool. This API is used when you need to obtain details about a dedicated resource pool, such as resource usage, job status, or resource allocation. Before using this API, ensure that the dedicated resource pool exists and you have the required permissions (such as administrator permissions or resource management permissions). After the API is called, the system returns the job list of the dedicated resource pool, including the job ID, name, status, and resource usage. If the dedicated resource pool does not exist, the user does not have the operation permission, or the resource pool is unavailable, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/pools/{pool_name}/workloads

Table 9-292 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
pool_name	Yes	String	Definition: Resource pool ID. The value is obtained from the metadata.name field in the resource pool details. Constraints: N/A <i>*Range:</i> The value can contain 36 to 63 characters. It must start with a lowercase letter and cannot end with a hyphen (-). Digits and hyphens (-) are allowed. Default Value: N/A

Table 9-293 Query Parameters

Parameter	Mandatory	Type	Description
type	No	String	Definition: Job types based on which the resource pool job list is queried Constraints: N/A Range: The options are as follows: • train: training job • infer: inference service • notebook: notebook job • x-infer: new inference job Default Value: N/A

Parameter	Mandatory	Type	Description
status	No	String	Definition: Job statuses based on which the resource pool job list is queried Constraints: N/A Range: The options are as follows: • Queue: jobs in the queue • Pending: pending jobs • Abnormal: abnormal jobs • Terminating: jobs being terminated • Creating: jobs being created • Running: running jobs • Completed: completed jobs • Terminated: terminated jobs • Failed: jobs that fail to be executed Default Value: N/A
sort	No	String	Definition: Sorting criteria for querying jobs in a resource pool Constraints: N/A Range: The options are as follows: • create_time: Sort jobs by creation time. Default Value: N/A
ascend	No	Boolean	Definition: Whether jobs in a resource pool to be queried are sorted in ascending order Constraints: This parameter must be used with the sort query parameter. Range: The options are as follows: • true: in ascending order • false: in descending order Default Value: false

Parameter	Mandatory	Type	Description
offset	No	String	Definition: Offset of pagination query Constraints: N/A Range: 0 to 2147483647 Default Value: 0
limit	No	Integer	Definition: Number of resources returned in a single pagination query Constraints: N/A Range: 0 to 500 Default Value: 500

Request Parameters

None

Response Parameters

Status code: 200

Table 9-294 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource Range: The options are as follows: • v1: The current resource version is v1.
kind	String	Definition: Resource type Range: The options are as follows: • WorkloadList: Job list
items	Array of Workload objects	Definition: Job list in the resource pool.

Table 9-295 Workload

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource Range: The options are as follows: • v1: The current resource version is v1.
kind	String	Definition: Resource type Range: The options are as follows: • Workload: Resource pool job
type	String	Definition: Service type of a job in the resource pool Range: The options are as follows: • train: training job • infer: inference service • notebook: notebook job
namespace	String	Definition: Namespace to which a job in a cluster belongs Range: N/A
name	String	Definition: Job name Range: N/A
jobName	String	Definition: Name of the upper-layer service to which a job belongs Range: N/A
uid	String	Definition: Job ID Range: N/A
jobUUID	String	Definition: ID of the upper-layer service to which a job belongs Range: N/A
flavor	String	Definition: Resource specifications of a job Range: N/A
status	String	Definition: Job status. Range: N/A
resourceRequirement	resourceRequirement object	Definition: Resource volume requested for job running.
priority	String	Definition: Job priority Range: N/A

Parameter	Type	Description
runningDuration	Integer	Definition: Duration of job running, in seconds Range: N/A
pendingDuration	Integer	Definition: Queue time of a job, in seconds Range: N/A
pendingPosition	Integer	Definition: Position of a job in the queue Range: N/A
createTime	Integer	Definition: Unix timestamp of the job creation, in milliseconds Range: N/A
gvk	String	Definition: Kubernetes resource type, group, and version of a job Range: N/A
hostIps	String	Definition: IP addresses of the nodes where a job is running. The values are separated with commas (.). Range: N/A
nodes	Array of WorkloadNodeVO objects	Definition: Node resource information occupied by a running job.

Table 9-296 resourceRequirement

Parameter	Type	Description
cpu	String	Definition: CPU resources used for job running Range: N/A
memory	String	Definition: Memory resources used for job running Range: N/A
nvidia.com/gpu	String	Definition: GPU resources used for job running Range: N/A
huawei.com/ascend-snt3	String	Definition: snt3 NPU resources used for job running Range: N/A

Parameter	Type	Description
huawei.com/ascend-snt9	String	Definition: snt9 NPU resources used for job running Range: N/A

Table 9-297 WorkloadNodeVO

Parameter	Type	Description
hostIp	String	Definition: IP address of the node where a job runs Range: N/A
npuTopologyPlacement	String	Definition: Topology of the NPU card resource usage. The value is a 16-bit binary number, where the first bit from the right indicates card 1. 1 indicates occupied, and 0 indicates idle. For example, if cards 1 and 15 are occupied in a 16-card model, the value is 0100000000000001 . If cards 1 and 7 are occupied in an 8-card model, the returned value is 0000000001000001 . Range: N/A
resourceRequirement	ResourceRequirementVO object	Definition: Resources used for job running.

Table 9-298 ResourceRequirementVO

Parameter	Type	Description
cpu	String	Definition: CPU resources used for job running. Range: N/A
memory	String	Definition: Memory resources used for job running. Range: N/A
nvidia.com/gpu	String	Definition: GPU resources used for job running. Range: N/A
huawei.com/ascend-310	String	Definition: snt3 NPU resources used for job running. Range: N/A

Parameter	Type	Description
huawei.com/ascend-1980	String	Definition: snt9 NPU resources used for job running. Range: N/A

Status code: 400

Table 9-299 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404

Table 9-300 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://{endpoint}/v2/{project_id}/pools/{pool_name}/workloads
```

Example Responses

Status code: 200

OK.

```
{
  "kind": "WorkloadList",
  "apiVersion": "v1",
  "items": [ {
    "kind": "Workload",
    "apiVersion": "v1",
    "uid": "837ad51b-7c39-41f7-82e9-ea904cbb8ed6",
    "jobUUID": "19d05662-0f87-43c7-8426-1ccf4b30179b",
    "name": "ma-job-19d05662-0f87-43c7-8426-1ccf4b30179b",
    "jobName": "DI-job-202412022313-hlyh5",
```



```
{
  "type" : "train",
  "namespace" : "os-pool-train-dSnt9b-memarts1-1ccf4b30179b",
  "status" : "Running",
  "resourceRequirement" : {
    "cpu" : "360 Cores",
    "memory" : "2.36 TiB"
  },
  "priority" : "1",
  "createTime" : 1733152598000,
  "runningDuration" : 1857065,
  "pendingPosition" : -1,
  "gvk" : "batch.volcano.sh/v1alpha1, Kind=Job",
  "hostIps" : "192.168.81.93,192.168.73.217",
  "nodes" : [ {
    "hostIp" : "192.168.81.93",
    "npuTopologyPlacement" : "0x00ff",
    "resourceRequirement" : {
      "cpu" : "180 Cores",
      "memory" : "1.18 TiB",
      "huawei.com/ascend-1980" : "8"
    }
  }, {
    "hostIp" : "192.168.73.217",
    "npuTopologyPlacement" : "0x00ff",
    "resourceRequirement" : {
      "cpu" : "180 Cores",
      "memory" : "1.18 TiB",
      "huawei.com/ascend-1980" : "8"
    }
  } ]
}
```

Status code: 400

Bad Request.

```
{
  "error_code" : "ModelArts.50004000",
  "error_msg" : "Bad request."
}
```

Status code: 404

Not Found.

```
{
  "error_code" : "ModelArts.50015001",
  "error_msg" : "Pool {name} not found."
}
```

Status Codes

Status Code	Description
200	OK.
400	Bad Request.
404	Not Found.

Error Codes

See [Error Codes](#).

9.21 Querying dedicated resource pool Job Statistics

Function

This API is used to obtain job statistics of a dedicated resource pool. This API is used when you need to obtain the job running information, resource usage, or job status distribution of a dedicated resource pool. Before using this API, ensure that the dedicated resource pool exists and you have the required permissions (such as administrator permissions or resource management permissions). After the API is called, the system returns the job statistics of the dedicated resource pool, including the total number of jobs, number of running jobs, number of completed jobs, and resource usage. If the dedicated resource pool does not exist, the user does not have the operation permission, or the resource pool is unavailable, the API returns an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/statistics/pools/{pool_name}/workloads

Table 9-301 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool to which the job belongs. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 9-302 Response body parameters

Parameter	Type	Description
statistics	statistics object	Definition: Job statistics.

Table 9-303 statistics

Parameter	Type	Description
total	Integer	Definition: Number of statistics lists. Range: N/A
items	Array of WorkloadStatistics objects	Definition: Statistics of a specific job type.

Table 9-304 WorkloadStatistics

Parameter	Type	Description
type	String	Definition: Job type. Range • train: training job • infer: inference job • notebook: notebook job
total	Integer	Definition: Number of jobs. Range: N/A
status	status object	Definition: Number of jobs in different states.

Table 9-305 status

Parameter	Type	Description
Queue	Integer	Definition: Number of queuing jobs. Range: N/A
Pending	Integer	Definition: Number of pending jobs. Range: N/A

Parameter	Type	Description
Abnormal	Integer	Definition: Number of abnormal jobs. Range: N/A
Terminating	Integer	Definition: Number of jobs being terminated. Range: N/A
Creating	Integer	Definition: Number of jobs being created. Range: N/A
Running	Integer	Definition: Number of running jobs. Range: N/A
Completed	Integer	Definition: Number of completed jobs. Range: N/A
Terminated	Integer	Definition: Number of terminated jobs. Range: N/A
Failed	Integer	Definition: Number of jobs that fail to be executed. Range: N/A

Status code: 400**Table 9-306** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 9-307** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A

Parameter	Type	Description
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://{endpoint}/v2/{project_id}/statistics/pools/{pool_name}/workloads
```

Example Responses

Status code: 400

Bad Request.

```
{
  "error_code" : "ModelArts.50004000",
  "error_msg" : "Bad request."
}
```

Status code: 404

Not Found.

```
{
  "error_code" : "ModelArts.50015001",
  "error_msg" : "Pool {name} not found."
}
```

Status Codes

Status Code	Description
200	OK.
400	Bad Request.
404	Not Found.

Error Codes

See [Error Codes](#).

10 DevServer Management

10.1 Obtaining All DevServer Instances of a User

Function

This API is used to obtain all DevServer instances of a user.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers

Table 10-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID Constraints: Mandatory Range: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Default Value: N/A

Table 10-2 Query Parameters

Parameter	Mandatory	Type	Description
owner	No	String	Definition: User ID of the instance Constraints: Optional Range: This value contains 1 to 64 characters. Lowercase letters, digits, and hyphens (-) are allowed. This parameter is valid only when the account is a big account or has the admin permission. Generally, the value is the ID of the current login user. Default Value: N/A
sort_dir	No	String	Definition: Sorting mode Constraints: Optional Range: • ASC: ascending order • DESC: descending order Default Value: ASC
sort_key	No	String	Definition: Sorting field Constraints: Optional Range: • createTime: sorting by creation time (default value) • updateTime: sorting by update time Default Value: createTime
limit	No	Integer	Definition: Number of records on each page Constraints: Optional Range: 0 to 1024 Default Value: 10
offset	No	Integer	Definition: Start offset of the records on each page Constraints: Optional Range: 0 to 2147483647 Default Value: 0

Request Parameters

None

Response Parameters

Status code: 200

Table 10-3 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Value range: 1 to 2097152
data	Array of ServerResponse objects	Definition: DevServer instance list.
pages	Integer	Definition: Total number of pages. Value range: 1 to 2097152
size	Integer	Definition: Number of records on each page. Maximum number of instances returned on each page. The value of this parameter directly affects the amount of returned data. You can adjust the value to optimize the query performance or increase the information volume of a single request. Range: 1 to 1024
total	Long	Definition: Total number of records. Total number of instances that meet the search criteria. This field is used to learn the overall data scale. Range: 1 to 2147483647

Table 10-4 ServerResponse

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A

Parameter	Type	Description
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-5 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Table 10-6 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-7 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-8 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-9 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-10 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Example Requests

```
GET https://{endpoint}/v1/{project_id}/dev-servers
```

Example Responses

Status code: 200

OK

```
{
  "current" : 0,
  "data" : [ {
    "charging_mode" : "POST_PAID",
    "cloud_server" : {
      "id" : "eb8b4e32-afc9-4f71-8372-1f55f3d7ab28",
      "type" : "ECS"
    },
    "create_at" : 1699352013484,
    "endpoints" : [ {
      "service" : "SSH",
      "uri" : "192.168.0.23"
    } ],
    "flavor" : "Si2.large.4",
    "id" : "c65c4f27-f791-452b-9098-a2726fa2e922",
    "image" : {
      "arch" : "X86",
      "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
      "name" : "Ubuntu18.04_x86_64_CPU",
      "server_type" : "ECS"
    },
    "name" : "El-evs-01",
    "status" : "RUNNING",
    "update_at" : 1699352058465,
    "vpc_id" : "05982b48-a70f-43a1-a2b0-1fe36a236172"
  }, {
    "charging_mode" : "POST_PAID",
    "cloud_server" : {
      "type" : "ECS"
    },
    "create_at" : 1699348284990,
    "flavor" : "Si2.large.4",
    "id" : "62383738-e52a-450a-9f84-f9e705402be8",
    "image" : {
      "arch" : "X86",
      "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
      "name" : "Ubuntu18.04_x86_64_CPU",
      "server_type" : "ECS"
    }
  }
]
```



```
},
"name" : "El-evs-1107",
"status" : "CREATING",
"update_at" : 1699348285077
}],
"pages" : 1,
"size" : 2,
"total" : 2
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.2 Obtaining the Hyper Cluster Details List

Function

This API is used to obtain the hyper cluster details list.

Constraints

No constraints.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/hyper-clusters

Table 10-11 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. Constraints: Mandatory. Range: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Default Value: N/A

Table 10-12 Query Parameters

Parameter	Mandatory	Type	Description
type	No	String	Definition: Hyper cluster type. Constraints: Optional. Range • HPS: Default value, which is used to query the hyper cluster of the HPS model. • ECS: Query the hyper cluster of the ECS model. Default Value: HPS

Request Parameters

None

Response Parameters

Status code: 200

Table 10-13 Response body parameters

Parameter	Type	Description
hyper_clusters	Array of HyperCluster objects	Definition: Hyper cluster list.

Table 10-14 HyperCluster

Parameter	Type	Description
id	String	Definition: ID of the hyper cluster. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the hyper cluster. Range: ^[-_a-zA-Z0-9]{1,64}\$
network_info	Array of network_info objects	Network information.

Table 10-15 network_info

Parameter	Type	Description
hyper_cluster_subnet_id	String	Definition: Subnet name of the hyper cluster. Range: ^[-_a-zA-Z0-9]{1,64}\$
is_default	Boolean	Definition: Indicates whether the network is default. Constraints: N/A Range • true: default network • false: non-default network

Example Requests

GET https://{endpoint}/v1/{project_id}/dev-servers/hyper-clusters

Example Responses

Status code: 200

OK

```
{
  "hyper_clusters": [ {
    "id": "e05f463f-b8d0-4377-bb48-a72c67432590",
    "name": "kat3ned-8-752t.80xlarge.8.matrix-6e35",
    "network_info": [ {
      "hyper_cluster_subnet_id": "a7f3607c-4d7d-4bd0-b922-5a8f1e3a4f48",
      "is_default": true
    } ]
  }, {
    "id": "c9292bec-40eb-4cac-94ea-d7ce0b7941a5",
    "name": "test-kat3ne-8.48xlarge.8.800t.matrix",
    "network_info": [ {
      "hyper_cluster_subnet_id": "730a875a-2f98-4d4f-b93e-11ae072173d7",
      "is_default": true
    } ]
  } ]
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.3 Creating a DevServer Instance

Function

This API is used to create a Lite Server, ECS, BMS, and supernode server.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/dev-servers

Table 10-16 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID Constraints: Mandatory Range: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Default Value: N/A

Request Parameters

Table 10-17 Request body parameters

Parameter	Mandatory	Type	Description
admin_pass	No	String	Definition: Password used for logging in to the server. Select either admin_pass or key_pair_name. The password must: • Contain 8 to 26 characters. • Contain at least three of the following types: uppercase letters, lowercase letters, digits, and special characters (!@%-_+=[{ }],./?). • Cannot be the username or the username spelled backwards. • Cannot contain root, administrator, or their reverse. Constraints: admin_pass and key_pair_name cannot exist at the same time. Range: The value must contain 8 to 26 characters and meet the preceding password rules. Default Value: N/A
arch	No	String	Definition: Architecture type of a server flavor. Constraints: N/A Range: • X86: The CPU architecture is x86. • ARM: The CPU architecture is Arm. Default Value: N/A

Parameter	Mandatory	Type	Description
availability_zone	No	String	Definition: AZ where the server is located. Constraints: N/A Range: The value can contain 1 to 256 characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Default Value: N/A
charging_info	No	ChargingInfo object	Definition: Billing mode of a server.
count	No	Integer	Definition: Number of servers purchased at a time. Constraints: N/A Range: 1 to 100 Default Value: N/A
enterprise_project_id	No	String	Definition: Enterprise ID. Constraints: N/A Range: The value can contain 1 to 36 characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Default Value: N/A
flavor	Yes	String	Definition: Server flavor name. Constraints: N/A Range: The value can contain 1 to 128 characters. Only letters, digits, and periods (.) are allowed. Default Value: N/A
image_id	Yes	String	Definition: Server image ID. Constraints: N/A Range: The value must be a string of 36 characters in UUID format. Default Value: N/A

Parameter	Mandatory	Type	Description
key_pair_name	No	String	Definition: Key pair name used for logging in to the server. Select either admin_pass or key_pair_name. Note that supernodes can be created only using key pairs. Constraints: admin_pass and key_pair_name cannot exist at the same time. Range: The value can contain 1 to 64 characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Default Value: N/A
name	Yes	String	Definition: Server name. Constraints: N/A Range: The value can contain 1 to 64 characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Default Value: N/A
network	Yes	ServerNetwork object	Definition: Server network information. Constraints: N/A Range: See #/definitions/ServerNetwork. Default Value: N/A
root_volume	No	EvsVolume object	Definition: System disk information of a server. Constraints: N/A Range: See #/definitions/EvsVolume. Default Value: N/A
data_volume	No	ServerDataVolume object	Definition: Data disk information of a server. Constraints: N/A Range: See #/definitions/ServerDataVolume. Default Value: N/A

Parameter	Mandatory	Type	Description
server_type	No	String	Definition: Server type. Constraints: N/A Range: • BMS • ECS • HPS: supernode server Default Value: N/A
userdata	No	String	Definition: Custom data to be injected into the instance during cloud server creation. Texts and text files can be injected. Example: Before base64 encoding: • Linux server: <pre>#!/bin/bash echo user_test > /home/user.txt</pre> After base64 encoding: • Linux server: <pre>IyEvYmluL2Jhc2gKZWNoYyB1c2VyX3Rlc 3QgPiAvaG9tZS91c2VyLnR4dA==</pre> For details about how to inject custom data, see Injecting User Data . You must be aware of the effects of user_data . You are responsible for the impact and risks. Constraints: • The content of user_data must be encoded with Base64. • The maximum size of the content to be injected (before encoding) is 32K. Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
hps_cluster_id	No	String	Definition: Network information of the supernode cluster. This parameter is required only when a supernode is created. Constraints: This parameter is used only for creating HPS servers. Range: The value must be a string of 36 characters in UUID format. Default Value: N/A

Table 10-18 ChargingInfo

Parameter	Mandatory	Type	Description
charging_mode	Yes	String	Definition: Payment type, which is the billing mode of the server. Constraints: N/A Range: • COMMON: Both yearly/monthly and pay-per-use are supported. • POST_PAID: postpaid charging mode • PRE_PAID: prepaid charging mode Default Value: N/A
is_auto_pay	No	Boolean	Definition: Specifies whether to enable automatic payment. Constraints: N/A Range: • true: The order will be automatically paid. • false: The order will not be automatically paid. Default Value: N/A

Parameter	Mandatory	Type	Description
is_auto_renew	No	Boolean	Definition: Specifies whether to enable auto renewal. Constraints: N/A Range: • true: Auto renewal is enabled. • false: Auto renewal is not enabled. Default Value: N/A
period_num	Yes	Integer	Definition: Number of subscription periods. Constraints: N/A Range: 1 to 11 Default Value: N/A
period_type	Yes	String	Definition: Subscription period type, which defines the time unit for the subscription period. Constraints: N/A Range: • ABSOLUTE • DAY • HOUR • MONTH • WEEK • YEAR Default Value: N/A

Table 10-19 ServerNetwork

Parameter	Mandatory	Type	Description
ipv6_enable	No	Boolean	Definition: Whether IPv6 is enabled when a server is created. Constraints: N/A Range: • true: IPv6 is enabled. • false: IPv6 is disabled. Default Value: N/A

Parameter	Mandatory	Type	Description
roce_id	No	String	Definition: RoCE network ID of the server. Constraints: N/A Range: The value must be a string in UUID format. Default Value: N/A
security_group_id	Yes	String	Definition: ID of the security group to which the server belongs. Constraints: N/A Range: The value must be a string in UUID format. Default Value: N/A
subnet_id	Yes	String	Definition: ID of the subnet where the server is located. Constraints: N/A Range: The value must be a string in UUID format. Default Value: N/A
vpc_id	Yes	String	Definition: ID of the VPC where the server is located. Constraints: N/A Range: The value must be a string in UUID format. Default Value: N/A

Table 10-20 EvsVolume

Parameter	Mandatory	Type	Description
size	No	Integer	Definition: System disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A

Parameter	Mandatory	Type	Description
type	No	String	Definition: System disk type, which indicates the storage type of the system disk. Constraints: N/A Range: • ESSD: extreme SSD • GPSSD: General-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Table 10-21 ServerDataVolume

Parameter	Mandatory	Type	Description
size	Yes	Integer	Definition: Data disk size. Storage space allocated to a data disk. Constraints: N/A Range: 100 to 32,768 GB Default Value: N/A
type	Yes	String	Definition: System disk type, which indicates the storage type of the data disk. Constraints: N/A Range: • ESSD: extreme SSD • GPSSD: General-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Mandatory	Type	Description
count	Yes	Integer	Definition: Number of data disks. Number of data disks allocated to an instance. Constraints: N/A Range: 1 to 8 Default Value: N/A

Response Parameters

Status code: 200

Table 10-22 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[_a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[_a-zA-Z0-9]{1,64}\$

Parameter	Type	Description
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-23 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-24 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-25 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-26 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-27 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-28 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Example Requests

```
POST https://{endpoint}/v1/{project_id}/dev-servers
{
  "name" : "El-evs-1107",
  "flavor" : "Si2.large.4",
  "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
  "network" : {
    "security_group_id" : "150a2c76-1334-45f6-b28f-419f9b1d1742",
    "subnet_id" : "38cf274a-98f9-4f6f-b622-5ed0e4a3db54",
    "vpc_id" : "05982b48-a70f-43a1-a2b0-1fe36a236172"
  },
  "admin_pass" : "@DevServer"
}
```

Example Responses

Status code: 200

OK

```
{
  "charging_mode" : "PRE_PAID",
  "cloud_server" : {
    "type" : "ECS"
  },
  "create_at" : 1699348284990,
  "flavor" : "Si2.large.4",
  "id" : "62383738-e52a-450a-9f84-f9e705402be8",
  "image" : {
    "arch" : "X86",
    "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
    "name" : "Ubuntu18.04_x86_64_CPU",
    "server_type" : "ECS"
  },
  "name" : "El-evs-1107",
  "status" : "CREATING",
  "update_at" : 1699348285077
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.4 Creating a Hyper Cluster

Function

This API is used to create a hyper cluster.

Constraints

No constraints.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/dev-servers/hyper-clusters

Table 10-29 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. Constraints: Mandatory. Range: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Default Value: N/A

Request Parameters

Table 10-30 Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Definition: Name of the hyper cluster. Range: ^[-_a-zA-Z0-9]{1,64}\$
hyper_cluster_subnet_id	No	String	Definition: ID of the hyper cluster. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
type	No	String	Definition: Server type. Constraints: N/A Range • BMS • ECS Default Value: N/A

Response Parameters

Status code: 200**Table 10-31** Response body parameters

Parameter	Type	Description
id	String	Definition: ID of the hyper cluster. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the hyper cluster. Range: ^[-_a-zA-Z0-9]{1,64}\$
network_info	Array of network_info objects	Network information.

Table 10-32 network_info

Parameter	Type	Description
hyper_cluster_subnet_id	String	Definition: Subnet name of the hyper cluster. Range: ^[-_.a-zA-Z0-9]{1,64}\$
is_default	Boolean	Definition: Indicates whether the network is default. Constraints: N/A Range • true: default network • false: non-default network

Example Requests

```
POST https://{endpoint}/v1/{project_id}/dev-servers/hyper-clusters
{
  "name" : "test-hps--1107"
}
```

Example Responses

Status code: 200

OK

```
{
  "id" : "74437437-6810-43b8-ba20-8f8e5bc034da",
  "name" : "test-hps--1107",
  "network_info" : [ {
    "hyper_cluster_subnet_id" : "47be1c96-b00c-4cc9-83cb-089893a632b6",
    "is_default" : true
  } ]
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.5 Obtaining DevServer Instance Details

Function

This API is used to obtain DevServer instance details.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/{id}

Table 10-33 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: DevServer ID Constraints: Mandatory Range: 1 to 64 characters Default Value: N/A
project_id	Yes	String	Definition: Project ID Constraints: Mandatory Range: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-34 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-35 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-36 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-37 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-38 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-39 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-40 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[_a-zA-Z0-9]{1,64}\$

Example Requests

```
GET https://{endpoint}/v1/{project_id}/dev-servers/{id}
```

Example Responses

Status code: 200

OK

```
{
  "charging_mode" : "POST_PAID",
  "cloud_server" : {
    "type" : "ECS"
  },
  "create_at" : 1699348284990,
  "flavor" : "Si2.large.4",
  "id" : "62383738-e52a-450a-9f84-f9e705402be8",
  "image" : {
    "arch" : "X86",
    "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
    "name" : "Ubuntu18.04_x86_64_CPU",
    "server_type" : "ECS"
  },
  "name" : "EI-evs-1107",
  "status" : "STARTING",
  "update_at" : 1699348285077
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.6 Querying Hyper Cluster Instance Details

Function

This API is used to query details about a hyper cluster instance.

Constraints

No constraints.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/hyper-clusters/{id}

Table 10-41 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Description: Hyper cluster ID. Constraints: Mandatory. Range: 1 to 64 characters. Default Value: N/A
project_id	Yes	String	Definition: User project ID. Constraints: Mandatory. Range: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Default Value: N/A

Table 10-42 Query Parameters

Parameter	Mandatory	Type	Description
type	No	String	Definition: Hyper cluster type. Constraints: Optional. Range • HPS: Default value, which is used to query the hyper cluster of the HPS model. • ECS: Query the hyper cluster of the ECS model. Default Value: HPS

Request Parameters

None

Response Parameters

Status code: 200

Table 10-43 Response body parameters

Parameter	Type	Description
id	String	Definition: ID of the hyper cluster. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the hyper cluster. Range: ^[-_a-zA-Z0-9]{1,64}\$
network_info	Array of network_info objects	Network information.

Table 10-44 network_info

Parameter	Type	Description
hyper_cluster_subnet_id	String	Definition: Subnet name of the hyper cluster. Range: ^[-_a-zA-Z0-9]{1,64}\$

Parameter	Type	Description
is_default	Boolean	Definition: Indicates whether the network is default. Constraints: N/A Range • true: default network • false: non-default network

Example Requests

```
GET https://{endpoint}/v1/{project_id}/dev-servers/hyper-clusters/{id}
```

Example Responses

Status code: 200

OK

```
{
  "id" : "74437437-6810-43b8-ba20-8f8e5bc034da",
  "name" : "test-hps--1107",
  "network_info" : [ {
    "hyper_cluster_subnet_id" : "47be1c96-b00c-4cc9-83cb-089893a632b6",
    "is_default" : true
  } ]
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.7 Deleting DevServer Instances

Function

This API is used to delete DevServer instances.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/dev-servers/{id}

Table 10-45 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: DevServer ID Constraints: Mandatory Range: 1 to 64 characters Default Value: N/A
project_id	Yes	String	Definition: Project ID Constraints: Mandatory Range: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-46 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A

Parameter	Type	Description
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-47 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-48 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-49 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-50 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-51 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-52 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[_a-zA-Z0-9]{1,64}\$

Example Requests

```
DELETE https://{endpoint}/v1/{project_id}/dev-servers/{id}
```

Example Responses

Status code: 200

OK

```
{
  "charging_mode" : "POST_PAID",
  "cloud_server" : {
    "type" : "ECS"
  },
  "create_at" : 1699348284990,
  "flavor" : "Si2.large.4",
  "id" : "62383738-e52a-450a-9f84-f9e705402be8",
  "image" : {
    "arch" : "X86",
    "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
    "name" : "Ubuntu18.04_x86_64_CPU",
    "server_type" : "ECS"
  },
  "name" : "EI-evs-1107",
  "status" : "DELETING",
  "update_at" : 1699348285077
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.8 Deleting a Hyper Cluster Instance

Function

This API is used to delete a hyper cluster instance.

Constraints

No constraints.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/dev-servers/hyper-clusters/{id}

Table 10-53 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Description: Hyper cluster ID. Constraints: Mandatory. Range: 1 to 64 characters. Default Value: N/A
project_id	Yes	String	Definition: User project ID. Constraints: Mandatory. Range: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Default Value: N/A

Table 10-54 Query Parameters

Parameter	Mandatory	Type	Description
type	No	String	Definition: Hyper cluster type. Constraints: Optional. Range • HPS: Default value, which is used to query the hyper cluster of the HPS model. • ECS: Query the hyper cluster of the ECS model. Default Value: HPS

Request Parameters

None

Response Parameters

Status code: 204

Request succeeded.

None

Example Requests

```
DELETE https://{endpoint}/v1/{project_id}/dev-servers/hyper-clusters/{id}
```

Example Responses

None

Status Codes

Status Code	Description
204	Request succeeded.

Error Codes

See [Error Codes](#).

10.9 Synchronizing the Status of All DevServer Instances of a User in Real Time

Function

This API is used to synchronize the status of all DevServer instances of a user in real time.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/{project_id}/dev-servers/sync

Table 10-55 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID Constraints: Mandatory Range: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Default Value: N/A

Table 10-56 Query Parameters

Parameter	Mandatory	Type	Description
owner	No	String	Definition: User ID of the instance Constraints: Optional Range: This value contains 1 to 64 characters. Lowercase letters, digits, and hyphens (-) are allowed. This parameter is valid only when the account is a big account or has the admin permission. Generally, the value is the ID of the current login user. Default Value: N/A
sort_dir	No	String	Definition: Sorting mode Constraints: Optional Range: • ASC: ascending order • DESC: descending order Default Value: ASC
sort_key	No	String	Definition: sorting field. Constraints: optional. Options: • createTime: sorting by creation time (default value) • updateTime: sorting by update time. Default Value: createTime
offset	No	Integer	Definition: Start offset of the records on each page Constraints: Optional Range: 0 to 2147483647 Default Value: 0
limit	No	Integer	Definition: Number of records on each page Constraints: Optional Range: 0 to 1024 Default Value: 10

Request Parameters

None

Response Parameters

Status code: 200

Table 10-57 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Value range: 1 to 2097152
data	Array of ServerResponse objects	Definition: DevServer instance list.
pages	Integer	Definition: Total number of pages. Value range: 1 to 2097152
size	Integer	Definition: Number of records on each page. Maximum number of instances returned on each page. The value of this parameter directly affects the amount of returned data. You can adjust the value to optimize the query performance or increase the information volume of a single request. Range: 1 to 1024
total	Long	Definition: Total number of records. Total number of instances that meet the search criteria. This field is used to learn the overall data scale. Range: 1 to 2147483647

Table 10-58 ServerResponse

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A

Parameter	Type	Description
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-59 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-60 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-61 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-62 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-63 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-64 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Example Requests

```
PUT https://{endpoint}/v1/{project_id}/dev-servers/sync
```

Example Responses

Status code: 200

OK

```
{
  "current" : 0,
  "data" : [ {
    "charging_mode" : "POST_PAID",
    "cloud_server" : {
      "id" : "eb8b4e32-afc9-4f71-8372-1f55f3d7ab28",
      "type" : "ECS"
    },
    "create_at" : 1699352013484,
    "endpoints" : [ {
      "service" : "SSH",
      "uri" : "192.168.0.23"
    } ],
    "flavor" : "Si2.large.4",
    "id" : "c65c4f27-f791-452b-9098-a2726fa2e922",
    "image" : {
      "arch" : "X86",
      "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
      "name" : "Ubuntu18.04_x86_64_CPU",
      "server_type" : "ECS"
    },
    "name" : "El-evs-01",
    "status" : "RUNNING",
    "update_at" : 1699352058465,
    "vpc_id" : "05982b48-a70f-43a1-a2b0-1fe36a236172"
  }, {
    "charging_mode" : "POST_PAID",
    "cloud_server" : {
      "type" : "ECS"
    },
    "create_at" : 1699348284990,
    "flavor" : "Si2.large.4",
    "id" : "62383738-e52a-450a-9f84-f9e705402be8",
    "image" : {
      "arch" : "X86",
      "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
      "name" : "Ubuntu18.04_x86_64_CPU",
      "server_type" : "ECS"
    }
  }
]
```

```
},
"name" : "El-evs-1107",
"status" : "CREATING",
"update_at" : 1699348285077
}],
"pages" : 1,
"size" : 2,
"total" : 2
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.10 Starting DevServer Instances

Function

This API is used to start DevServer instances.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/{project_id}/dev-servers/{id}/start

Table 10-65 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: DevServer instance ID Constraints: $^{[0-9a-f]\{8\}-[0-9a-f]\{4\}-[1-5][0-9a-f]\{3\}-[89ab][0-9a-f]\{3\}-[0-9a-f]\{12\}}$ Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID Constraints: For details, see Obtaining a Project ID and Name . Range: N/A Default Value: N/A

Request Parameters

Table 10-66 Request body parameters

Parameter	Mandatory	Type	Description
arch	No	String	Definition: Server architecture information. Constraints: N/A Range: • ARM • X86 Default value: N/A
charging_mode	No	String	Definition: Billing mode of the server flavor. Constraints: N/A Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly Default value: N/A

Parameter	Mandatory	Type	Description
server_type	No	String	Definition: Server type. Constraints: N/A Range: • BMS: BMS • ECS: ECS • HPS: supernode server Default value: N/A

Response Parameters

Status code: 200

Table 10-67 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_a-zA-Z0-9]{1,64}\$

Parameter	Type	Description
name	String	Definition: Instance name. Range: ^[-_a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-68 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-69 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-70 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-71 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-72 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-73 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Example Requests

```
PUT https://{endpoint}/v1/{project_id}/dev-servers/{id}/start
{ }
```

Example Responses

Status code: 200

OK

```
{
  "charging_mode" : "POST_PAID",
  "cloud_server" : {
    "type" : "ECS"
  },
  "create_at" : 1699348284990,
  "flavor" : "Si2.large.4",
  "id" : "62383738-e52a-450a-9f84-f9e705402be8",
  "image" : {
    "arch" : "X86",
    "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
    "name" : "Ubuntu18.04_x86_64_CPU",
    "server_type" : "ECS"
  },
  "name" : "EI-evs-1107",
  "status" : "STARTING",
  "update_at" : 1699348285077
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.11 Stopping DevServer Instances

Function

This API is used to stop DevServer instances.

Constraints

No constraints

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/{project_id}/dev-servers/{id}/stop

Table 10-74 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: DevServer instance ID Constraints: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID Constraints: For details, see Obtaining a Project ID and Name . Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-75 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-76 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-77 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-78 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-79 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-80 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-81 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[_a-zA-Z0-9]{1,64}\$

Example Requests

```
PUT https://{endpoint}/v1/{project_id}/dev-servers/{id}/stop
```

Example Responses

Status code: 200

OK

```
{
  "charging_mode" : "POST_PAID",
  "cloud_server" : {
    "type" : "ECS"
  },
  "create_at" : 1699348284990,
  "flavor" : "Si2.large.4",
  "id" : "62383738-e52a-450a-9f84-f9e705402be8",
  "image" : {
    "arch" : "X86",
    "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
    "name" : "Ubuntu18.04_x86_64_CPU",
    "server_type" : "ECS"
  },
  "name" : "EI-evs-1107",
  "status" : "STOPPING",
  "update_at" : 1699348285077
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.12 Creating DevServer Supernode Tags

Function

This API is used to create the DevServer supernode tags.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/dev-servers/hyperinstance/{id}/tags/create

Table 10-82 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: ID of the DevServer supernode
project_id	Yes	String	Definition: Project ID Constraints: For details, see Obtaining a Project ID and Name . Range: N/A Default Value: N/A

Request Parameters

Table 10-83 Request body parameters

Parameter	Mandatory	Type	Description
tags	Yes	Array of TmsTag objects	Definition: Tag list.

Table 10-84 TmsTag

Parameter	Mandatory	Type	Description
key	Yes	String	Definition: Key of a TMS tag. Constraints: The value can contain at most 128 characters and cannot start or end with <i>sys</i> . Only letters, digits, spaces, and special characters (_.:/+@) are allowed. Range: N/A Default Value: N/A
value	Yes	String	Definition: Value of a TMS tag. Constraints: The value can contain at most 255 characters. Only letters, digits, spaces, and special characters (_.:/+@) are allowed. Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 10-85 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-86 Response body parameters

Parameter	Type	Description
tags	Array of TmsTag objects	Tag list.

Table 10-87 TmsTag

Parameter	Type	Description
key	String	Definition: Key of a TMS tag. Constraints: The value can contain at most 128 characters and cannot start or end with sys . Only letters, digits, spaces, and special characters (_.:/+@) are allowed. Range: N/A Default Value: N/A
value	String	Definition: Value of a TMS tag. Constraints: The value can contain at most 255 characters. Only letters, digits, spaces, and special characters (_.:/+@) are allowed. Range: N/A Default Value: N/A

Status code: 400**Table 10-88** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-89 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 10-90** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-91 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 10-92** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-93 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 10-94** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-95 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A

Parameter	Type	Description
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
POST https://{endpoint}/v1/{project_id}/dev-servers/hyperinstance/{id}/tags/create
{
  "tags" : [ {
    "key" : "k1",
    "value" : "v1"
  }, {
    "key" : "k2",
    "value" : "v2"
  }, {
    "key" : "k3",
    "value" : "v3"
  }, {
    "key" : "k4",
    "value" : "v4"
  } ]
}
```

Example Responses

Status code: 200

Definition: Response body for creating DevServer supernode tags

```
{
  "tags" : [ {
    "key" : "k1",
    "value" : "v1"
  }, {
    "key" : "k2",
    "value" : "v2"
  }, {
    "key" : "k3",
    "value" : "v3"
  }, {
    "key" : "k4",
    "value" : "v4"
  } ]
}
```

Status Codes

Status Code	Description
200	Definition: Response body for creating DevServer supernode tags
400	Bad Request
401	Unauthorized
403	Forbidden

Status Code	Description
500	Server Internal Error

Error Codes

See [Error Codes](#).

10.13 Deleting DevServer Supernode Tags

Function

This API is used to delete the DevServer supernode tags.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/dev-servers/hyperinstance/{id}/tags/delete

Table 10-96 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: ID of the DevServer supernode
project_id	Yes	String	Definition: Project ID Constraints: For details, see Obtaining a Project ID and Name . Range: N/A Default Value: N/A

Request Parameters

Table 10-97 Request body parameters

Parameter	Mandatory	Type	Description
tags	Yes	Array of TmsTag objects	Definition: Tag list.

Table 10-98 TmsTag

Parameter	Mandatory	Type	Description
key	Yes	String	Definition: Key of a TMS tag. Constraints: The value can contain at most 128 characters and cannot start or end with sys . Only letters, digits, spaces, and special characters (_.:/+@) are allowed. Range: N/A Default Value: N/A
value	Yes	String	Definition: Value of a TMS tag. Constraints: The value can contain at most 255 characters. Only letters, digits, spaces, and special characters (_.:/+@) are allowed. Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 10-99 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-100 Response body parameters

Parameter	Type	Description
tags	Array of TmsTag objects	Tag list.

Table 10-101 TmsTag

Parameter	Type	Description
key	String	Definition: Key of a TMS tag. Constraints: The value can contain at most 128 characters and cannot start or end with sys . Only letters, digits, spaces, and special characters (_.:/+@) are allowed. Range: N/A Default Value: N/A
value	String	Definition: Value of a TMS tag. Constraints: The value can contain at most 255 characters. Only letters, digits, spaces, and special characters (_.:/+@) are allowed. Range: N/A Default Value: N/A

Status code: 400**Table 10-102** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-103 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 10-104** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-105 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 10-106** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-107 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 10-108** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-109 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

POST https://{endpoint}/v1/{project_id}/dev-servers/hyperinstance/{id}/tags/delete

```
{
  "tags" : [ {
    "key" : "k1",
    "value" : "v1"
  }, {
    "key" : "k2",
    "value" : "v2"
  }, {
    "key" : "k3",
    "value" : "v3"
  }, {
    "key" : "k4",
    "value" : "v4"
  } ]
}
```

Example Responses

None

Status Codes

Status Code	Description
200	Definition: Response body for deleting DevServer supernode tags
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

Error Codes

See [Error Codes](#).

10.14 Obtaining the DevServer Supernode Tags

Function

This API is used to obtain the DevServer supernode tags.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/hyperinstance/{id}/tags

Table 10-110 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: ID of the DevServer supernode
project_id	Yes	String	Definition: Project ID Constraints: For details, see Obtaining a Project ID and Name . Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-111 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-112 Response body parameters

Parameter	Type	Description
tags	Array of TmsTag objects	Tag list.

Table 10-113 TmsTag

Parameter	Type	Description
key	String	Definition: Key of a TMS tag. Constraints: The value can contain at most 128 characters and cannot start or end with sys . Only letters, digits, spaces, and special characters (_.:/+@) are allowed. Range: N/A Default Value: N/A
value	String	Definition: Value of a TMS tag. Constraints: The value can contain at most 255 characters. Only letters, digits, spaces, and special characters (_.:/+@) are allowed. Range: N/A Default Value: N/A

Status code: 400**Table 10-114** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-115 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 10-116** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-117 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 10-118** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-119 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 10-120** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-121 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

GET https://{endpoint}/v1/{project_id}/dev-servers/hyperinstance/{id}/tags

Example Responses

Status code: 200

Definition: Response body of the tag list

```
{
  "tags": [ {
    "key": "k1",
    "value": "v1"
  }, {
    "key": "k2",
    "value": "v2"
  }, {
    "key": "k3",
    "value": "v3"
  }, {
    "key": "k4",
    "value": "v4"
  } ]
}
```

Status Codes

Status Code	Description
200	Definition: Response body of the tag list
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

Error Codes

See [Error Codes](#).

10.15 Reinstalling the OS Image of the DevServer Server

Function

This API is used to reinstall the OS image of the DevServer server.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/dev-servers/{id}/reinstallos

Table 10-122 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: DevServer instance ID Constraints: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID Constraints: For details, see Obtaining a Project ID and Name . Range: N/A Default Value: N/A

Request Parameters

Table 10-123 Request body parameters

Parameter	Mandatory	Type	Description
admin_pass	No	String	Definition: Password used for logging in to the server. Note that either admin_pass or key_pair_name must be specified for ECSs and BMSs and supernodes support only key_pair_name. Constraints: The password must: • Contain 8 to 26 characters. • Contain at least three of the following types: uppercase letters, lowercase letters, digits, and special characters (!@%_-=+[{ }],./?). • Cannot be the username or the username spelled backwards. • Cannot contain root, administrator, or their reverse. Range: N/A Default value: N/A
key_pair_name	No	String	Name of the key pair for logging in to the server. Note that either admin_pass or key_pair_name must be specified. This parameter is supported only when ECSs or BMSs are reset or their OSs are changed. Supernodes do not support this parameter.
image_id	No	String	Definition: Image ID. This parameter is mandatory when the OS is changed. Constraints: N/A Range: N/A Default value: N/A

Parameter	Mandatory	Type	Description
user_data	No	String	Definition: Custom data to be injected into the instance during cloud server creation. Texts and text files can be injected. Example: Before base64 encoding: - Linux server: <pre>#!/bin/bash echo user_test > /home/user.txt</pre> After base64 encoding: - Linux server: <pre>IyEvYmluL2Jhc2gKZWNObyB1c2VyX3Rlc 3QgPiAvaG9tZS91c2VyLnR4dA==</pre> For details about how to inject custom data, see Injecting User Data. You must be aware of the effects of user_data. You are responsible for the impact and risks. Constraints: - The content of user_data must be encoded with Base64. - The maximum size of the content to be injected (before encoding) is 32K. Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 10-124 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-125 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-126 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-127 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-128 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-129 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Table 10-130 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-131 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Status code: 400**Table 10-132** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-133 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 10-134** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-135 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 10-136** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-137 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 10-138** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-139 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
POST https://{endpoint}/v1/{project_id}/dev-servers/{id}/reinstallos
{
  "admin_pass" : "@Admin_pass"
}
```

Example Responses

Status code: 200

OK

```
{
  "charging_mode" : "PRE_PAID",
  "cloud_server" : {
    "id" : "2c5261a0-b55b-4677-9c92-6927dd3e000d",
    "type" : "ECS"
  },
  "create_at" : 1699348284990,
  "flavor" : "Si2.large.4",
  "id" : "62383738-e52a-450a-9f84-f9e705402be8",
  "image" : {
    "arch" : "X86",
    "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
    "name" : "Ubuntu18.04_x86_64_CPU",
    "server_type" : "ECS"
  },
  "name" : "devserver-name",
  "status" : "REINSTALLOS",
  "update_at" : 1699348285077
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

Error Codes

See [Error Codes](#).

10.16 Changing the OS Image of the DevServer Server

Function

This API is used to change the OS image of the DevServer server.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/dev-servers/{id}/changeos

Table 10-140 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: DevServer instance ID Constraints: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID Constraints: For details, see Obtaining a Project ID and Name . Range: N/A Default Value: N/A

Request Parameters

Table 10-141 Request body parameters

Parameter	Mandatory	Type	Description
admin_pass	No	String	Definition: Password used for logging in to the server. Note that either admin_pass or key_pair_name must be specified for ECSs and BMSs and supernodes support only key_pair_name. Constraints: The password must: • Contain 8 to 26 characters. • Contain at least three of the following types: uppercase letters, lowercase letters, digits, and special characters (!@%_-=+[{ }],./?). • Cannot be the username or the username spelled backwards. • Cannot contain root, administrator, or their reverse. Range: N/A Default value: N/A
key_pair_name	No	String	Name of the key pair for logging in to the server. Note that either admin_pass or key_pair_name must be specified. This parameter is supported only when ECSs or BMSs are reset or their OSs are changed. Supernodes do not support this parameter.
image_id	No	String	Definition: Image ID. This parameter is mandatory when the OS is changed. Constraints: N/A Range: N/A Default value: N/A

Parameter	Mandatory	Type	Description
user_data	No	String	Definition: Custom data to be injected into the instance during cloud server creation. Texts and text files can be injected. Example: Before base64 encoding: - Linux server: <pre>#!/bin/bash echo user_test > /home/user.txt</pre> After base64 encoding: - Linux server: <pre>IyEvYmluL2Jhc2gKZWNoYyB1c2VyX3Rlc 3QgPiAvaG9tZS91c2VyLnR4dA==</pre> For details about how to inject custom data, see Injecting User Data. You must be aware of the effects of user_data. You are responsible for the impact and risks. Constraints: - The content of user_data must be encoded with Base64. - The maximum size of the content to be injected (before encoding) is 32K. Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 10-142 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-143 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-144 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-145 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-146 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-147 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-148 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-149 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Status code: 400**Table 10-150** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-151 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 10-152** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-153 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 10-154** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-155 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 10-156** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-157 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
POST https://{endpoint}/v1/{project_id}/dev-servers/{id}/changeos
{
  "admin_pass" : "@Admin_pass",
  "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7"
}
```

Example Responses

Status code: 200

OK

```
{
  "charging_mode" : "PRE_PAID",
  "cloud_server" : {
    "id" : "2c5261a0-b55b-4677-9c92-6927dd3e000d",
    "type" : "ECS"
  },
  "create_at" : 1699348284990,
  "flavor" : "Si2.large.4",
  "id" : "62383738-e52a-450a-9f84-f9e705402be8",
  "image" : {
    "arch" : "X86",
    "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
    "name" : "Ubuntu18.04_x86_64_CPU",
    "server_type" : "ECS"
  },
  "name" : "devserver-name",
  "status" : "CHANGINGOS",
  "update_at" : 1699348285077
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

Error Codes

See [Error Codes](#).

10.17 Changing the OS Image of the DevServer Supernode Server

Function

This API is used to change the OS image of the DevServer supernode server.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/dev-servers/hyperinstance/{id}/changeos

Table 10-158 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: ID of the DevServer instance supernode Constraints: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID Constraints: For details, see Obtaining a Project ID and Name . Range: N/A Default Value: N/A

Request Parameters

Table 10-159 Request body parameters

Parameter	Mandatory	Type	Description
admin_pass	No	String	Definition: Password used for logging in to the server. Note that either admin_pass or key_pair_name must be specified for ECSs and BMSs and supernodes support only key_pair_name. Constraints: The password must: • Contain 8 to 26 characters. • Contain at least three of the following types: uppercase letters, lowercase letters, digits, and special characters (!@%_-=+[{ }],./?). • Cannot be the username or the username spelled backwards. • Cannot contain root, administrator, or their reverse. Range: N/A Default value: N/A
key_pair_name	No	String	Name of the key pair for logging in to the server. Note that either admin_pass or key_pair_name must be specified. This parameter is supported only when ECSs or BMSs are reset or their OSs are changed. Supernodes do not support this parameter.
image_id	No	String	Definition: Image ID. This parameter is mandatory when the OS is changed. Constraints: N/A Range: N/A Default value: N/A

Parameter	Mandatory	Type	Description
user_data	No	String	Definition: Custom data to be injected into the instance during cloud server creation. Texts and text files can be injected. Example: Before base64 encoding: - Linux server: <pre>#!/bin/bash echo user_test > /home/user.txt</pre> After base64 encoding: - Linux server: <pre>IyEvYmluL2Jhc2gKZWNObyB1c2VyX3Rlc3QgPiAvaG9tZS91c2VyLnR4dA==</pre> For details about how to inject custom data, see Injecting User Data. You must be aware of the effects of user_data. You are responsible for the impact and risks. Constraints: - The content of user_data must be encoded with Base64. - The maximum size of the content to be injected (before encoding) is 32K. Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 10-160 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-161 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: Creation time. Constraints: N/A Range: N/A Default Value: N/A
hps_cluster_id	String	Definition: Network ID of the supernode cluster. Constraints: N/A Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Default Value: N/A
hps_id	String	Definition: Supernode ID. Constraints: N/A Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Default Value: N/A
id	String	Definition: ID of the DevServer supernode. Constraints: N/A Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Default Value: N/A
name	String	Definition: Instance name. Constraints: N/A Range: ^[-_a-zA-Z0-9]{1,64}\$ Default Value: N/A
order_id	String	Definition: Order ID. Constraints: N/A Range: ^[a-zA-Z0-9]{1,64}\$ Default Value: N/A

Parameter	Type	Description
status	String	Definition: Supernode instance status. Constraints: N/A Range: • PROVISIONING: The request for creating a supernode has been accepted, but the supernode is still being created. • ACTIVE: The supernode is active and its resources can be used. • ERROR: The supernode fails to be created. • REIMAGING: The OS of the supernode is being changed. • TERMINATING: Resources are being released. • TERMINATED: The supernode resources have been released and are no longer available. Default Value: N/A
servers	Array of ServerResponse objects	Definition: List of supernode subnode instances. Constraints: N/A Range: N/A Default Value: N/A
update_at	Long	Definition: Creation time. Constraints: N/A Range: N/A Default Value: N/A

Table 10-162 ServerResponse

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A

Parameter	Type	Description
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-163 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-164 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-165 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-166 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-167 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-168 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Status code: 400**Table 10-169** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-170 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 10-171** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-172 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 10-173** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-174 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 10-175** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-176 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
POST https://{endpoint}/v1/{project_id}/dev-servers/hyperinstance/{id}/changeos
{
  "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7"
}
```

Example Responses

Status code: 200

OK

```
{
  "create_at" : 1731055875839,
  "hps_cluster_id" : "42669b79-da2f-4482-ad40-22f50442c9e7",
  "hps_id" : "33806b62-1c7b-4781-8d2c-411a042b86b8",
  "id" : "b4beacb6-4380-448c-a218-daa82cf03f5d",
  "name" : "devserver-hps",
  "order_id" : "CS2411081650G9B6Z",
  "servers" : [ {
    "charging_mode" : "PRE_PAID",
    "cloud_server" : {
      "hps_id" : "33806b62-1c7b-4781-8d2c-411a042b86b8",
      "id" : "50208d41-749e-4bce-95a9-47a850925d4e",
      "type" : "HPS"
    },
    "create_at" : 1731055875840,
    "endpoints" : [ {
      "service" : "SSH",
      "uri" : "10.1.0.98"
    } ],
    "flavor" : "kat3ne-8.48xlarge.8.800t.matrix",
    "id" : "278d70a9-2049-450a-bf6d-db02fe9f6634",
    "image" : {
      "image_id" : "86496e41-87c4-4779-9007-4f8f5c2a208f"
    },
    "key_pair_name" : "KeyPair-hps",
    "name" : "devserver-hps-1",
    "order_id" : "CS2411081650G9B6Z",
    "server_hps" : {
      "id" : "b4beacb6-4380-448c-a218-daa82cf03f5d",
      "name" : "devserver-hps"
    },
    "status" : "CHANGINGOS",
    "update_at" : 1731209918651,
    "vpc_id" : "7980ccf4-44d0-42cc-a844-42e035379a38"
  } ],
  "status" : "REIMAGING",
  "update_at" : 1731209918651
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden

Status Code	Description
500	Server Internal Error

Error Codes

See [Error Codes](#).

10.18 Obtaining Details About All Supernode Instances of a User

Function

This API is used to obtain details about all supernode instances of a user.

Constraints

No constraints.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/hyperinstance

Table 10-177 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID Constraints: For details, see Obtaining a Project ID and Name . Range: N/A Default Value: N/A

Table 10-178 Query Parameters

Parameter	Mandatory	Type	Description
sort_dir	No	String	Definition: Sorting mode Constraints: N/A Range: Enums: - ASC: ascending order - DESC: descending order Default Value: N/A
sort_key	No	String	Definition: Sorting field Constraints: N/A Range: Enums: - createTime: sorting by creation time (default value) - updateTime: sorting by update time Default Value: N/A
limit	No	Integer	Definition: Number of records on each page Constraints: N/A Range: [1, 1024] Default Value: 10
offset	No	Integer	Definition: Start offset of the records on each page Constraints: N/A Range: [0, 2147483647] Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-179 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-180 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Constraints: N/A Range: N/A Default Value: N/A
data	Array of ServerHyperinstanceResponse objects	Definition: List of DevServer supernode instances. Constraints: N/A Range: N/A Default Value: N/A
pages	Integer	Definition: Total number of pages. Constraints: N/A Range: N/A Default Value: N/A
size	Integer	Definition: Number of records on each page. Constraints: N/A Range: N/A Default Value: N/A
total	Long	Definition: Total number of records. Constraints: N/A Range: N/A Default Value: N/A

Table 10-181 ServerHyperinstanceResponse

Parameter	Type	Description
create_at	Long	Definition: Creation time. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
hps_cluster_id	String	Definition: Network ID of the supernode cluster. Constraints: N/A Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> Default Value: N/A
hps_id	String	Definition: Supernode ID. Constraints: N/A Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> Default Value: N/A
id	String	Definition: ID of the DevServer supernode. Constraints: N/A Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> Default Value: N/A
name	String	Definition: Instance name. Constraints: N/A Range: <code>^[_.a-zA-Z0-9]{1,64}\$</code> Default Value: N/A
order_id	String	Definition: Order ID. Constraints: N/A Range: <code>^[a-zA-Z0-9]{1,64}\$</code> Default Value: N/A

Parameter	Type	Description
status	String	Definition: Supernode instance status. Constraints: N/A Range: • PROVISIONING: The request for creating a supernode has been accepted, but the supernode is still being created. • ACTIVE: The supernode is active and its resources can be used. • ERROR: The supernode fails to be created. • REIMAGING: The OS of the supernode is being changed. • TERMINATING: Resources are being released. • TERMINATED: The supernode resources have been released and are no longer available. Default Value: N/A
servers	Array of ServerResponse objects	Definition: List of supernode subnode instances. Constraints: N/A Range: N/A Default Value: N/A
update_at	Long	Definition: Creation time. Constraints: N/A Range: N/A Default Value: N/A

Table 10-182 ServerResponse

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A

Parameter	Type	Description
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-183 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-184 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-185 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-186 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-187 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-188 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Status code: 400**Table 10-189** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-190 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 10-191** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-192 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 10-193** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-194 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 10-195** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-196 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/dev-servers/hyperinstance
```

Example Responses

Status code: 200

OK

```
{
  "current" : 0,
  "data" : [ {
    "create_at" : 1731055875839,
    "hps_cluster_id" : "42669b79-da2f-4482-ad40-22f50442c9e7",
    "hps_id" : "33806b62-1c7b-4781-8d2c-411a042b86b8",
    "id" : "b4beacb6-4380-448c-a218-daa82cf03f5d",
    "name" : "devserver-hps",
    "order_id" : "CS2411081650G9B6Z",
    "servers" : [ {
      "charging_mode" : "PRE_PAID",
      "cloud_server" : {
        "hps_id" : "33806b62-1c7b-4781-8d2c-411a042b86b8",
        "id" : "50208d41-749e-4bce-95a9-47a850925d4e",
        "type" : "HPS"
      },
      "create_at" : 1731055875840,
      "endpoints" : [ {
        "service" : "SSH",
        "uri" : "10.1.0.98"
      } ],
      "flavor" : "kat3ne-8.48xlarge.8.800t.matrix",
      "id" : "278d70a9-2049-450a-bf6d-db02fe9f6634",
      "image" : {
        "image_id" : "86496e41-87c4-4779-9007-4f8f5c2a208f"
      },
      "key_pair_name" : "KeyPair-hps",
      "name" : "devserver-hps-1",
      "order_id" : "CS2411081650G9B6Z",
      "server_hps" : {
        "id" : "b4beacb6-4380-448c-a218-daa82cf03f5d",
        "name" : "devserver-hps"
      },
      "status" : "RUNNING",
      "update_at" : 1731209918651,
      "vpc_id" : "7980ccf4-44d0-42cc-a844-42e035379a38"
    } ],
    "status" : "ACTIVE",
    "update_at" : 1731209918651
  } ],
  "pages" : 1,
  "size" : 10,
  "total" : 1
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized

Status Code	Description
403	Forbidden
500	Server Internal Error

Error Codes

See [Error Codes](#).

10.19 Obtaining Details About a Specified Supernode Instance

Function

This API is used to obtain details about a specified supernode instance.

Constraints

No constraints.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/hyperinstance/{id}

Table 10-197 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: DevServer instance ID Constraints: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID Constraints: For details, see Obtaining a Project ID and Name . Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-198 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-199 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: Creation time. Constraints: N/A Range: N/A Default Value: N/A
hps_cluster_id	String	Definition: Network ID of the supernode cluster. Constraints: N/A Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Default Value: N/A
hps_id	String	Definition: Supernode ID. Constraints: N/A Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Default Value: N/A

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode. Constraints: N/A Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> Default Value: N/A
name	String	Definition: Instance name. Constraints: N/A Range: <code>^[_.a-zA-Z0-9]{1,64}\$</code> Default Value: N/A
order_id	String	Definition: Order ID. Constraints: N/A Range: <code>^[a-zA-Z0-9]{1,64}\$</code> Default Value: N/A
status	String	Definition: Supernode instance status. Constraints: N/A Range: • PROVISIONING: The request for creating a supernode has been accepted, but the supernode is still being created. • ACTIVE: The supernode is active and its resources can be used. • ERROR: The supernode fails to be created. • REIMAGING: The OS of the supernode is being changed. • TERMINATING: Resources are being released. • TERMINATED: The supernode resources have been released and are no longer available. Default Value: N/A
servers	Array of ServerResponse objects	Definition: List of supernode subnode instances. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
update_at	Long	Definition: Creation time. Constraints: N/A Range: N/A Default Value: N/A

Table 10-200 ServerResponse

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$

Parameter	Type	Description
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-201 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-202 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-203 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-204 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-205 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-206 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Status code: 400**Table 10-207** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-208 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 10-209** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-210 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 10-211** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-212 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 10-213** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-214 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/dev-servers/hyperinstance/{id}
```

Example Responses

Status code: 200

OK

```
{
  "create_at" : 1731055875839,
  "hps_cluster_id" : "42669b79-da2f-4482-ad40-22f50442c9e7",
  "hps_id" : "33806b62-1c7b-4781-8d2c-411a042b86b8",
  "id" : "b4beacb6-4380-448c-a218-daa82cf03f5d",
  "name" : "devserver-hps",
  "order_id" : "CS2411081650G9B6Z",
  "servers" : [ {
    "charging_mode" : "PRE_PAID",
    "cloud_server" : {
      "hps_id" : "33806b62-1c7b-4781-8d2c-411a042b86b8",
      "id" : "50208d41-749e-4bce-95a9-47a850925d4e",
      "type" : "HPS"
    },
    "create_at" : 1731055875840,
    "endpoints" : [ {
      "service" : "SSH",
      "uri" : "10.1.0.98"
    } ],
    "flavor" : "kat3ne-8.48xlarge.8.800t.matrix",
    "id" : "278d70a9-2049-450a-bf6d-db02fe9f6634",
    "image" : {
      "image_id" : "86496e41-87c4-4779-9007-4f8f5c2a208f"
    },
    "key_pair_name" : "KeyPair-hps",
    "name" : "devserver-hps-1",
    "order_id" : "CS2411081650G9B6Z",
    "server_hps" : {
      "id" : "b4beacb6-4380-448c-a218-daa82cf03f5d",
      "name" : "devserver-hps"
    },
    "status" : "RUNNING",
    "update_at" : 1731209918651,
    "vpc_id" : "7980ccf4-44d0-42cc-a844-42e035379a38"
  } ],
  "status" : "ACTIVE",
  "update_at" : 1731209918651
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

Error Codes

See [Error Codes](#).

10.20 Deleting a DevServer Supernode Instance

Function

This API is used to delete the DevServer supernode instance in the ERROR state.

Constraints

No constraints.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/dev-servers/hyperinstance/{id}

Table 10-215 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: ID of the DevServer supernode Constraints: N/A Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> Default Value: N/A
project_id	Yes	String	Definition: Project ID Constraints: For details, see Obtaining a Project ID and Name . Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-216 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-217 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: Creation time. Constraints: N/A Range: N/A Default Value: N/A
hps_cluster_id	String	Definition: Network ID of the supernode cluster. Constraints: N/A Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Default Value: N/A
hps_id	String	Definition: Supernode ID. Constraints: N/A Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Default Value: N/A
id	String	Definition: ID of the DevServer supernode. Constraints: N/A Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Default Value: N/A
name	String	Definition: Instance name. Constraints: N/A Range: ^[-_a-zA-Z0-9]{1,64}\$ Default Value: N/A
order_id	String	Definition: Order ID. Constraints: N/A Range: ^[a-zA-Z0-9]{1,64}\$ Default Value: N/A

Parameter	Type	Description
status	String	Definition: Supernode instance status. Constraints: N/A Range: • PROVISIONING: The request for creating a supernode has been accepted, but the supernode is still being created. • ACTIVE: The supernode is active and its resources can be used. • ERROR: The supernode fails to be created. • REIMAGING: The OS of the supernode is being changed. • TERMINATING: Resources are being released. • TERMINATED: The supernode resources have been released and are no longer available. Default Value: N/A
servers	Array of ServerResponse objects	Definition: List of supernode subnode instances. Constraints: N/A Range: N/A Default Value: N/A
update_at	Long	Definition: Creation time. Constraints: N/A Range: N/A Default Value: N/A

Table 10-218 ServerResponse

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A

Parameter	Type	Description
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-219 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-220 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-221 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-222 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-223 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-224 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Status code: 400**Table 10-225** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-226 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 10-227** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-228 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 10-229** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-230 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 10-231** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-232 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
DELETE https://{endpoint}/v1/{project_id}/dev-servers/hyperinstance/{id}
```

Example Responses

Status code: 200

OK

```
{
  "create_at" : 1731055875839,
  "hps_cluster_id" : "42669b79-da2f-4482-ad40-22f50442c9e7",
  "hps_id" : "33806b62-1c7b-4781-8d2c-411a042b86b8",
  "id" : "b4beacb6-4380-448c-a218-daa82cf03f5d",
  "name" : "devserver-hps",
  "order_id" : "CS2411081650G9B6Z",
  "servers" : [ ],
  "status" : "TERMINATING",
  "update_at" : 1731209918651
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

Error Codes

See [Error Codes](#).

10.21 Restarting a DevServer Instance

Function

This API is used to restart a DevServer instance.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

```
PUT /v1/{project_id}/dev-servers/{id}/reboot
```

Table 10-233 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: DevServer instance ID Constraints: N/A Range: $^{[0-9a-f]\{8\}-[0-9a-f]\{4\}-[1-5][0-9a-f]\{3\}-[89ab][0-9a-f]\{3\}-[0-9a-f]\{12\}}$ Default Value: N/A
project_id	Yes	String	Definition: Project ID Constraints: For details, see Obtaining a Project ID and Name . Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-234 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-235 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly

Parameter	Type	Description
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-236 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-237 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-238 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-239 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-240 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-241 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Status code: 400**Table 10-242** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-243 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 10-244** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-245 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 10-246** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-247 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 10-248** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-249 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

None

Example Responses

Status code: 200

OK

```
{
  "category": "HPS",
  "charging_mode": "PRE_PAID",
  "cloud_server": {
    "hps_id": "d4837700-0fb9-4597-93aa-5d43919e470e",
    "id": "2e83f8d5-f0b4-4cd8-b02d-0de0b3be0b43",
    "type": "HPS"
  },
  "create_at": 1733379035379,
  "endpoints": [ {
    "service": "SSH",
    "uri": "10.1.0.0"
  } ],
  "flavor": "kat3ne-8-800t.48xlarge.8.matrix",
  "id": "dab50b58-a5c9-4322-bc60-376ed45c0b80",
  "image": {
    "arch": "ARM",
    "image_id": "32c85a96-1627-4328-8825-58a68dd09a60",
    "name": "HCE_HPS",
    "server_type": "HPS"
  },
  "key_pair_name": "KeyPair-de42",
  "name": "devserver",
  "order_id": "CS2412051410VT1C8",
  "server_hps": {
    "id": "a2aaa100-d348-4830-9aca-3a8ccfb72021",
    "name": "devserver"
  },
  "status": "REBOOTING",
  "update_at": 1733385707806,
  "vpc_id": "7980ccf4-44d0-42cc-a844-42e035379a38"
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

Error Codes

See [Error Codes](#).

10.22 Starting a DevServer Supernode Server

Function

This API is used to start a DevServer supernode server.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/{project_id}/dev-servers/hyperinstance/{id}/start

Table 10-250 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Parameter description: ID of the DevServer supernode. Constraints: N/A. **Value range: **:^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$. ** Default value: **: N/A.
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-251 Response header parameters

Parameter	Type	Description
X-Request-Id	String	LinkTrace ID

Table 10-252 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: Creation time. Constraints: N/A Range: N/A Default Value: N/A
hps_cluster_id	String	Definition: Network ID of the supernode cluster. Constraints: N/A Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Default Value: N/A
hps_id	String	Definition: Supernode ID. Constraints: N/A Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Default Value: N/A
id	String	Definition: ID of the DevServer supernode. Constraints: N/A Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$ Default Value: N/A
name	String	Definition: Instance name. Constraints: N/A Range: ^[-_a-zA-Z0-9]{1,64}\$ Default Value: N/A
order_id	String	Definition: Order ID. Constraints: N/A Range: ^[a-zA-Z0-9]{1,64}\$ Default Value: N/A

Parameter	Type	Description
status	String	Definition: Supernode instance status. Constraints: N/A Range: • PROVISIONING: The request for creating a supernode has been accepted, but the supernode is still being created. • ACTIVE: The supernode is active and its resources can be used. • ERROR: The supernode fails to be created. • REIMAGING: The OS of the supernode is being changed. • TERMINATING: Resources are being released. • TERMINATED: The supernode resources have been released and are no longer available. Default Value: N/A
servers	Array of ServerResponse objects	Definition: List of supernode subnode instances. Constraints: N/A Range: N/A Default Value: N/A
update_at	Long	Definition: Creation time. Constraints: N/A Range: N/A Default Value: N/A

Table 10-253 ServerResponse

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A

Parameter	Type	Description
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-254 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-255 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-256 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-257 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-258 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-259 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Example Requests

POST https://{endpoint}/v1/{project_id}/dev-servers/hyperinstance/{id}/start

Example Responses

Status code: 200

OK

```
{
  "create_at" : 1737100086697,
  "hps_cluster_id" : "6fba954e-0d5e-4abf-9d54-f344d1de4eaa",
  "hps_id" : "451163c7-1f69-45e3-b6fa-b0dbee766767",
  "id" : "b41f61ed-fc38-4a84-a65c-35dae14acbc0",
  "name" : "devserver-hps-60b2",
  "order_id" : "CS2501171547LQEI9",
  "servers" : [ {
    "category" : "HPS",
    "charging_mode" : "PRE_PAID",
    "cloud_server" : {
      "hps_id" : "451163c7-1f69-45e3-b6fa-b0dbee766767",
      "id" : "5ed6f141-4872-481b-b917-16b6c7b9366c",
      "type" : "HPS"
    },
    "create_at" : 1737100086698,
    "endpoints" : [ {
      "uri" : "10.1.0.76"
    } ],
    "flavor" : "kat3ne-16.96xlarge.8.800t.matrix-kf",
    "id" : "be6c8c8a-0322-4e90-9f51-f3639462aa87",
    "image" : {
      "image_id" : "59e58c02-8c52-42eb-87a9-3eb0a14d3343"
    },
    "key_pair_name" : "KeyPair-de42",
    "name" : "devserver-hps-60b2-2",
    "order_id" : "CS2501171547LQEI9",
    "server_hps" : {
      "id" : "b41f61ed-fc38-4a84-a65c-35dae14acbc0",
      "name" : "devserver-hps-60b2"
    },
    "status" : "STARTING",
    "subnet_id" : "018a995b-29af-4140-b396-939d9c80a92b",
    "update_at" : 1737342598459,
    "vpc_id" : "7980ccf4-44d0-42cc-a844-42e035379a38"
  }, {
    "category" : "HPS",
    "charging_mode" : "PRE_PAID",
```

```
"cloud_server" : {
  "hps_id" : "451163c7-1f69-45e3-b6fa-b0dbee766767",
  "id" : "cb8f5e9d-85b0-4cd7-ad30-cd06f05f5869",
  "type" : "HPS"
},
"create_at" : 1737100086697,
"endpoints" : [ {
  "uri" : "10.1.0.64"
} ],
"flavor" : "kat3ne-16.96xlarge.8.800t.matrix-kf",
"id" : "24988d23-a7d9-4210-bba4-e945a4c2cf28",
"image" : {
  "image_id" : "59e58c02-8c52-42eb-87a9-3eb0a14d3343"
},
"key_pair_name" : "KeyPair-de42",
"name" : "devserver-hps-60b2-1",
"order_id" : "CS2501171547LQE19",
"server_hps" : {
  "id" : "b41f61ed-fc38-4a84-a65c-35dae14acbc0",
  "name" : "devserver-hps-60b2"
},
"status" : "STARTING",
"subnet_id" : "018a995b-29af-4140-b396-939d9c80a92b",
"update_at" : 1737193168118,
"vpc_id" : "7980ccf4-44d0-42cc-a844-42e035379a38"
} ],
"status" : "ACTIVE",
"update_at" : 1737185971586
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.23 Stopping a DevServer Supernode Server

Function

This API is used to stop a DevServer supernode server.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/{project_id}/dev-servers/hyperinstance/{id}/stop

Table 10-260 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Parameter description: ID of the DevServer supernode. Constraints: N/A. **Value range: **:^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$. ** Default value: **: N/A.
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-261 Response header parameters

Parameter	Type	Description
X-Request-Id	String	LinkTrace ID

Table 10-262 Response body parameters

Parameter	Type	Description
create_at	Long	Definition: Creation time. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
hps_cluster_id	String	Definition: Network ID of the supernode cluster. Constraints: N/A Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> Default Value: N/A
hps_id	String	Definition: Supernode ID. Constraints: N/A Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> Default Value: N/A
id	String	Definition: ID of the DevServer supernode. Constraints: N/A Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> Default Value: N/A
name	String	Definition: Instance name. Constraints: N/A Range: <code>^[_.a-zA-Z0-9]{1,64}\$</code> Default Value: N/A
order_id	String	Definition: Order ID. Constraints: N/A Range: <code>^[a-zA-Z0-9]{1,64}\$</code> Default Value: N/A

Parameter	Type	Description
status	String	Definition: Supernode instance status. Constraints: N/A Range: • PROVISIONING: The request for creating a supernode has been accepted, but the supernode is still being created. • ACTIVE: The supernode is active and its resources can be used. • ERROR: The supernode fails to be created. • REIMAGING: The OS of the supernode is being changed. • TERMINATING: Resources are being released. • TERMINATED: The supernode resources have been released and are no longer available. Default Value: N/A
servers	Array of ServerResponse objects	Definition: List of supernode subnode instances. Constraints: N/A Range: N/A Default Value: N/A
update_at	Long	Definition: Creation time. Constraints: N/A Range: N/A Default Value: N/A

Table 10-263 ServerResponse

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A

Parameter	Type	Description
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-264 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-265 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-266 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-267 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-268 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-269 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Example Requests

POST https://{endpoint}/v1/{project_id}/dev-servers/hyperinstance/{id}/stop

Example Responses

Status code: 200

OK

```
{
  "create_at" : 1737100086697,
  "hps_cluster_id" : "6fba954e-0d5e-4abf-9d54-f344d1de4eaa",
  "hps_id" : "451163c7-1f69-45e3-b6fa-b0dbee766767",
  "id" : "b41f61ed-fc38-4a84-a65c-35dae14acbc0",
  "name" : "devserver-hps-60b2",
  "order_id" : "CS2501171547LQEI9",
  "servers" : [ {
    "category" : "HPS",
    "charging_mode" : "PRE_PAID",
    "cloud_server" : {
      "hps_id" : "451163c7-1f69-45e3-b6fa-b0dbee766767",
      "id" : "5ed6f141-4872-481b-b917-16b6c7b9366c",
      "type" : "HPS"
    },
    "create_at" : 1737100086698,
    "endpoints" : [ {
      "uri" : "10.1.0.76"
    } ],
    "flavor" : "kat3ne-16.96xlarge.8.800t.matrix-kf",
    "id" : "be6c8c8a-0322-4e90-9f51-f3639462aa87",
    "image" : {
      "image_id" : "59e58c02-8c52-42eb-87a9-3eb0a14d3343"
    },
    "key_pair_name" : "KeyPair-de42",
    "name" : "devserver-hps-60b2-2",
    "order_id" : "CS2501171547LQEI9",
    "server_hps" : {
      "id" : "b41f61ed-fc38-4a84-a65c-35dae14acbc0",
      "name" : "devserver-hps-60b2"
    },
    "status" : "STOPPING",
    "subnet_id" : "018a995b-29af-4140-b396-939d9c80a92b",
    "update_at" : 1737342598459,
    "vpc_id" : "7980ccf4-44d0-42cc-a844-42e035379a38"
  }, {
    "category" : "HPS",
    "charging_mode" : "PRE_PAID",
```



```
{
  "cloud_server": {
    "hps_id": "451163c7-1f69-45e3-b6fa-b0dbee766767",
    "id": "cb8f5e9d-85b0-4cd7-ad30-cd06f05f5869",
    "type": "HPS"
  },
  "create_at": 1737100086697,
  "endpoints": [ {
    "uri": "10.1.0.64"
  } ],
  "flavor": "kat3ne-16.96xlarge.8.800t.matrix-kf",
  "id": "24988d23-a7d9-4210-bba4-e945a4c2cf28",
  "image": {
    "image_id": "59e58c02-8c52-42eb-87a9-3eb0a14d3343"
  },
  "key_pair_name": "KeyPair-de42",
  "name": "devserver-hps-60b2-1",
  "order_id": "CS2501171547LQE19",
  "server_hps": {
    "id": "b41f61ed-fc38-4a84-a65c-35dae14acbc0",
    "name": "devserver-hps-60b2"
  },
  "status": "STOPPING",
  "subnet_id": "018a995b-29af-4140-b396-939d9c80a92b",
  "update_at": 1737193168118,
  "vpc_id": "7980ccf4-44d0-42cc-a844-42e035379a38"
},
"status": "ACTIVE",
"update_at": 1737185971586
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.24 Mounting Disks to the DevServer

Function

This API is used to Mounting Disks to the DevServer.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/dev-servers/{id}/attachvolume

Table 10-270 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Parameter description: ID of the DevServer instance. Restrictions: N/A. ** Value range: **:^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$. **Default value: * *: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 10-271 Request body parameters

Parameter	Mandatory	Type	Description
volume_id	Yes	String	Parameter description: ID of the disk to be attached. Constraints: N/A. ** Value range: **:^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$. **Default value * *: N/A.

Response Parameters

Status code: 200

Table 10-272 Response header parameters

Parameter	Type	Description
X-Request-Id	String	LinkTrace ID

Table 10-273 Response body parameters

Parameter	Type	Description
operation_id	String	Parameter description: operation ID. ** Value range: ** : [^] [0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$.
operation_status	String	Parameter description: operation status. Value Range: • Pending to be processed • Running • failed. -Success succeeded.
operation_type	String	Parameter description: operation type. **Value range: node_attach_volume

Example Requests

```
POST https://{endpoint}/v1/{project_id}/dev-servers/{id}/attachvolume
{
  "volume_id" : "1e79eff7-c02b-4dfd-a0d6-f76c90d9b4e0"
}
```

Example Responses

Status code: 200

```
{
  "operation_id" : "b894b879-a3c0-49ee-b5cb-92202b2794e2",
  "operation_status" : "pending",
  "operation_type" : "node_attach_volume"
}
```

Status Codes

Status Code	Description
200	

Error Codes

See [Error Codes](#).

10.25 Bind EIPs to a DevServer

Function

EIPs bound to a DevServer.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/dev-servers/{id}/publicips

Table 10-274 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: DevServer ID Constraints: Mandatory Range: 1 to 64 characters Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 10-275 Request body parameters

Parameter	Mandatory	Type	Description
public_ip_id	No	String	Definition: EIP ID. Constraints: Mandatory Range: 1 to 64 characters Default Value: N/A

Response Parameters

Status code: 200

Table 10-276 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-277 Response body parameters

Parameter	Type	Description
public_ips	Array of ServerPublicIp objects	Definition: Array of EIP information.

Table 10-278 ServerPublicIp

Parameter	Type	Description
id	String	Definition: EIP ID. Constraints: Mandatory Range: 1 to 64 characters Default Value: N/A
address	String	Definition: EIP IP address. Constraints: Mandatory Range: 1 to 64 characters in standard IPv4 format. Default Value: N/A

Example Requests

```
POST https://{endpoint}/v1/{project_id}/dev-servers/{id}/publicips
```

Example Responses

None

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.26 Query Bound EIPs

Function

Query bound EIPs.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/{id}/publicips

Table 10-279 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: DevServer ID Constraints: Mandatory Range: 1 to 64 characters Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-280 Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-281 Response body parameters

Parameter	Type	Description
public_ips	Array of ServerPublicIp objects	Definition: Array of EIP information.

Table 10-282 ServerPublicIp

Parameter	Type	Description
id	String	Definition: EIP ID. Constraints: Mandatory Range: 1 to 64 characters Default Value: N/A
address	String	Definition: EIP IP address. Constraints: Mandatory Range: 1 to 64 characters in standard IPv4 format. Default Value: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/dev-servers/{id}/publicips
```

Example Responses

None

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.27 Querying the Specification List

Function

This API is used to query the specification list.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/flavors

Table 10-283 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 10-284 Query Parameters

Parameter	Mandatory	Type	Description
server_type	No	String	Definition: Service type Constraints: N/A Range: • bms: The resource type is Bare Metal Server (BMS). • ecs: The resource type is Elastic Cloud Server (ECS) • hps: The resource type is supernode server. Default Value: N/A

Parameter	Mandatory	Type	Description
arch	No	String	Definition: The CPU architecture of the specification Constraints: N/A Range: • X86 • ARM Default Value: N/A
charging_mode	No	String	Definition: The billing mode Constraints: N/A Range: • PRE_PAID: Yearly/Monthly • POST_PAID: Pay-per-use Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-285 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Constraints: N/A Default Value: N/A
data	Array of ServerFlavorInstanceResponse objects	DevServer flavor list.
pages	Integer	Definition: Total number of pages. Constraints: N/A Default Value: N/A
size	Integer	Definition: Number of records on each page. Constraints: N/A Default Value: N/A

Parameter	Type	Description
total	Long	Definition: Total number of records. Constraints: N/A Default Value: N/A

Table 10-286 ServerFlavorinstanceResponse

Parameter	Type	Description
arch	String	Definition: CPU architecture. Constraints: N/A Range: • X86: The CPU architecture is x86. • ARM: The CPU architecture is Arm. Default Value: N/A
availability_zone	String	Definition: Partition name. Constraints: N/A Range: N/A Default Value: N/A
charging_mode	String	Definition: Billing mode. Constraints: N/A Range: • PRE_PAID: yearly/monthly • POST_PAID: pay-per-use Default Value: N/A
count	Integer	Definition: Quantity. Constraints: N/A Default Value: N/A
flavor	String	Definition: Specification name. Constraints: N/A Default Value: N/A
flavor_type	String	Definition: Flavor type. Constraints: N/A Default Value: N/A
roce_num	Integer	Definition: Number of RoCEs. Constraints: N/A Default Value: N/A

Parameter	Type	Description
server_type	String	Definition: Service type. Constraints: N/A Range: • bms: The resource type is Bare Metal Server (BMS). • ecs: The resource type is Elastic Cloud Server (ECS) • hps: The resource type is supernode server. Default Value: N/A
sku_code	String	Definition: Billing code. Constraints: N/A Default Value: N/A
specification	String	Definition: Flavor details. Constraints: N/A Default Value: N/A
status	String	Definition: Status. Constraints: N/A Default Value: N/A
is_sold_out	Boolean	Definition: Whether it is sold out. Constraints: N/A Range: • true: Sold out • false: Not sold out Default Value: false

Status code: 400**Table 10-287** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401

Table 10-288 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 10-289** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 10-290** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
GET https://{endpoint}/v1/{project_id}/dev-servers/flavors
```

Example Responses

None

Status Codes

Status Code	Description
200	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

Error Codes

See [Error Codes](#).

10.28 Obtaining the Resource Flavor List

Function

This API is used to obtain the resource flavor list.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/resource-flavors

Table 10-291 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 10-292 Query Parameters

Parameter	Mandatory	Type	Description
server_type	No	String	Definition: Service type. Constraints: N/A Range • bms: The resource type is Bare Metal Server (BMS). • ecs: The resource type is Elastic Cloud Server (ECS) • hps: The resource type is supernode server. Default Value: N/A
arch	No	String	Definition: CPU architecture of the flavor. Constraints: N/A Range • X86: The CPU architecture is x86. • ARM: The CPU architecture is Arm. Default Value: N/A
charging_mode	No	String	Definition: CPU architecture of the flavor. Constraints: N/A Range • X86: The CPU architecture is x86. • ARM: The CPU architecture is Arm. Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-293 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Constraints: N/A Default Value: N/A
data	Array of ServerResourceFlavorInstanceResponse objects	DevServer flavor list.
pages	Integer	Definition: Total number of pages. Constraints: N/A Default Value: N/A
size	Integer	Definition: Number of records on each page. Constraints: N/A Default Value: N/A
total	Long	Definition: Total number of records. Constraints: N/A Default Value: N/A

Table 10-294 ServerResourceFlavorInstanceResponse

Parameter	Type	Description
flavor	String	IaaS flavor name.
specification	String	Flavor specifications.
arch	String	Cloud server architecture.
server_type	String	Cloud server type.
sku_code	String	Flavor billing code.
charging_mode	String	Billing mode.
roce_num	Integer	NIC quantity.
count	Integer	Supernode instance nodes.
status	String	Server specifications status.
server_flavors	Array of ServerFlavorInfo objects	Available flavors for supernode scaling.
flavor_type	String	Compute PU type.

Parameter	Type	Description
availability_zones	Array of AvailabilityZoneResponse objects	AZ and on-sale status.

Table 10-295 ServerFlavorInfo

Parameter	Type	Description
name	String	Server flavor name.

Table 10-296 AvailabilityZoneResponse

Parameter	Type	Description
id	String	AZ ID.
is_sold_out	Boolean	Flavor on-sale status.

Status code: 400**Table 10-297** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 10-298** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 10-299** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 10-300** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

GET https://{endpoint}/v1/{project_id}/dev-servers/resource-flavors

Example Responses

Status code: 200

Accepted

```
{
  "current" : 1,
  "data" : [ {
    "arch" : "ARM",
    "availability_zones" : [ {
      "id" : "cn-north-7c",
      "is_sold_out" : false
    }, {
      "id" : "cn-north-7b",
      "is_sold_out" : false
    }, {
      "id" : "cn-north-7a",
      "is_sold_out" : false
    } ],
    "charging_mode" : "COMMON",
    "count" : 1,
    "flavor" : "modelarts.bm.npu.arm.8snt9b3.d.physical",
    "flavor_type" : "ASCEND_SNT9B",
    "roce_num" : 8,
    "server_flavors" : [ {
      "name" : "kat2e.48xlarge.8.376t.physical"
    }, {
```

```
{
  "name": "kat2e.48xlarge.8.400t.physical"
},
{
  "server_type": "ECS",
  "sku_code": "modelarts.vm.cpu.2u.d",
  "specification": "8*Snt9b3|8*64GB|192vcpus|768GiB"
},
{
  "pages": 1,
  "size": 1,
  "total": 1
}
```

Status Codes

Status Code	Description
200	Accepted
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

Error Codes

See [Error Codes](#).

10.29 Querying the List of Supported DevServer Scaling Specifications and Capacity Calculation

Function

This API is used to query the specifications supported by DevServer supernode scaling and calculate the capacity.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/hyperinstance/{id}/scale-evaluations

Table 10-301 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: ID of the DevServer supernode. Constraints: $^{[0-9a-f]\{8\}-[0-9a-f]\{4\}-[1-5][0-9a-f]\{3\}-[89ab][0-9a-f]\{3\}-[0-9a-f]\{12\}}\$$ Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-302 Response body parameters

Parameter	Type	Description
evaluations	Array of ServerScaleEvaluation objects	Flavor capacity retention.

Table 10-303 ServerScaleEvaluation

Parameter	Type	Description
is_sold_out	Boolean	Specifies whether a flavor is sold out.
flavor	String	Flavor information.
resource_flavor	String	Resource flavor.

Example Requests

```
GET https://{endpoint}/v1/{project_id}/dev-servers/hyperinstance/{id}/live-scale-up
```

Example Responses

Status code: 200

Accepted

```
{
  "evaluations": [ {
    "is_sold_out": false,
    "flavor": "physical.xx.8765",
    "resource_flavor": "modelarts.bm.abc.arm.ei.d"
  } ]
}
```

Status Codes

Status Code	Description
200	Accepted

Error Codes

See [Error Codes](#).

10.30 Performing Operations on DevServer Instances in Batches

Function

This API is used to perform operations on DevServer instances in batches.

Constraints

No constraints.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/dev-servers/action

Table 10-304 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 10-305 Request body parameters

Parameter	Mandatory	Type	Description
type	Yes	String	Definition: Batch operation type. Constraints: N/A Range • START: DevServer instances are started in batches. • STOP: DevServer instances are stopped in batches. • REBOOT: DevServer instances are restarted in batches. • CHANGEOS: DevServer server OS images are changed in batches. • REINSTALLLOS: DevServer server OS images are reinstalled in batches. • DELETE: DevServer instances are deleted in batches. Default Value: N/A
servers	Yes	Array of BatchAction DevServerIds objects	Definition: DevServer ID list for batch operations.

Parameter	Mandatory	Type	Description
extend_param	No	ServerOsRequest object	Definition: Parameters for changing and resetting the OS image of DevServer instances in batches.

Table 10-306 BatchActionDevServerIds

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: DevServer instance ID. Constraints: N/A Range: N/A Default Value: N/A

Table 10-307 ServerOsRequest

Parameter	Mandatory	Type	Description
admin_pass	No	String	Definition: Password used for logging in to the server. Note that either admin_pass or key_pair_name must be specified for ECSs and BMSs and supernodes support only key_pair_name . Constraints: The password must: • Contain 8 to 26 characters. • Contain at least three of the following types: uppercase letters, lowercase letters, digits, and special characters (!@%-_+[{ } ; , / ?). • Cannot be the username or the username spelled backwards. • Cannot contain root, administrator, or their reverse. Range: N/A Default value: N/A

Parameter	Mandatory	Type	Description
key_pair_name	No	String	Name of the key pair for logging in to the server. Note that either admin_pass or key_pair_name must be specified. This parameter is supported only when ECSs or BMSs are reset or their OSs are changed. Supernodes do not support this parameter.
image_id	No	String	Definition: Image ID. This parameter is mandatory when the OS is changed. Constraints: N/A Range: N/A Default value: N/A

Parameter	Mandatory	Type	Description
user_data	No	String	Definition: Custom data to be injected into the instance during cloud server creation. Texts and text files can be injected. Example: Before base64 encoding: - Linux server: <pre>#!/bin/bash echo user_test > /home/user.txt</pre> After base64 encoding: - Linux server: <pre>IyEvYmluL2Jhc2gKZWNoYyB1c2VyX3Rlc 3QgPiAvaG9tZS91c2VyLnR4dA==</pre> For details about how to inject custom data, see Injecting User Data. You must be aware of the effects of user_data. You are responsible for the impact and risks. Constraints: - The content of user_data must be encoded with Base64. - The maximum size of the content to be injected (before encoding) is 32K. Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 10-308 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Value range: 1 to 2097152
data	Array of ServerResponse objects	Definition: DevServer instance list.

Parameter	Type	Description
pages	Integer	Definition: Total number of pages. Value range: 1 to 2097152
size	Integer	Definition: Number of records on each page. Maximum number of instances returned on each page. The value of this parameter directly affects the amount of returned data. You can adjust the value to optimize the query performance or increase the information volume of a single request. Range: 1 to 1024
total	Long	Definition: Total number of records. Total number of instances that meet the search criteria. This field is used to learn the overall data scale. Range: 1 to 2147483647

Table 10-309 ServerResponse

Parameter	Type	Description
create_at	Long	Definition: Creation time. Range: N/A
update_at	Long	Definition: Update time. Range: N/A
charging_mode	String	Definition: Billing mode. Range: • COMMON: both yearly/monthly and pay-per-use • POST_PAID: pay-per-use • PRE_PAID: yearly/monthly
cloud_server	CloudServer object	Definition: Cloud service information.
endpoints_response	Array of Endpoints objects	Definition: Private IP address of the instance.
flavor	String	Definition: Instance flavor name. Range: ^.{1,128}\$

Parameter	Type	Description
id	String	Definition: Instance ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
key_pair_name	String	Definition: Key pair name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
name	String	Definition: Instance name. Range: ^[-_.a-zA-Z0-9]{1,64}\$
order_id	String	Definition: Order ID. Range: ^[a-zA-Z0-9]{1,64}\$
server_image_response	ServerImageResponse object	Definition: Instance image information. Range: N/A

Parameter	Type	Description
status	String	Definition: Instance status. Current running status of the instance, which is used to monitor the lifecycle and health status of the instance. Range: • CREATE_FAILED: Creating the instance failed. • CREATING: The instance is being created. • DELETED: The instance has been deleted. • DELETE_FAILED: Deleting the instance failed. • DELETING: The instance is being deleted. • ERROR: An error occurred. • RUNNING: The instance is running. • STARTING: The instance is being started. • START_FAILED: Starting the instance failed. • STOPPED: The instance has been stopped. • STOPPING: The instance is being stopped. • STOP_FAILED: Stopping the instance failed. • REBOOTING: The instance is being restarted. • REBOOT_FAILED: Restarting the instance failed. • CHANGINGOS: The OS is being changed. • CHANGINGOS_FAILED: Changing the OS failed. • REINSTALLINGOS: The OS is being reinstalled. • REINSTALLINGOS_FAILED: Reinstalling the OS failed.

Parameter	Type	Description
vpc_id	String	Definition: ID of the VPC where the instance is located. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>
endpoints	Array of EndpointsRes objects	Definition: Private IP address of the server.
volumes	Array of ServerVolume objects	Definition: Information about the mounted hard disk.
image	ServerImageResponse object	Definition: Server image information.
category	String	Definition: Server type. Range: • HPS: supernode server • SPOD: full-cabinet server • SERVER: single server
server_hps	ServerHpsInfo object	Definition: Information about the supernode to which the server belongs.
subnet_id	String	Parameter description: ID of the subnet where the instance is located. ** Value range: <code>**^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code> .

Table 10-310 CloudServer

Parameter	Type	Description
id	String	Definition: Server resource ID or supernode's child node ID. Range: <code>^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$</code>

Parameter	Type	Description
type	String	Definition: DevServer server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
hps_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
hps_ecs_id	String	Definition: Server resource ID of the supernode's child node. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-311 Endpoints

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances. Constraints: N/A Range: 0 to 1,024 IP addresses Default Value: N/A
dev_service	String	Definition: Supported services. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.

Parameter	Type	Description
extensions	Map<String,String>	Definition: App-specific URL for accessing the remote development mode of the app. It includes extended configurations of the application. Constraints: N/A Range: N/A Default Value: N/A
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time. Constraints: N/A Range: 0 to 1,024 key pairs Default Value: N/A

Table 10-312 EndpointsRes

Parameter	Type	Description
allowed_access_ips	Array of strings	Definition: Whitelisted public IP addresses that are allowed to access notebook instances through SSH. By default, all public IP addresses can access the notebook instances. If IP addresses are specified, only the clients with the specified IP addresses can access the notebook instances.
dev_service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
ssh_keys	Array of strings	Definition: List of SSH key pairs. You can set multiple key pairs to access an SSH instance at the same time.

Parameter	Type	Description
service	String	Definition: Method for accessing the notebook instance. Range: • NOTEBOOK: You can access notebook instances using HTTPS. • SSH: You can remotely access notebook instances through SSH.
uri	String	Definition: Private IP address of the instance. Range: N/A

Table 10-313 ServerVolume

Parameter	Type	Description
size	Integer	Definition: EVS disk size, which is the storage space allocated to the system disk. Constraints: N/A Range: 100 to 1,024 GB Default Value: N/A
type	String	Definition: Storage type, which can be a system disk or data disk. Constraints: N/A Range • ROOT: system disk • DATA: data disk Default Value: N/A
evs_type	String	Definition: EVS disk type. Storage type of the EVS disk. Constraints: N/A Range • ESSD: extreme SSD • GPSSD: general-purpose SSD • SAS: high I/O EVS disk • SATA: common I/O EVS disk • SSD: ultra-high I/O EVS disk Default Value: N/A

Parameter	Type	Description
evs_id	String	Definition: ID of the EVS disk. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$

Table 10-314 ServerImageResponse

Parameter	Type	Description
arch	String	Definition: Architecture type of a server image. Range: • ARM • X86
image_id	String	Definition: Server image ID. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Server image name. Constraints: N/A Range: 1 to 256 characters Default Value: N/A
server_type	String	Definition: Server type. Range: • BMS: BMS • ECS: ECS • HPS: supernode server
status	String	Definition: Server image status. Range: • ACTIVE • INACTIVE

Table 10-315 ServerHpsInfo

Parameter	Type	Description
id	String	Definition: ID of the DevServer supernode instance. Range: ^[0-9a-f]{8}-[0-9a-f]{4}-[1-5][0-9a-f]{3}-[89ab][0-9a-f]{3}-[0-9a-f]{12}\$
name	String	Definition: Name of the DevServer supernode. Range: ^[-_a-zA-Z0-9]{1,64}\$

Status code: 400**Table 10-316** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-317 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 10-318** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-319 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 10-320** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-321 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 500**Table 10-322** Response header parameters

Parameter	Type	Description
X-Request-Id	String	Link trace ID.

Table 10-323 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
post https://{endpoint}/v1/{project_id}/dev-servers/action
{
  "type" : "START",
  "servers" : [ {
    "id" : "b6dfd2ba-ac27-49cc-9fa5-750a1ad6342e"
  }, {
    "id" : "75751015-8929-434f-a346-c0c4c3afa547"
  } ]
}
```

Example Responses

Status code: 200

OK

```
{
  "current" : 0,
  "data" : [ {
    "charging_mode" : "POST_PAID",
    "cloud_server" : {
      "id" : "eb8b4e32-afc9-4f71-8372-1f55f3d7ab28",
      "type" : "ECS"
    },
    "create_at" : 1699352013484,
    "endpoints" : [ {
      "service" : "SSH",
      "uri" : "192.168.0.23"
    } ],
    "flavor" : "Si2.large.4",
    "id" : "c65c4f27-f791-452b-9098-a2726fa2e922",
    "image" : {
      "arch" : "X86",
      "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
      "name" : "Ubuntu18.04_x86_64_CPU",
      "server_type" : "ECS"
    },
    "name" : "EI-evs-01",
    "status" : "RUNNING",
    "update_at" : 1699352058465,
    "vpc_id" : "05982b48-a70f-43a1-a2b0-1fe36a236172"
  }, {
    "charging_mode" : "POST_PAID",
    "cloud_server" : {
      "type" : "ECS"
    },
    "create_at" : 1699348284990,
    "flavor" : "Si2.large.4",
    "id" : "62383738-e52a-450a-9f84-f9e705402be8",
    "image" : {
      "arch" : "X86",
      "image_id" : "c90fb553-2cdb-4b81-b56a-ef68812c6cf7",
      "name" : "Ubuntu18.04_x86_64_CPU",
      "server_type" : "ECS"
    },
    "name" : "EI-evs-1107",
    "status" : "CREATING",
    "update_at" : 1699348285077
  } ],
  "pages" : 1,
  "size" : 2,
  "total" : 2
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
500	Server Internal Error

Error Codes

See [Error Codes](#).

10.31 Obtaining Details About a DevServer Job

Function

This API is used to query details about a DevServer job.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/jobs/{id}

Table 10-324 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Definition: DevServer job ID. Constraints: Mandatory. Range: 1 to 64 characters. Default Value: N/A

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-325 Response body parameters

Parameter	Type	Description
create_at	String	Definition: Creation time. Range: N/A
update_at	String	Definition: Update time. Range: N/A
id	String	Definition: Task ID. Range: N/A
name	String	Definition: Task name. Range: N/A
type	String	Definition: Task template type. Range: N/A
status	String	Definition: Status. Range: N/A
items	Array of DevServerJobItem objects	Definition: Task instance list information.
tasks	Array of DevServerTaskResponse objects	Definition: Task details list.

Parameter	Type	Description
template_id	String	Definition: Task template ID. Range: N/A
user_name	String	Definition: Information about the user who delivers the task. Range: N/A
abnormal_count	Integer	Definition: number of nodes where the task fails. Range: N/A
description	String	Definition: Description. Range: N/A

Table 10-326 DevServerJobItem

Parameter	Type	Description
type	String	Definition: Fine-grained task type. Range: N/A
spec	Map<String,String>	Definition: Parameters required by the task.

Table 10-327 DevServerTaskResponse

Parameter	Type	Description
id	String	Definition: task ID. Range: N/A
server_id	String	DevServer ID.
server_name	String	DevServer name.
status	String	Task status. Options: PROCESSING: The task is being executed. SUCCESS: The task is complete. FAILED: The task fails to be executed. DELETE: The task has been deleted.
cloud_server	Map<String,String>	Underlying ECS/BMS/HPS ID.
message	String	Output information.

Parameter	Type	Description
create_at	String	Creation time.
update_at	String	Update time.

Example Requests

Query details about the job specified by **job_id**.

```
GET https://{endpoint}/v1/{project_id}/dev-servers/jobs/{job_id}
```

```
{ }
```

Example Responses

Status code: 200

OK

```
{
  "create_at" : 1757558550702,
  "update_at" : 1757558564458,
  "id" : "0319470a-7fad-452e-bff0-d3ba3bd83955",
  "name" : "software-query",
  "description" : "Query Huawei Cloud AI software.",
  "type" : "ASCEND_SOFTWARE_QUERY",
  "status" : "FINISHED",
  "items" : [ {
    "type" : "HDK_QUERY"
  } ],
  "tasks" : [ {
    "create_at" : 1757558550733,
    "update_at" : 1757558564470,
    "id" : "0319470a-2524-4b1e-bb91-09e776701d78",
    "server_id" : "3384bdb0-2d31-4fe9-946e-09e776701d78",
    "server_name" : "liteserver-a2-aiserver-test",
    "cloud_server" : {
      "id" : "0c12a47a-0103-4fdb-bf85-7a09a8f53ac9",
      "type" : "BMS"
    },
    "status" : "SUCCESS",
    "message" : "Driver: 24.1.0.3 | Firmware: 7.5.0.5.220"
  } ],
  "template_id" : "2b087a09-e90d-414c-9b15-ffec45e400e7",
  "user_name" : "modelarts_user",
  "abnormal_count" : 0
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.32 Obtaining the DevServer Job List

Function

This API is used to obtain the DevServer job list. The jobs can be filtered by status, ID, or other fields.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/jobs

Table 10-328 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 10-329 Query Parameters

Parameter	Mandatory	Type	Description
id	No	String	Definition: DevServer job ID. Constraints: None Range: 1 to 64 characters. Default Value: N/A

Parameter	Mandatory	Type	Description
name	No	String	Definition: DevServer job name. Constraints: None Range: N/A Default Value: N/A
type	No	String	Definition: DevServer job type. Constraints: None Range: N/A Default Value: N/A
status	No	String	Definition: DevServer job status. Constraints: None Range: N/A Default Value: N/A
visible	No	Boolean	Definition: Visible or not. Constraints: bool Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-330 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Range: N/A
data	Array of DevServerJobListResponse objects	Definition: Job instance list.
pages	Integer	Definition: Total number of pages. Range: N/A

Parameter	Type	Description
size	Integer	Definition: Number of records on each page. Range: N/A
total	Long	Definition: Total number of records. Range: N/A

Table 10-331 DevServerJobListResponse

Parameter	Type	Description
id	String	Task ID.
name	String	Task name.
user_name	String	Username.
description	String	Task description.
type	String	Task type.
status	String	Task status.
abnormal_count	Integer	Number of nodes where the task fails.
create_at	String	Creation time.
update_at	String	Update time.

Example Requests

```
GET https://{endpoint}/v1/{project_id}/dev-servers/jobs
{ }
```

Example Responses

Status code: 200

OK

```
{
  "current" : 1,
  "data" : [ {
    "create_at" : 1749536420547,
    "update_at" : 1749536603947,
    "id" : "03af7361-5cba-44d4-b29b-4dcc5d9dff51",
    "name" : "software-upgrade-792a",
    "user_name" : "modelarts_user",
    "type" : "ASCEND_SOFTWARE_UPGRADE",
    "status" : "FINISHED",
    "abnormal_count" : 0
  }, {
    "create_at" : 1749523685137,
    "update_at" : 1749523899848,
```

```
{
  "id" : "62c89f77-fc81-45a8-9647-d6e457e73954",
  "name" : "diagnosis-81ef",
  "user_name" : "modelarts_user",
  "description" : "POC",
  "type" : "ASCEND_DIAGNOSIS",
  "status" : "FINISHED",
  "abnormal_count" : 0
} ],
"pages" : 1,
"size" : 2,
"total" : 2
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.33 Deleting DevServer Jobs in Batches

Function

Delete DevServer jobs in batches.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/dev-servers/jobs

Table 10-332 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 10-333 Request body parameters

Parameter	Mandatory	Type	Description
job_ids	No	Array of strings	ID list of DevServer tasks to be deleted.

Response Parameters

Status code: 200

Table 10-334 Response body parameters

Parameter	Type	Description
current	Integer	Definition: Current page number. Range: N/A
data	Array of DevServerJobListResponse objects	Definition: Job instance list.
pages	Integer	Definition: Total number of pages. Range: N/A
size	Integer	Definition: Number of records on each page. Range: N/A
total	Long	Definition: Total number of records. Range: N/A

Table 10-335 DevServerJobListResponse

Parameter	Type	Description
id	String	Task ID.
name	String	Task name.
user_name	String	Username.
description	String	Task description.
type	String	Task type.
status	String	Task status.
abnormal_count	Integer	Number of nodes where the task fails.
create_at	String	Creation time.
update_at	String	Update time.

Example Requests

```
DELETE https://{endpoint}/v1/{project_id}/dev-servers/jobs
{
  "job_ids" : [ "03af7361-5cba-44d4-b29b-4dcc5d9dff51", "62c89f77-fc81-45a8-9647-d6e457e73954" ]
}
```

Example Responses

Status code: 200

OK

```
{
  "current" : 1,
  "data" : [ {
    "create_at" : 1749536420547,
    "update_at" : 1749536603947,
    "id" : "03af7361-5cba-44d4-b29b-4dcc5d9dff51",
    "name" : "software-upgrade-792a",
    "user_name" : "modelarts_user",
    "type" : "ASCEND_SOFTWARE_UPGRADE",
    "status" : "FINISHED",
    "abnormal_count" : 0
  }, {
    "create_at" : 1749523685137,
    "update_at" : 1749523899848,
    "id" : "62c89f77-fc81-45a8-9647-d6e457e73954",
    "name" : "diagnosis-81ef",
    "user_name" : "modelarts_user",
    "description" : "POC",
    "type" : "ASCEND_DIAGNOSIS",
    "status" : "FINISHED",
    "abnormal_count" : 0
  } ],
  "pages" : 1,
  "size" : 2,
  "total" : 2
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.34 Creating a DevServer Job

Function

This API is used to create a DevServer job.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/dev-servers/jobs

Table 10-336 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 10-337 Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Name.

Parameter	Mandatory	Type	Description
description	No	String	Description.
server_ids	Yes	Array of strings	The list of DevServer instance IDs.
type	Yes	String	Task template type.
is_reboot	No	Boolean	Specifies whether to automatically restart the task after the task is executed.
items	Yes	Array of DevServerJobItem objects	Task instance list.

Table 10-338 DevServerJobItem

Parameter	Mandatory	Type	Description
type	Yes	String	Definition: Fine-grained task type. Range: N/A
spec	No	Map<String,String>	Definition: Parameters required by the task.

Response Parameters

Status code: 200

Table 10-339 Response body parameters

Parameter	Type	Description
create_at	String	Definition: Creation time. Range: N/A
update_at	String	Definition: Update time. Range: N/A
id	String	Definition: Task ID. Range: N/A
name	String	Definition: Task name. Range: N/A
type	String	Definition: Task template type. Range: N/A

Parameter	Type	Description
status	String	Definition: Status. Range: N/A
items	Array of DevServerJobItem objects	Definition: Task instance list information.
tasks	Array of DevServerTaskResponse objects	Definition: Task details list.
template_id	String	Definition: Task template ID. Range: N/A
user_name	String	Definition: Information about the user who delivers the task. Range: N/A
abnormal_count	Integer	Definition: number of nodes where the task fails. Range: N/A
description	String	Definition: Description. Range: N/A

Table 10-340 DevServerJobItem

Parameter	Type	Description
type	String	Definition: Fine-grained task type. Range: N/A
spec	Map<String,String>	Definition: Parameters required by the task.

Table 10-341 DevServerTaskResponse

Parameter	Type	Description
id	String	Definition: task ID. Range: N/A
server_id	String	DevServer ID.
server_name	String	DevServer name.

Parameter	Type	Description
status	String	Task status. Options: PROCESSING : The task is being executed. SUCCESS : The task is complete. FAILED : The task fails to be executed. DELETE : The task has been deleted.
cloud_server	Map<String,String>	Underlying ECS/BMS/HPS ID.
message	String	Output information.
create_at	String	Creation time.
update_at	String	Update time.

Example Requests

```
POST https://{endpoint}/v1/{project_id}/dev-servers/jobs
{
  "server_ids": [ "66d210bc-023c-490a-8664-afd321a163ad" ],
  "type": "HDK_UPGRADE",
  "items": [ {
    "spec": {
      "version": "24.1.rc3.10"
    },
    "type": "HDK_UPGRADE"
  } ],
  "name": "hdk_upgrade_task",
  "description": "Task description."
}
```

Example Responses

Status code: 200

OK

```
{
  "create_at": 1755005748201,
  "update_at": 1755005931007,
  "id": "64e004ec-6cb0-401f-a7c0-ec2557626b16",
  "name": "hdk_upgrade_task",
  "description": "Task description.",
  "type": "ASCEND_SOFTWARE_UPGRADE",
  "status": "FINISHED",
  "items": [ {
    "spec": {
      "version": "24.1.rc3.10"
    },
    "type": "HDK_UPGRADE"
  } ],
  "tasks": [ {
    "create_at": 1755005748201,
    "update_at": 1755005931355,
    "id": "64e004ec-ad30-4038-9af1-afd321a163ad",
    "server_id": "66d210bc-023c-490a-8664-afd321a163ad",
```

```
"server_name" : "liteserver-978c-00001",
"cloud_server" : {
  "hps_ecs_id" : "e2cb187a-4c4d-495c-a5f8-3de83a4e44ce",
  "id" : "39aab8e4-add9-4c2a-8fb7-c3e477e23855",
  "type" : "HPS"
},
"status" : "SUCCESS",
"message" : "the message"
} ],
"template_id" : "6f02d33b-a5d6-485c-8d73-480da5870512",
"user_name" : "modelarts_user",
"abnormal_count" : 0
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.35 Obtaining the DevServer Job Template List

Function

This API is used to obtain the DevServer job template list.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/jobs/templates

Table 10-342 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 10-343 Query Parameters

Parameter	Mandatory	Type	Description
id	No	String	Definition: ID of the DevServer job template. Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
name	No	String	Definition: Name of the DevServer job template. Constraints: The value can contain letters, digits, and hyphens (-). Range: N/A Default Value: N/A
type	No	String	Definition: Type of the DevServer job template. Constraints: The value can contain letters, digits, and hyphens (-). Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-344 Response body parameters

Parameter	Type	Description
current	Integer	Current page number.
data	Array of DevServerTemplateListResponse objects	Template list.
pages	Integer	Total number of pages.
size	Integer	Number of records on each page.
total	Long	Total number of records.

Table 10-345 DevServerTemplateListResponse

Parameter	Type	Description
id	String	Task template ID.
name	String	Task template name.
description	String	Task template description.
type	String	Task template type.
flavor_type	String	Server type.
params	Array of TemplateParam objects	Template parameters.

Table 10-346 TemplateParam

Parameter	Type	Description
name	String	Name.
description	String	Description.
value	String	Value.
visible	String	Display or not.
regex	String	Regular expression verification.

Example Requests

```
GET https://{endpoint}/v1/{project_id}/dev-servers/jobs/templates
{ }
```

Example Responses

Status code: 200

OK

```
{
  "current" : 0,
  "data" : [ {
    "id" : "2b087a09-e90d-414c-9b15-ffec45e400e9",
    "type" : "ASCEND_SYSTEM_CONFIG",
    "flavor_type" : "ASCEND_GENERIC",
    "params" : [ {
      "description" : "Configure the RoCE network uplink ports properly and set up the parameter plane
network with correct IP addresses, subnet masks, and gateways.",
      "name" : "JOB_ITEM_RDMA_CONFIG",
      "regex" : "^[A-Za-z0-9-_{1,128}$",
      "value" : "Parameter Plane Network Configuration",
      "visible" : "true"
    }, {
      "description" : "Detect and fix security vulnerabilities in the HCE2.0 system.",
      "name" : "JOB_ITEM_SYSTEM_FIX",
      "regex" : "^[A-Za-z0-9-_{1,128}$",
      "value" : "System Bug Fixes",
      "visible" : "true"
    }, {
      "description" : "Timeout of RDMA_CONFIG job item",
      "name" : "TIMEOUT_RDMA_CONFIG",
      "regex" : "^[A-Za-z0-9-_{1,128}$",
      "value" : "300",
      "visible" : "false"
    }, {
      "description" : "Timeout of SYSTEM_FIX job item",
      "name" : "TIMEOUT_SYSTEM_FIX",
      "regex" : "^[A-Za-z0-9-_{1,128}$",
      "value" : "300",
      "visible" : "false"
    }
  ]
}, {
  "pages" : 1,
  "size" : 10,
  "total" : 1
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.36 Obtaining Details About a DevServer Job Template

Function

This API is used to obtain details about a DevServer job template.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/jobs/templates/{id}

Table 10-347 Path Parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Description: ID of a DevServer job template. Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-348 Response body parameters

Parameter	Type	Description
id	String	Template ID.
name	String	Template name.
description	String	Template description.
cmd	String	Image execution command.
swr_path	String	Task image.
resources	String	Task specifications.
volumes	String	Volume.
volumes_mount	String	Volume mounting.
flavor_type	String	Server type.
timeout	String	Timeout interval of a task.
check_interval	String	Task polling period.
type	String	Task type.
status	String	Template status.
params	Array of TemplateParam objects	Other template parameters.

Table 10-349 TemplateParam

Parameter	Type	Description
name	String	Name.
description	String	Description.
value	String	Value.
visible	String	Display or not.
regex	String	Regular expression verification.

Example Requests

```
GET https://{endpoint}/v1/{project_id}/dev-servers/jobs/templates/{id}
{ }
```

Example Responses

Status code: 200

OK

```
{
  "id" : "2b087a09-e90d-414c-9b15-ffec45e400e9",
  "cmd" : "/root/script/start_system_config.sh",
  "swr_path" : "swr.cn-north-7.myhuaweicloud.com/atelier/aiserver_service_aarch64:ai_server-py_3.11-hce_2.0.2506-aarch64-20251020164959-113183f",
  "resources" : "{limits:{cpu:250m,memory:512Mi},requests:{cpu:250m,memory:512Mi}}",
  "volumes" : [{"hostPath":{"path":"/tmp"},"name":"tmp"}],
  "volumes_mount" : [{"mountPath":"/tmp","name":"tmp"}],
  "flavor_type" : "ASCEND_GENERIC",
  "timeout" : "300",
  "check_interval" : "10",
  "type" : "ASCEND_SYSTEM_CONFIG",
  "status" : "ACTIVE",
  "params" : [ {
    "description" : "Configure the RoCE network uplink ports properly and set up the parameter plane network with correct IP addresses, subnet masks, and gateways.",
    "name" : "JOB_ITEM_RDMA_CONFIG",
    "regex" : "^[A-Za-z0-9-_{1,128}$",
    "value" : "Parameter Plane Network Configuration",
    "visible" : "true"
  }, {
    "description" : "Detect and fix security vulnerabilities in the HCE2.0 system.",
    "name" : "JOB_ITEM_SYSTEM_FIX",
    "regex" : "^[A-Za-z0-9-_{1,128}$",
    "value" : "System Bug Fixes",
    "visible" : "true"
  }, {
    "description" : "Timeout of RDMA_CONFIG job item",
    "name" : "TIMEOUT_RDMA_CONFIG",
    "regex" : "^[A-Za-z0-9-_{1,128}$",
    "value" : "300",
    "visible" : "false"
  }, {
    "description" : "Timeout of SYSTEM_FIX job item",
    "name" : "TIMEOUT_SYSTEM_FIX",
    "regex" : "^[A-Za-z0-9-_{1,128}$",
    "value" : "300",
    "visible" : "false"
  } ]
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.37 Obtaining the DevServer Plug-in List

Function

This API is used to obtain the DevServer plug-in list.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/plugins

Table 10-350 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 10-351 Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Definition: DevServer plug-in name. Constraints: The value can contain letters, digits, and hyphens (-). Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-352 Response body parameters

Parameter	Type	Description
current	Integer	Current page number.

Parameter	Type	Description
data	Array of PluginResponse objects	Data
pages	Integer	Total number of pages.
size	Integer	Page size.
total	Long	Total number of records.

Table 10-353 PluginResponse

Parameter	Type	Description
name	String	Plugin name.
infos	Array of AIServerPlugin objects	Plugin details.

Table 10-354 AIServerPlugin

Parameter	Type	Description
id	String	Service plugin ID.
version	String	Plugin version.
status	String	Plugin status.
url	String	Plugin link.

Example Requests

None

Example Responses

Status code: 200

OK

```
{
  "current" : 1,
  "data" : [ {
    "infos" : [ {
      "id" : "68d860dd-6380-4a09-b484-b6cce6efb6ac",
      "status" : "ACTIVE",
      "url" : "https://abc.com/plugin",
      "version" : "1.1.0"
    } ],
  } ],
}
```

```
"name" : "NodeTaskHub"
}],
"pages" : 1,
"size" : 1,
"total" : 1
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

10.38 Obtaining Software Information

Function

This API is used to obtain the supported software information. The **flavor_type** and **name** parameters are supported.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/dev-servers/software

Table 10-355 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 10-356 Query Parameters

Parameter	Mandatory	Type	Description
flavor_type	No	String	Definition: DevServer flavor type. Constraints: The value can contain letters, digits, and hyphens (-). Range: N/A Default Value: N/A
type	No	String	Definition: DevServer software type. Constraints: The value can contain letters, digits, and hyphens (-). Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 10-357 Response body parameters

Parameter	Type	Description
data	Array of SoftwareData objects	All flavor types and supported software.

Table 10-358 SoftwareData

Parameter	Type	Description
flavor_type	String	Flavor type.
support	Array of SoftwareSupport objects	Information about all software supported by flavor_type .

Table 10-359 SoftwareSupport

Parameter	Type	Description
type	String	Software name.
info	Array of VersionInfo objects	Software version information, including the software version number and software description.

Table 10-360 VersionInfo

Parameter	Type	Description
id	String	Definition: ID. Range: N/A
version	String	Version.
description	String	Version description, which is displayed in the drop-down list on the frontend.
url	String	Download link.
status	String	Availability status.
file	Array of File objects	Software package list.

Table 10-361 File

Parameter	Type	Description
name	String	Software package name.
file	String	Software package and installation package.

Example Requests

```
GET https://{endpoint}/v1/{project_id}/dev-servers/software
{ }
```

Example Responses

Status code: 200

OK

```
{
  "data": [ {
    "flavor_type": "ASCEND_SNT9B",
```

```
"support" : [ {  
  "info" : [ {  
    "description" : "Driver: 23.0.6 | Firmware: 7.1.0.9.220",  
    "id" : "5a0f7b07-b4d7-4f7c-8290-617f3e4be8d0",  
    "status" : "ACTIVE",  
    "url" : "https://abc.com/hdk",  
    "version" : "23.0.6"  
  }, {  
    "description" : "Driver: 24.1.0.3 | Firmware: 7.5.0.3.220",  
    "id" : "af890aa4-4579-418a-83ca-d6e41398ca65",  
    "status" : "ACTIVE",  
    "url" : "https://abc.com/hdk",  
    "version" : "24.1.0.3"  
  } ],  
  "type" : "ASCEND_HDK"  
} ]  
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

11 Authorization Management

11.1 Viewing an Authorization List

Function

This API is used to view the authorization information.

This API applies to the following scenarios: When you need to know the current authorization status, review permission assignment, or manage permissions, you can use this API to view the authorization list. Before using this API, ensure that you have the permission to view authorization. After the query is complete, the authorization list is returned, including the authorized resources, authorization type, and authorization content. If you do not have the permission to view the authorization list or the authorization list does not exist, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/authorizations

Table 11-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 11-2 Query Parameters

Parameter	Mandatory	Type	Description
sort_by	No	String	Definition: Sorting field Constraints: N/A Range: Enums: • user_name: IAM user • create_time: creation time Default Value: user_name
order	No	String	Definition: Sorting mode Constraints: N/A Range: Enums: • ASC: ascending order • DESC: descending order Default Value: ASC
limit	No	Integer	Definition: Maximum number of records returned on each page Constraints: N/A Range: [1, 1000] Default Value: 1000
offset	No	Integer	Definition: Start page for pagination display Constraints: N/A Range: Non-negative integers Default Value: 0

Request Parameters

None

Response Parameters

Status code: 200

Table 11-3 Response body parameters

Parameter	Type	Description
total_count	Number	Definition: Total number of authorizations. Range: N/A
auth	Array of AuthorizationResponse objects	Definition: Authorization information list.

Table 11-4 AuthorizationResponse

Parameter	Type	Description
user_id	String	Definition: user ID. For details, see Obtaining a Username and ID . If user_id is set to all , all IAM users are authorized. If some IAM users have been authorized, the authorization setting will be updated. This parameter is mandatory only if the authorization method is set to Agency . Constraints: N/A Range: The value must contain 3 to 32 characters. Letters, digits, and hyphens (-) are allowed. Default Value: N/A
type	String	Definition: Authorization type. Agency is recommended. Constraints: N/A Range: • AGENCY: agency • CREDENTIAL: access keys (AK/SK) Default Value: N/A
content	String	Definition: Authorization content. Constraints: • When the authorization type is agency, this field is the agency name. • When the authorization type is access key, this field is the access key ID (AK). Range: 0 to 64 Default Value: N/A

Parameter	Type	Description
secret_key	String	Definition: Secret access key (SK). Constraints: This field is required only when the authorization type is access key. Range: The value must contain 40 characters. Letters and digits are allowed. Default Value: N/A
user_name	String	Definition: Username. Constraints: If user_id is set to all-users , all users will be displayed. Range: N/A Default Value: N/A
user_type	String	Definition: User type. Constraints: N/A Range: • IAM: IAM user. The user_id field is mandatory. • FEDERATE: federated user. The user_name field is mandatory, and the user_id field is not needed. • GRANT: agency. The user_id field is mandatory, and its value is the agency ID. • ALL-USERS: all users. The user_id field is mandatory, and its value is all. Default Value: IAM.
create_time	Long	Definition: Creation timestamp. Range: N/A

Example Requests

View an authorization list.

```
GET https://{endpoint}/v2/{project_id}/authorizations
```

Example Responses

Status code: 200

OK

```
{  
  "total_count": 1,  
}
```

```
"auth" : [ {  
  "user_id" : "****d80fb058844ae8b82aa66d9fe****",  
  "user_name" : "iam-user01",  
  "type" : "agency",  
  "content" : "modelarts_agency",  
  "create_time" : 15657747821288  
} ]  
}
```

Status Codes

Status Code	Description
200	OK
400	Bad request
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

11.2 Configuring Authorization

Function

This API is used to configure ModelArts authorization.

This API applies to the following scenario: When IAM users need to be granted the permission to access ModelArts, the administrator can use this API to configure authorization. Before using this API, the administrator must have the Security Administrator permission configured in IAM, and access keys must be configured for the IAM users. After the authorization is configured, IAM users are granted the permission to access ModelArts resources so that they can use functions such as training management, development environment, data management, and real-time services. If the administrator does not have the required permission or an IAM user does not exist, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/authorizations

Table 11-5 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 11-6 Request body parameters

Parameter	Mandatory	Type	Description
user_id	No	String	Definition: user ID. For details, see Obtaining a Username and ID . If user_id is set to all , all IAM users are authorized. If some IAM users have been authorized, the authorization setting will be updated. This parameter is mandatory only if the authorization method is set to Agency . Constraints: N/A Range: The value must contain 3 to 32 characters. Letters, digits, and hyphens (-) are allowed. Default Value: N/A
type	No	String	Definition: Authorization type. Agency is recommended. Constraints: N/A Range: • AGENCY: agency • CREDENTIAL: access keys (AK/SK) Default Value: N/A

Parameter	Mandatory	Type	Description
content	Yes	String	Definition: Authorization content. Constraints: - When the authorization type is agency, this field is the agency name. - When the authorization type is access key, this field is the access key ID (AK). Range: 0 to 64 Default Value: N/A
secret_key	No	String	Definition: Secret access key (SK). Constraints: This field is required only when the authorization type is access key. Range: The value must contain 40 characters. Letters and digits are allowed. Default Value: N/A
user_name	No	String	Definition: Username. Constraints: If user_id is set to all-users, all users will be displayed. Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
user_type	No	String	Definition: User type. Constraints: N/A Range: • IAM: IAM user. The user_id field is mandatory. • FEDERATE: federated user. The user_name field is mandatory, and the user_id field is not needed. • GRANT: agency. The user_id field is mandatory, and its value is the agency ID. • ALL-USERS: all users. The user_id field is mandatory, and its value is all. Default Value: IAM.

Response Parameters

Status code: 200

OK

None

Example Requests

The following is an example of how to upload authorization whose authorization type is **agency** and authorization content is **modelarts_agency**.

```
POST https://{endpoint}/v2/{project_id}/authorizations
```

```
{
  "user_id" : "****d80fb058844ae8b82aa66d9fe****",
  "type" : "agency",
  "content" : "modelarts_agency"
}
```

Example Responses

Status code: 200

OK

```
{
  "result" : "true"
}
```

Status Codes

Status Code	Description
200	OK
400	Bad request
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

11.3 Deleting Authorization

Function

This API is used to delete the authorization of a specified user or all users.

This API applies to the following scenarios: When the access permission of a specified user needs to be revoked or the authorization of all users needs to be cleared during system maintenance, the administrator can use this API to do so. Before using this API, the administrator must have the permission to delete the authorization and specify the user whose authorization is to be deleted or delete the authorization of all users. After the deletion is complete, the authorization of the specified user will be removed, or the authorization of all users will be cleared. Users cannot access related functions. If the user does not exist, the administrator does not have the operation permission, or the system detects that there is no administrator permission during authorization deletion of all users, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v2/{project_id}/authorizations

Table 11-7 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 11-8 Query Parameters

Parameter	Mandatory	Type	Description
user_id	No	String	Definition: User ID. If this parameter is set to all , the authorization of all IAM users will be deleted. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

OK

None

Example Requests

Delete the authorization of a specified user.

```
DELETE https://{endpoint}/v2/{project_id}/authorizations?user_id=****d80fb058844ae8b82aa66d9fe****
```

Example Responses

Status code: 200

OK

```
{  
  "result" : "true"  
}
```


Status Codes

Status Code	Description
200	OK
400	Bad request
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

11.4 Creating a ModelArts Agency

Function

This API is used to create a ModelArts agency for ModelArts-dependent services, such as Object Storage Service (OBS), Software Repository for Container (SWR), and Intelligent EdgeFabric (IEF).

This API applies to the following scenarios: When you need to configure permissions for ModelArts to access services such as OBS, SWR, and IEF, you can use this API to create an agency. Before using this API, ensure that you have the permission to create an agency and have corresponding permissions in IAM. After the agency is created, ModelArts is authorized to access services such as OBS, SWR, and IEF for data storage, image pulling, model deployment, and other functions. If you do not have the permission to create an agency or dependent services have not been configured, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/agency

Table 11-9 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 11-10 Request body parameters

Parameter	Mandatory	Type	Description
agency_name_suffix	No	String	Definition: Suffix of the agency name. The agency name prefix is consistently to be ma_agency . For example, if the value of this parameter is iam-user01 , the name of the created agency is ma_agency_iam-user01 . The value of this parameter is left blank by default, indicating that an agency named ma_agency is created. Constraints: N/A Range: 0 to 50 Default Value: N/A

Response Parameters

Status code: 200

OK

None

Example Requests

The following is an example of how to create a ModelArts agency whose name suffix is **iam-user01**.

```
POST https://{endpoint}/v2/{project_id}/agency
{
```

```
"agency_name_suffix" : "iam-user01"
}
```

Example Responses

Status code: 200

OK

```
{
  "agency_name" : "ma_agency_iam-user01"
}
```

Status Codes

Status Code	Description
200	OK
400	Bad request
401	Unauthorized
403	Forbidden
404	Not found

Error Codes

See [Error Codes](#).

12 Workspace Management

12.1 Querying Details About a Workspace

Function

This API is used to query the details about a workspace.

This API is used when you need to view the configuration, status, or other information about a workspace. Before using this API, ensure that the workspace exists and you have the permission to view the workspace. After the query, the API returns the workspace details, including the workspace name, description, creation time, and status. If the workspace does not exist or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/workspaces/{workspace_id}

Table 12-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
workspace_id	Yes	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 12-2 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 12-3 Response body parameters

Parameter	Type	Description
grants	Array of grants objects	Definition: Authorization user list. By default, this parameter is left blank. This parameter must be used with auth_type and takes effect only when auth_type is set to INTERNAL .
owner	String	Definition: Creator name. Range: N/A

Parameter	Type	Description
auth_type	String	Definition: Authorization type. Range: • PUBLIC: accessible to tenants • PRIVATE: accessible only to the creator and tenant accounts • INTERNAL: accessible to the creator, tenant accounts, and specified IAM users. This parameter must be used with grants.
enterprise_project_id	String	Definition Range: N/A Enterprise project ID.
update_time	Integer	Definition: Last modification time (UTC). Range: N/A
create_time	Integer	Definition: Creation time (UTC). Range: N/A
enterprise_project_name	String	Definition: Enterprise project name. Range: N/A
name	String	Definition: Workspace name. The value can contain 4 to 64 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. default is the name of the default workspace reserved by the system. You are not allowed to create a workspace named default . Range: N/A
description	String	Definition: Workspace description. Range: N/A
id	String	Definition: Workspace ID, which is a 32-bit UUID generated by the system without hyphens (-). Range: N/A

Parameter	Type	Description
status	String	Definition: Workspace status. Range • CREATE_FAILED: Creating the workspace failed. • NORMAL: The workspace is running properly. • DELETING: The workspace is being deleted. • DELETE_FAILED: Deleting the workspace failed.
status_info	String	Definition: Status description. This parameter is left empty by default. This parameter is used to show detailed information about a status. If a deletion failed, you can use this parameter to obtain the failure cause. Range: N/A

Table 12-4 grants

Parameter	Type	Description
user_id	String	Definition: IAM user ID. Either this parameter or user_name must be configured. If both of them are available, user_id will be used preferentially. Range: N/A
user_name	String	Definition: IAM username. Either this parameter or user_id must be configured. Range: N/A

Parameter	Type	Description
user_type	String	Definition Authorized user type. Constraints This parameter is mandatory for federated users or agency users. Range IAM: IAM user FEDERATE: federated user AGENCY: agency user Default value IAM

Example Requests

```
GET https://{endpoint}/v1/{project_id}/workspaces/ccd05d1a553b4e188ea878e7dcb85e47
```

Example Responses

Status code: 200

The details about a workspace are obtained.

```
{
  "id": "***d05d1a553b4e188ea878e7dcb85e**",
  "name": "test-workspace",
  "status": "NORMAL",
  "status_info": "",
  "description": "",
  "owner": "testUser",
  "create_time": 1470000020000,
  "update_time": 1470000030000,
  "enterprise_project_id": "****b0091-887f-4839-9929-cbc884f1e****",
  "enterprise_project_name": "test-eps",
  "auth_type": "INTERNAL",
  "grants": [ {
    "user_id": "***55d2cd53b4x458ea878e7dcb85****",
    "user_name": "test-iam-user",
    "user_type": "IAM"
  } ]
}
```

Status Codes

Status Code	Description
200	The details about a workspace are obtained.

Error Codes

See [Error Codes](#).

12.2 Modifying a Workspace

Function

This API is used to update the configuration information of a specified workspace.

This API is used when you need to change the name, description, or other configuration information of a workspace. Before using this API, ensure that the workspace exists and you have the permission to modify the workspace. After the modification is complete, the API returns the updated workspace details, including the workspace name, description, and update time. If the workspace does not exist or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/{project_id}/workspaces/{workspace_id}

Table 12-5 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
workspace_id	Yes	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 12-6 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Table 12-7 Request body parameters

Parameter	Mandatory	Type	Description
grants	No	Array of grants objects	Definition: Dataset used by a training job. Constraints: This parameter cannot be used together with data_url or dataset_id/dataset_version_id . Range: N/A Default Value: N/A
auth_type	No	String	Definition: Authorization type. Constraints: N/A Range: • PUBLIC: accessible to tenants • PRIVATE: accessible only to the creator and tenant accounts • INTERNAL: accessible to the creator, tenant accounts, and specified IAM users. This parameter must be used with grants. Default Value: PUBLIC

Parameter	Mandatory	Type	Description
name	No	String	Definition: Workspace name. Constraints: Enter 4 to 64 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. default is the name of the default workspace reserved by the system. You are not allowed to create a workspace named default . Range: N/A Default Value: N/A
description	No	String	Definition: Workspace description. Constraints: The value can contain at most 256 characters. Range: N/A Default Value: This parameter is left empty by default.

Table 12-8 grants

Parameter	Mandatory	Type	Description
user_id	No	String	Definition: IAM user ID. Constraints: Either this parameter or user_name must be specified. If both of them are available, user_id will be used preferentially. Range: N/A Default Value: N/A
user_name	No	String	Definition: IAM username. Constraints: Either this parameter or user_id must be specified. Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
user_type	No	String	Definition Authorized user type. Constraints This parameter is mandatory for federated users or agency users. Range IAM: IAM user FEDERATE: federated user AGENCY: agency user Default Value IAM

Response Parameters

Status code: 200

Table 12-9 Response body parameters

Parameter	Type	Description
workspace_id	String	Definition: Workspace ID. Range: N/A

Example Requests

```
PUT https://{endpoint}/v1/{project_id}/workspaces/ccd05d1a553b4e188ea878e7dcb85e47
```

```
{
  "name" : "my_workspace",
  "description" : "It is my workspace",
  "auth_type" : "INTERNAL",
  "grants" : [ {
    "user_name" : "my_iam_user"
  } ]
}
```

Example Responses

Status code: 200

Response parameter indicating that a workspace is modified

```
{
  "workspace_id" : "****05d1a553b4e188ea878e7dcb85****"
}
```

Status Codes

Status Code	Description
200	Response parameter indicating that a workspace is modified

Error Codes

See [Error Codes](#).

12.3 Deleting a Workspace

Function

This API is used to delete a created workspace.

This API applies to the following scenarios: When a workspace is no longer required, or resources need to be cleared, you can use this API to delete the specified workspace. Before using this API, ensure that the workspace exists and you have the permission to delete the workspace. After the deletion is complete, the workspace is permanently removed, and related resources are cleared. If the workspace does not exist or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v1/{project_id}/workspaces/{workspace_id}

Table 12-10 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
workspace_id	Yes	String	Definition: Workspace ID. For details about how to obtain the ID, see Querying the Workspace List . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 12-11 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: Requests for calling an API can be authenticated using either a token or AK/SK. If token-based authentication is used, this parameter is mandatory and must be set to a user token. For details, see Obtaining a User Token . Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 12-12 Response body parameters

Parameter	Type	Description
workspace_id	String	Definition: Workspace ID. For details about how to obtain the value, see Obtaining Workspaces . Range: If no workspaces are available, there is no default value. If a workspace is created and used, use the actual value.

Example Requests

(Example) Deleting the workspace whose UUID is **ccd05d1a553b4e188ea878e7dcb85e47**

```
DELETE https://{endpoint}/v1/{project_id}/workspaces/ccd05d1a553b4e188ea878e7dcb85e47
```

Example Responses

Status code: 200

Response parameter indicating that a workspace is deleted

```
{  
  "workspace_id" : "ccd05d1a553b4e188ea878e7dcb85e47"  
}
```

Status Codes

Status Code	Description
200	Response parameter indicating that a workspace is deleted

Error Codes

See [Error Codes](#).

12.4 Querying a Workspace Quota

Function

This API is used to obtain the resource quota of a specified workspace.

This API is used when you need to know the resource usage and quota limits of a workspace. Before using this API, ensure that the workspace exists and you have the permission to view the workspace quota. After the query, the API returns the

quota information of the workspace, including the quotas and used amounts of compute, storage, and network resources. If the workspace does not exist or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/workspaces/{workspace_id}/quotas

Table 12-13 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
workspace_id	Yes	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 12-14 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 12-15 Response body parameters

Parameter	Type	Description
quotas	Array of WorkspaceQuotasResponse objects	Definition: Workspace quota data.

Table 12-16 WorkspaceQuotasResponse

Parameter	Type	Description
max_quota	Integer	Definition: Maximum quota value. Range: N/A
update_time	Integer	Definition: Last modification time (UTC). If the resource quota has not been modified, the default value is the time when a workspace was created. Range: N/A
resource	String	Definition: Unique ID of a resource. Range: N/A
quota	Integer	Definition: Current quota value. Value -1 indicates that the quota is not limited. Range: N/A
min_quota	Integer	Definition: Minimum quota value. Range: N/A
name_cn	String	Definition: Quota name (Chinese) Range: N/A
unit_cn	String	Definition: Quantity unit (Chinese). Range: N/A
name_en	String	Definition: Quota name (English). Range: N/A
unit_en	String	Definition: Quantity unit (English). Range: N/A

Parameter	Type	Description
used_quota	Integer	Definition: Used quota. If the value of quota is -1 (indicating that the quota is not limited), the value of used_quota is null . Range: N/A

Example Requests

GET https://{endpoint}/v1/{project_id}/workspaces/ccd05d1a553b4e188ea878e7dcb85e47/quotas

Example Responses

Status code: 200

Response parameter indicating that a workspace quota is queried

```
{
  "quotas": [ {
    "max_quota": 60000,
    "update_time": 1470000020000,
    "resource": "exemlProject.gpu_duration",
    "used_quota": 5,
    "quota": 10,
    "min_quota": -1,
    "name_cn": "ExeML Training Duration (Image Classification, Object Detection, and Sound Classification)",
    "unit_cn": "Minute",
    "name_en": "ExeMLtraining duration (image classification, object detection, and soundclassification)",
    "unit_en": "minute"
  } ]
}
```

Status Codes

Status Code	Description
200	Response parameter indicating that a workspace quota is queried

Error Codes

See [Error Codes](#).

12.5 Modifying a Workspace Quota

Function

This API is used to update the resource quota of a specified workspace.

This API is used when you need to adjust the resource quota of a workspace, for example, increase or decrease the quota of compute, storage, or network resources. Before using this API, ensure that the workspace exists and you have

the permission to modify the workspace quota. After the modification is complete, the API returns the updated quota information, including the new quotas of compute, storage, and network resources. If the workspace does not exist or you do not have the operation permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/{project_id}/workspaces/{workspace_id}/quotas

Table 12-17 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
workspace_id	Yes	String	Definition: Workspace ID. If no workspaces are available, the default value is 0 . If a workspace is created and used, use the actual value. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 12-18 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Table 12-19 Request body parameters

Parameter	Mandatory	Type	Description
quotas	Yes	Array of quotas objects	Definition: Workspace quota data. Constraints: N/A

Table 12-20 quotas

Parameter	Mandatory	Type	Description
resource	Yes	String	Definition: Resource identifier. Constraints: N/A Range: N/A Default Value: N/A
quota	Yes	Integer	Definition: Quota value to be changed. The quota value is a positive integer or -1. Value -1 indicates that the quota is not limited. The quota cannot exceed the maximum and minimum value. You can call the API to query the maximum quota. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 12-21 Response body parameters

Parameter	Type	Description
quotas	Array of WorkspaceQuotasUpdateResponse objects	Definition: Workspace quota data.

Table 12-22 WorkspaceQuotasUpdateResponse

Parameter	Type	Description
max_quota	Integer	Definition: Maximum quota value. Range: N/A
update_time	Integer	Definition: Last modification time (UTC). If the resource quota has not been modified, the default value is the time when a workspace was created. Range: N/A
resource	String	Definition: Unique ID of a resource. Range: N/A
quota	Integer	Definition: Current quota value. Value -1 indicates that the quota is not limited. Range: N/A
min_quota	Integer	Definition: Minimum quota value. Range: N/A
name_cn	String	Definition: Quota name (Chinese). Range: N/A
unit_cn	String	Definition: Quantity unit (Chinese). Range: N/A
name_en	String	Definition: Quota name (English). Range: N/A
unit_en	String	Definition: Quantity unit (English). Range: N/A

Example Requests

```
PUT https://{endpoint}/v1/{project_id}/workspaces/ccd05d1a553b4e188ea878e7dcb85e47/quotas
{
  "quotas": [ {
    "resource": "exemlProject.gpu_duration",
    "quota": 10
  } ]
}
```

Example Responses

Status code: 200

Response parameter indicating that a workspace quota is modified

```
{
  "quotas": [ {
```

```
"max_quota" : 60000,  
"update_time" : 1574339372000,  
"resource" : "exemlProject.gpu_duration",  
"quota" : 20,  
"min_quota" : -1,  
"name_cn" : "ExeML Training Duration (Image Classification, Object Detection, and Sound Classification)",  
"unit_cn" : "Minute",  
"name_en" : "ExeML training duration (image classification, object detection, and sound classification)",  
"unit_en" : "minute"  
} ]  
}
```

Status Codes

Status Code	Description
200	Response parameter indicating that a workspace quota is modified

Error Codes

See [Error Codes](#).

12.6 Querying a Workspace List

Function

This API is used to obtain the details of all created workspaces.

This API applies to the following scenario: When you need to view all available workspaces or perform audit, you can use this API to query the workspace list. Before using this API, ensure that you have the view permission. After the query is complete, the system returns all workspace details, including the name, creation time, and status. If you do not have the permission to perform operations, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/workspaces

Table 12-23 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 12-24 Query Parameters

Parameter	Mandatory	Type	Description
offset	No	Integer	Definition: Start page of the pagination list Constraints: N/A Range: The value must no less than 0 and no more than 2147483647. Default Value: 0
limit	No	Integer	Definition: Maximum number of records displayed on each page Constraints: N/A Range: The value must no less than 1 and no more than 1000. Default Value: 1000

Parameter	Mandatory	Type	Description
sort_by	No	String	Definition: Sorting field Constraints: N/A Range: • name: workspace name • update_time: last modification time, in UTC format • status: workspace status Default Value: name
order	No	String	Definition: Sorting mode Constraints: N/A Range: • asc: ascending order • desc: descending order Default Value: desc
enterprise_project_id	No	String	Definition: Enterprise project ID. If this parameter is specified, only the workspaces of the enterprise project are returned. By default, all workspaces are displayed. Constraints: N/A Range: The value can contain 36 characters. Letters, digits, and hyphens (-) are allowed. Default Value: N/A

Parameter	Mandatory	Type	Description
name	No	String	Definition: Workspace name. If this parameter is specified, the fuzzy-match workspaces are queried. By default, all workspaces are displayed. Constraints: N/A Range: The value can contain 1 to 64 characters. Letters, digits, hyphens (-), and underscores (_) are allowed. Default Value: N/A
filter_accessible	No	Boolean	Definition: Whether accessible workspaces are filtered Constraints: N/A Range: • false: All workspaces are displayed. • true: Workspaces that the current user does not have permission to access are filtered. Default Value: false

Request Parameters

Table 12-25 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: Requests for calling an API can be authenticated using either a token or AK/SK. If token-based authentication is used, this parameter is mandatory and must be set to a user token. For details, see Obtaining a User Token . Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 12-26 Response body parameters

Parameter	Type	Description
total_count	Integer	Definition: Total number of workspaces. Range: N/A
count	Integer	Definition: Number of workspaces returned for the current request. Range: The value must be no less than 0 and no more than the value of limit .
workspaces	Array of WorkspaceResponse objects	Definition: workspace parameters.

Table 12-27 WorkspaceResponse

Parameter	Type	Description
owner	String	Definition: Creator name Range: The value can contain 4 to 64 characters. Letters, digits, hyphens (-), and underscores (_) are allowed.
auth_type	String	Definition: Authorization type Range: • PUBLIC: accessible to tenants • PRIVATE: accessible only to the creator and primary account • INTERNAL: accessible to the creator, primary account, and specified IAM users. This parameter must be used together with grants.
enterprise_project_id	String	Definition: Enterprise project ID Range: ID of an enabled enterprise project. The value contains 36 characters. Letters, digits, and hyphens (-) are allowed.
update_time	Integer	Definition: Last modification time, in UTC format Range: N/A
create_time	Integer	Definition: Creation time, in UTC format Range: N/A
enterprise_project_name	String	Definition: Enterprise project name Range: Name of the enterprise project corresponding to the response parameter enterprise_project_id

Parameter	Type	Description
name	String	Definition: Workspace name Range: The value can contain 4 to 64 characters. Letters, digits, hyphens (-), and underscores (_) are allowed.
description	String	Definition: Workspace description Range: The value can contain 0 to 256 characters. It cannot contain the following special characters: < > = & " ' /
status	String	Definition: Workspace status Range: • CREATE_FAILED: The workspace creation fails. • NORMAL: The workspace is running properly. • DELETING: The workspace is being deleted. • DELETE_FAILED: Deleting the workspace failed.
status_info	String	Definition: Status description. By default, this parameter is left blank. This parameter is used to show detailed information about a status. If a deletion failed, you can use this parameter to obtain the failure cause. Range: N/A

Example Requests

Filtering the records whose enterprise project ID is **0**, sorting the records by **name** in descending order, and obtaining a record on the fourth page in pagination mode

```
GET https://{endpoint}/v1/{project_id}/workspaces?  
limit=1&offset=3&sort_by=name&order=desc&enterprise_project_id=0
```

Example Responses

Status code: 200

Response parameter indicating that workspaces are obtained

```
{
  "total_count" : 1,
  "count" : 1,
  "workspaces" : [ {
    "id" : 0,
    "name" : "default",
    "description" : "",
    "owner" : "testUser",
    "enterprise_project_id" : "****b0091-887f-4839-9929-cbc884f1e****",
    "enterprise_project_name" : "default",
    "auth_type" : "public",
    "create_time" : 1460000010000,
    "update_time" : 1460000010000,
    "status" : "NORMAL",
    "status_info" : ""
  } ]
}
```

Status Codes

Status Code	Description
200	Response parameter indicating that workspaces are obtained

Error Codes

See [Error Codes](#).

12.7 Creating a Workspace

Function

This API is used to create a workspace. The name of the created workspace cannot be **default**, which is the name of the default workspace reserved by the system.

This API applies to the following scenarios: When you need to create independent workspaces for different service objectives, teams, or projects, you can use this API to create new workspaces. Before using this API, ensure that you have the permission to create a workspace and the workspace name is not in use and is not **default**. After the workspace is created, the system allocates a default access control policy to the workspace. You can develop, manage, and deploy models in the workspace. If the workspace name already exists, the workspace name is **default**, or you do not have the operation permission, the API returns an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/workspaces

Table 12-28 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 12-29 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: Requests for calling an API can be authenticated using either a token or AK/SK. If token-based authentication is used, this parameter is mandatory and must be set to a user token. For details, see Obtaining a User Token . Constraints: N/A Range: N/A Default Value: N/A

Table 12-30 Request body parameters

Parameter	Mandatory	Type	Description
grants	No	Array of grants objects	Definition: list of authorized users. Constraints: This parameter is valid only when auth_type is set to INTERNAL . The value contains a maximum of 500 characters.
auth_type	No	String	Definition: authorization type. Constraints: N/A Range: • PUBLIC: accessible to tenants • PRIVATE: accessible only to the creator and tenant account • INTERNAL: accessible to the creator, tenant account, and specified IAM users. This parameter must be used with grants. Default Value: PUBLIC
enterprise_project_id	No	String	Definition: Enterprise project ID. If this parameter is specified, only the workspaces of the enterprise project are returned. By default, all workspaces are displayed. Constraints: N/A Range: ID of an enabled enterprise project. The value contains 36 characters. Letters, digits, and hyphens (-) are allowed. Default Value: N/A

Parameter	Mandatory	Type	Description
name	Yes	String	Definition: Workspace name. Constraints: You are not allowed to create a workspace named default. default is the name of the default workspace reserved by the system. Range: The value can contain 4 to 64 characters. Letters, digits, hyphens (-), and underscores (_) are allowed. Default Value: N/A
description	No	String	Definition: Workspace description. Constraints: N/A Range: The value can contain 0 to 256 characters. It cannot contain the following special characters: < > = & " ' /. Default Value: It is left blank by default.

Table 12-31 grants

Parameter	Mandatory	Type	Description
user_id	No	String	Definition: IAM user ID. For details, see Obtaining a Username and ID . Constraints: Either this parameter or user_name must be configured. If both of them are available, user_id will be used preferentially. Range: N/A Default Value: N/A
user_name	No	String	Definition: IAM username. Constraints: Either this parameter or user_name must be configured. If both of them are available, user_id will be used preferentially. Range: N/A Default Value: N/A
user_type	No	String	Definition: Authorized user type. Constraints This parameter is mandatory for federated users or agency users. Range IAM: IAM user FEDERATE: federated user AGENCY: agency user Default Value IAM

Response Parameters

Status code: 200

Table 12-32 Response body parameters

Parameter	Type	Description
owner	String	Definition: Creator name. Range: N/A
auth_type	String	Definition: Authorization type. Range: • PUBLIC: accessible to tenants • PRIVATE: accessible only to the creator and tenant account • INTERNAL: accessible to the creator, tenant account, and specified IAM users. This parameter must be used with grants.
enterprise_project_id	String	Definition: Enterprise project ID. Range: ID of an enabled enterprise project. The value contains 36 characters. Letters, digits, and hyphens (-) are allowed.
update_time	Integer	Definition: Last modification time, in UTC format Range: N/A
create_time	Integer	Definition: Creation time, in UTC format. Range: N/A
enterprise_project_name	String	Definition: Enterprise project name. Range: Name of the enterprise project corresponding to the response parameter enterprise_project_id

Parameter	Type	Description
name	String	Definition: Workspace name. Range: The value can contain 4 to 64 characters. Letters, digits, hyphens (-), and underscores (_) are allowed.
description	String	Definition: Workspace description. Range: The value can contain 0 to 256 characters. It cannot contain the following special characters: < > = & " ' /.
id	String	Definition Workspace ID. For details about how to obtain the value, see Obtaining Workspaces . If no workspace is created, the default value is 0 . If a workspace is created and used, use the actual value. Range The value is a 32-bit UUID generated by the system without hyphens (-).
status	String	Definition: Workspace status. Range: • CREATE_FAILED: Creating the workspace failed. • NORMAL: The workspace is running properly. • DELETING: The workspace is being deleted. • DELETE_FAILED: Deleting the workspace failed.

Parameter	Type	Description
status_info	String	Definition: Status description. By default, this parameter is left blank. This parameter is used to show detailed information about a status. If a deletion failed, you can use this parameter to obtain the failure cause. Range: N/A
grants	Array of grants objects	Definition: List of authorized users. By default, this parameter is left blank. This parameter must be used with auth_type and takes effect only when auth_type is set to INTERNAL .

Table 12-33 grants

Parameter	Type	Description
user_id	String	Definition: IAM user ID. For details, see Obtaining a Username and ID . Range: N/A
user_name	String	Definition: IAM username. Range: N/A

Example Requests

The following is an example of how to create a workspace whose name is **test-workspace**, authorization type is **internal**, and authorized IAM user is **test**.

POST https://{endpoint}/v1/{project_id}/workspaces

```
{
  "name": "test-workspace",
  "description": "It is a test project",
  "enterprise_project_id": "***b0091-887f-4839-9929-cbc884f1e***",
  "auth_type": "internal",
  "grants": [ {
    "user_name": "test"
  } ]
}
```

Example Responses

Status code: 200

Response parameter indicating that a workspace is created

```
{
  "id" : "***d05d1a553b4e188ea878e7dcb85e**",
  "name" : "test-workspace",
  "description" : "It is a test project",
  "owner" : "testUser",
  "create_time" : 1470000020000,
  "update_time" : 1470000030000,
  "enterprise_project_id" : "****b0091-887f-4839-9929-cbc884f1e***",
  "enterprise_project_name" : "test-eps",
  "auth_type" : "internal",
  "status" : "NORMAL",
  "status_info" : ""
}
```

Status Codes

Status Code	Description
200	Response parameter indicating that a workspace is created

Error Codes

See [Error Codes](#).

12.8 Querying the Authorization Mode

Function

This API is used to obtain the authorization mode and permission configuration information of a specified resource or function. This API is used when system administrators can use this API to view the access permission settings of resources. Developers can use this API to verify whether authorization policies are correctly configured. Security auditors can use this API to check whether authorization configurations comply with security specifications. Before using this API, ensure that you have the query permission and the authorization mode of the target resource or function has been configured. After the API is called, the API returns details about the authorization mode, including the authorization mode type, rules, and permission scope. If you do not have the permission to access this API or the authorization mode of the target resource is not configured, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/auth-mode

Request Parameters

Table 12-34 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 12-35 Response body parameters

Parameter	Type	Description
domain_id	String	Definition: Account domain ID. Range: N/A
mode	String	Definition: Authorization mode. Range • strict: strict mode • loose: non-strict mode

Example Requests

None

Example Responses

Status code: 200

The authorization mode is queried.

```
{
  "domain_id" : "06024304b180d5090fbac00141b6cae0",
  "mode" : "loose"
}
```

Status Codes

Status Code	Description
200	The authorization mode is queried.

Error Codes

See [Error Codes](#).

12.9 Updating the Authorization Mode

Function

This API is used to modify the authorization mode and permission configuration information of a specified resource or function. This API is used when system administrators can use this API to adjust the access permission of resources. Developers can use this API to update authorization policies to meet new service requirements. Security auditors can use this API to modify authorization configurations to comply with new security specifications. Before using this API, ensure that you have the update permission and the authorization mode of the target resource or function exists. After the API is called, the API updates the authorization mode of the target resource and returns the updated authorization mode information. If you do not have the permission to access this API or the authorization mode of the target resource does not exist, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PUT /v1/auth-mode

Request Parameters

Table 12-36 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: Requests for calling an API can be authenticated using either a token or AK/SK. If token-based authentication is used, this parameter is mandatory and must be set to a user token. For details, see Obtaining a User Token . Constraints: N/A Range: N/A Default Value: N/A

Table 12-37 Request body parameters

Parameter	Mandatory	Type	Description
mode	Yes	String	Definition: Update mode type. Range • strict: strict mode • loose: non-strict mode

Response Parameters

Status code: 200

Table 12-38 Response body parameters

Parameter	Type	Description
domain_id	String	Definition: Account domain ID. Range: N/A
mode	String	Definition: Authorization mode. Range • strict: strict mode • loose: non-strict mode

Example Requests

Update to strict mode.

```
POST https://{endpoint}/v1/auth-mode
{
  "mode" : "strict"
}
```

Example Responses

Status code: 200

Response body for querying the authorization mode.

```
{
  "domain_id" : "06024304b180d5090fbac00141b6cae0",
  "mode" : "strict"
}
```

Status Codes

Status Code	Description
200	Response body for querying the authorization mode.

Error Codes

See [Error Codes](#).

12.10 Authenticating Whether the Current Workspace Can Be Used

Function

This API is used to check whether a user has the permission to access and use resources in the current workspace. This API is used when you try to access or operate resources in the workspace, and the system needs to check whether you have the required permission. Before using this API, ensure that you have logged in and the workspace exists. If the authentication is successful, the user can access and use resources in the workspace. If the authentication fails, the API returns an error message, for example, insufficient permissions or the workspace does not exist.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/workspaces/{workspace_id}/auth

Table 12-39 Path Parameters

Parameter	Mandatory	Type	Description
workspace_id	Yes	String	Definition: Workspace ID. For details about how to obtain the value, see Obtaining Workspaces . If no workspace is created, the default value is 0 . If a workspace is created and used, use the actual value. Constraints: N/A Range: N/A Default Value: 0
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 12-40 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: Requests for calling an API can be authenticated using either a token or AK/SK. If token-based authentication is used, this parameter is mandatory and must be set to a user token. For details, see Obtaining a User Token . Constraints: N/A Range: N/A Default Value: N/A

Table 12-41 Request body parameters

Parameter	Mandatory	Type	Description
requests	Yes	Array of AuthRequests objects	Definition: Workspace authentication request body.

Table 12-42 AuthRequests

Parameter	Mandatory	Type	Description
action_id	Yes	String	Definition: Random UUID, which is used for locating. Range: N/A
action	Yes	String	Definition: Fine-grained action. Range: N/A
resource	No	String	Definition: Resource ID. Range: N/A
service_attributes	No	Map<String,String>	Definition: Operation object. Range: N/A

Response Parameters

Status code: 200

Table 12-43 Response body parameters

Parameter	Type	Description
results	Array of ValidateAuthResults objects	Definition: Authentication result.

Table 12-44 ValidateAuthResults

Parameter	Type	Description
action	String	Definition: Fine-grained permission. Range: N/A

Parameter	Type	Description
verdict	String	Definition: Authentication result. Range • allow: Authenticated. • deny: Authentication failed.
action_id	String	Definition: Random UUID, which is used to locate faults. Range: N/A
resource	String	Definition: Request resource. Range: N/A
cause	Array of Cause objects	Definition: Failure cause.

Table 12-45 Cause

Parameter	Type	Description
policy_name	String	Definition: Policy name. Range: N/A
condition	Array of Conditions objects	Definition: Policy condition.

Table 12-46 Conditions

Parameter	Type	Description
key	String	Definition: Operation attribute. Range: N/A
operator	String	Definition: Operator. Range: N/A
value	Array of strings	Definition: Operator value.

Example Requests

Authenticate whether the current user can perform operations in the current workspace.

```
POST https://{endpoint}/v1/{projectId}/workspaces/{workspaceId}/auth
```

```
{  
  "requests": [ {
```

```
"action_id" : "cf6ad5b9_bd73_4354_b663_364348597e29",  
"action" : "modelarts:trainJob:get"  
} ]  
}
```

Example Responses

Status code: 200

Response body for workspace authentication.

```
{  
  "results" : [ {  
    "action" : "modelarts:trainJob:get",  
    "verdict" : "allow",  
    "action_id" : "cf6ad5b9_bd73_4354_b663_364348597e29",  
    "resource" : null,  
    "cause" : null  
  } ]  
}
```

Status Codes

Status Code	Description
200	Response body for workspace authentication.

Error Codes

See [Error Codes](#).

12.11 Querying the User Role Information

Function

This API is used to obtain the role information of a specified user in the system. This API is used when you need to know the permissions and roles of a user in the system. The administrator or system can use this API to query the role information of the user. Before using this API, ensure that the user exists and the role information is defined in the system. After the query, the API returns the role list of the user. If the user does not exist or the role information is not defined in the system, the API returns an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/workspaces/users/roles

Table 12-47 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 12-48 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 12-49 Response body parameters

Parameter	Type	Description
roles	Array of strings	Definition: User role.

Example Requests

None

Example Responses

Status code: 200

Query the user role information.

```
{
  "roles" : [ "gray_workspace" ]
}
```

Status Codes

Status Code	Description
200	Query the user role information.

Error Codes

See [Error Codes](#).

12.12 Obtaining the User List

Function

This API is used to obtain the user list in the system. This API is used when you need to view all users in the system or filter users based on specific conditions. The administrator or system can use this API to query the user list. Before using this API, ensure that the user exists and the query permission is granted. After the query, the API returns the list of users that meet the query conditions. If no user exists in the system or the query user does not have the required permission, the API returns an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/workspaces/users/list

Table 12-50 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Request Parameters

Table 12-51 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 12-52 Response body parameters

Parameter	Type	Description
users	Array of UserName objects	Definition: Authorization object list.

Table 12-53 UserName

Parameter	Type	Description
userName	String	Definition: Authorization object name. Range: N/A

Example Requests

None

Example Responses

Status code: 200

Query the user role information.

```
{
  "users": [ {
    "userName": "app"
  }, {
    "userName": "authoring_system_user_cnnorth7"
  }, {
    "userName": "b30039842"
  }, {
    "userName": "c00685862"
  }, {
    "userName": "c30056551"
  }, {
    "userName": "chang001"
  }, {
    "userName": "chang002"
  }, {
    "userName": "chang003"
  }, {
    "userName": "chang1115661"
  }, {
    "userName": "changliang_op"
  }, {
    "userName": "cheng"
  }, {
    "userName": "container0-child1"
  }, {
    "userName": "container0-sub-account"
  }, {
    "userName": "css_zhangbo"
  }, {
    "userName": "ctz-test"
  }, {
    "userName": "cwx1115661"
  }, {
    "userName": "d00806778"
  }, {
    "userName": "dingxiaofang"
  }, {
    "userName": "EI_modelarts_CRT"
  }, {
    "userName": "f60070752"
  }, {
    "userName": "g00673948"
  }, {
    "userName": "gyy_test"
  }, {
```

```
"userName" : "h00583569"
}, {
  "userName" : "h00826983"
}, {
  "userName" : "h00862484"
}, {
  "userName" : "h30028740"
}, {
  "userName" : "hjh123"
}, {
  "userName" : "hwcloud"
}, {
  "userName" : "hwx1269195"
}, {
  "userName" : "icsltest"
}, {
  "userName" : "idm_system_user_cnnorth7"
}, {
  "userName" : "infern_system_async"
}, {
  "userName" : "infern_system_user_cnnorth7"
}, {
  "userName" : "j00812367"
}, {
  "userName" : "l00452072"
}, {
  "userName" : "l00455264"
}, {
  "userName" : "l00471224"
}, {
  "userName" : "l00557915"
}, {
  "userName" : "l00585022"
}, {
  "userName" : "l00636439"
}, {
  "userName" : "l30030601"
}, {
  "userName" : "l30036628"
}, {
  "userName" : "l30047428"
}, {
  "userName" : "l60070759"
}, {
  "userName" : "lhk_test"
}, {
  "userName" : "lishuai"
}, {
  "userName" : "liuqiqin"
}, {
  "userName" : "liutingjian"
}, {
  "userName" : "louleilei"
}, {
  "userName" : "lts_report"
}, {
  "userName" : "lts_system_user_cnnorth7"
}, {
  "userName" : "lts_system_user_ffk_test1_cnnorth7"
}, {
  "userName" : "lts_system_user_ffk_test_cnnorth7"
}, {
  "userName" : "lyj_container0"
}, {
  "userName" : "m00520383"
}, {
  "userName" : "m00520383-1"
}, {
  "userName" : "m00520383-2"
```

```
, {
  "userName": "m00520383-3"
}, {
  "userName": "m00520383-4"
}, {
  "userName": "m00520383-5"
}, {
  "userName": "m00520383-6"
}, {
  "userName": "m00520383-7"
}, {
  "userName": "m005820383-5"
}, {
  "userName": "maasuser"
}, {
  "userName": "maozhonghao"
}, {
  "userName": "market_system_user_cnnorth7"
}, {
  "userName": "meitu_monitor"
}, {
  "userName": "modelarts_for_cce_cn-southwest-1"
}, {
  "userName": "modelarts_iac"
}, {
  "userName": "modelarts_vias"
}, {
  "userName": "model_resource_test"
}, {
  "userName": "mtest"
}, {
  "userName": "mzh"
}, {
  "userName": "mzh01"
}, {
  "userName": "n00521268"
}, {
  "userName": "notebook_h00496293"
}, {
  "userName": "obs_acl_test"
}, {
  "userName": "obs_test"
}, {
  "userName": "ops_readonly"
}, {
  "userName": "op_svc_eiwizard_1_cn283"
}, {
  "userName": "op_svc_eiwizard_1_cn302"
}, {
  "userName": "op_svc_modelarts_ascendbrain"
}, {
  "userName": "op_svc_modelarts_ccms_01041278"
}, {
  "userName": "op_svc_modelarts_ccms_02eccd55"
}, {
  "userName": "op_svc_modelarts_ccms_030e5d0c"
}, {
  "userName": "op_svc_modelarts_ccms_03ebdbf3"
}, {
  "userName": "op_svc_modelarts_ccms_049dd71b"
}, {
  "userName": "op_svc_modelarts_ccms_04c09e9c"
}, {
  "userName": "op_svc_modelarts_ccms_05de757e"
}, {
  "userName": "op_svc_modelarts_ccms_07498d6b"
}, {
  "userName": "op_svc_modelarts_ccms_074dffe1"
}, {
```

```
"userName": "op_svc_modelarts_ccms_07e36a67"
}, {
  "userName": "op_svc_modelarts_ccms_08cf8e84"
}, {
  "userName": "op_svc_modelarts_ccms_09037d36"
}, {
  "userName": "op_svc_modelarts_ccms_09b7f9a4"
}, {
  "userName": "op_svc_modelarts_ccms_0a06fc9a"
}, {
  "userName": "op_svc_modelarts_ccms_0ae4209d"
}, {
  "userName": "op_svc_modelarts_ccms_0c6551cb"
}, {
  "userName": "op_svc_modelarts_ccms_0d4f79f3"
}, {
  "userName": "op_svc_modelarts_ccms_0dc9215a"
}, {
  "userName": "op_svc_modelarts_ccms_0e8f6397"
}, {
  "userName": "op_svc_modelarts_ccms_0e99acc7"
}, {
  "userName": "op_svc_modelarts_ccms_0edeab1e"
}, {
  "userName": "op_svc_modelarts_ccms_106cfe37"
}, {
  "userName": "op_svc_modelarts_ccms_109ee712"
}, {
  "userName": "op_svc_modelarts_ccms_10bb25d4"
}, {
  "userName": "op_svc_modelarts_ccms_111460c7"
}, {
  "userName": "op_svc_modelarts_ccms_1221f7dc"
}, {
  "userName": "op_svc_modelarts_ccms_12dfc1e8"
}, {
  "userName": "op_svc_modelarts_ccms_1356c79b"
}, {
  "userName": "op_svc_modelarts_ccms_1420b918"
}, {
  "userName": "op_svc_modelarts_ccms_16fcdf7e"
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}, {
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}, {
  "userName": "op_svc_modelarts_ccms_19304f0c"
}, {
  "userName": "op_svc_modelarts_ccms_19c20332"
}, {
  "userName": "op_svc_modelarts_ccms_19e0445c"
}, {
  "userName": "op_svc_modelarts_ccms_1b39b55b"
}, {
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}, {
  "userName": "op_svc_modelarts_ccms_2139a897"
}, {
  "userName": "op_svc_modelarts_ccms_21cdb7c4"
}, {
  "userName": "op_svc_modelarts_ccms_22a155ce"
```

```
, {
  "userName": "op_svc_modelarts_ccms_26fa1765"
}, {
  "userName": "op_svc_modelarts_ccms_27661da7"
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}, {
  "userName": "test"
}, {
  "userName": "test-auth"
}, {
  "userName": "test0906"
}, {
  "userName": "test1"
}, {
  "userName": "test123"
}, {
  "userName": "test1234"
}, {
  "userName": "test123test"
}, {
  "userName": "test14"
}, {
  "userName": "testljd"
}, {
  "userName": "testljd2"
}, {
  "userName": "testljd3"
}, {
  "userName": "test_1123_01"
}, {
  "userName": "test_ces"
}, {
  "userName": "test_op"
}, {
  "userName": "test_pc"
}, {
  "userName": "test_syf"
}, {
  "userName": "train_auth_temp"
}, {
  "userName": "train_auth_test"
}, {
  "userName": "train_system_user_cnnorth7"
}, {
  "userName": "Train_test"
}, {
```

```
"userName": "typ"
}, {
  "userName": "ui_system_user_cnnorth7"
}, {
  "userName": "w00477913"
}, {
  "userName": "w00660935"
}, {
  "userName": "w30014252"
}, {
  "userName": "w30033116-test"
}, {
  "userName": "w30035684"
}, {
  "userName": "w30049444"
}, {
  "userName": "wangsj"
}, {
  "userName": "wangyiming"
}, {
  "userName": "wdtest"
}, {
  "userName": "weixiaodi"
}, {
  "userName": "weixiaodi1"
}, {
  "userName": "wsj_test_0"
}, {
  "userName": "wuweisheng"
}, {
  "userName": "wuweisheng1"
}, {
  "userName": "wzc-yange-shouquan"
}, {
  "userName": "x00354578"
}, {
  "userName": "x00899094"
}, {
  "userName": "xds"
}, {
  "userName": "xingxiaoxiao"
}, {
  "userName": "xkx_test_admin_sub"
}, {
  "userName": "xkx_test_sub"
}, {
  "userName": "xubixiao"
}, {
  "userName": "xubo"
}, {
  "userName": "y00424085"
}, {
  "userName": "y00580349"
}, {
  "userName": "y30001397"
}, {
  "userName": "yancs001"
}, {
  "userName": "z00357434"
}, {
  "userName": "z00430164"
}, {
  "userName": "z00576049"
}, {
  "userName": "z00800172"
}, {
  "userName": "z60078209"
}, {
  "userName": "zhanglie"
```

```
}, {  
  "userName": "zhangqian"  
}, {  
  "userName": "zhonghaiwei"  
}, {  
  "userName": "zhuzhiming"  
}, {  
  "userName": "zx-test"  
}]  
}
```

Status Codes

Status Code	Description
200	Query the user role information.

Error Codes

See [Error Codes](#).

13 Quota Management

13.1 Obtaining OS Quotas

Function

This API is used to obtain the quotas of some ModelArts OS resources, such as resource pool quotas and network quotas. This API is used when you need to know the usage limits of resource pools or network resources, plan resource allocation, or monitor resource usage. Before using this API, ensure that ModelArts OS is deployed and you have the required permissions (such as administrator permissions or resource management permissions). After the API is called, the system returns details about resource pool quotas and network quotas, helping you better plan and manage resources. If you do not have the required permission, the service is unavailable, or the quota information is not configured, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/quotas

Table 13-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 13-2 Response body parameters

Parameter	Type	Description
quotas	Quota object	Definition: Resource quota.

Table 13-3 Quota

Parameter	Type	Description
resources	Array of ResourceQuota objects	Definition: Resource quota.

Table 13-4 ResourceQuota

Parameter	Type	Description
type	String	Definition: Resource type. Range: • VPC: Virtual private cloud. • SUBNET: Subnet. • SECURITY_GROUP: Security group. • SECURITY_GROUP_RULE: Security group rule. • PUBLIC_IP: Public IP address. • VPC_PEER: Number of VPC peering connections. • FIREWALL: Firewall. • SHARE_BANDWIDTH: Shared bandwidth. • SHARE_BANDWIDTH_IP: Shared bandwidth IP address. • LOADBALANCER: Load balancer. • LISTENER: Listener. • PHYSICAL_CONNECT: Physical connection. • VIRTUAL_INTERFACE: Virtual interface. • VPC_CONTAIN_ROUTETABLE: Route tables contained in the VPC. • ROUTETABLE_CONTAIN_ROUTES: Routes contained in the routing table.
quota	String	Definition: Upper limit of the resource quota. Range: N/A
used	String	Definition: Used quota. Range: N/A

Status code: 404**Table 13-5** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A

Parameter	Type	Description
error_msg	String	Definition: Error message. Range: N/A

Example Requests

None

Example Responses

Status code: 200

OK.

```
{
  "quotas" : {
    "resources" : [ {
      "type" : "pool",
      "quota" : 15,
      "used" : 10
    }, {
      "type" : "network",
      "quota" : 15,
      "used" : 10
    } ]
  }
}
```

Status Codes

Status Code	Description
200	OK.
404	Not found.

Error Codes

See [Error Codes](#).

14 Resource Tag Management

14.1 Obtaining All Tags of Resource Pools

Function

This API is used to obtain all tags of resource pools in the current project. By default, all workspaces are queried, but tag data is not returned for workspaces to which you do not have permissions. This API is used when you need to manage, classify, or collect statistics on resource pool tags. Before using this API, ensure that you have the required permission and the resource pool exists. After the API is called, the system returns the resource pool tags of all accessible workspaces in the current project. If you do not have the required permission, the resource pool does not exist, or the project is not created, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/pools/tags

Table 14-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 14-2 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Definition: Maximum number of records returned on each page. The default value is 200 . Constraints: N/A Range: N/A Default Value: N/A
offset	No	Integer	Definition: Start page for pagination display. The default value is 0 . Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 14-3 Response body parameters

Parameter	Type	Description
tags	Array of PoolTag objects	Definition: Resource tag list.

Table 14-4 PoolTag

Parameter	Type	Description
key	String	Definition: Tag of the resource type. Range: N/A
values	Array of strings	Definition: Tag value of the resource type.

Status code: 400

Table 14-5 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 14-6** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 14-7** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
https://{endpoint}/v1/{project_id}/pools/tags
```

Example Responses

Status code: 200

Obtaining all tags of a specified resource type in a project

```
{
  "tags": [ {
    "key": "model_version",
    "values": [ "0.1", "0.2" ]
  }, {
    "key": "conda_version",
```

```
"values" : [ "10.2", "11.0" ]  
  } ]  
}
```

Status Codes

Status Code	Description
200	Obtaining all tags of a specified resource type in a project
400	Invalid parameter.
401	Authentication failed.
403	Insufficient permission.

Error Codes

See [Error Codes](#).

14.2 Obtaining Tags of a Resource Pool

Function

This API is used to obtain the tag information of a specified resource pool. This API is used when you need to view, manage, or collect statistics on resource pool tags. Before using this API, ensure that the resource pool exists and you have the required permission. After the API is called, the system returns the tag information of the specified resource pool, including the tag key and tag value. If the resource pool does not exist, you do not have the access permission, or the resource pool is not configured with tags, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/pools/{pool_name}/tags

Table 14-8 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool name. The value is the name value in the metadata field of the resource pool details. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 204

Table 14-9 Response body parameters

Parameter	Type	Description
tags	Array of PoolTag objects	Definition: Resource tag list.

Table 14-10 PoolTag

Parameter	Type	Description
key	String	Definition: Tag of the resource type. Range: N/A
values	Array of strings	Definition: Tag value of the resource type.

Status code: 400

Table 14-11 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 401**Table 14-12** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 403**Table 14-13** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404**Table 14-14** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

`https://{endpoint}/v1/{project_id}/pools/a55eba18-1ebf-4e9a-8229-d2d3b593a3dc/tags`

Example Responses

Status code: 204

Tags.

```
{
  "tags": [ {
    "key": "dev",
    "values": [ "dev1" ]
  } ]
}
```

Status Codes

Status Code	Description
204	Tags.
400	Invalid parameter.
401	Authentication failed.
403	Insufficient permission.
404	Resource not found

Error Codes

See [Error Codes](#).

15 Node Pool Management

15.1 Obtaining Node Pools

Function

This API is used to obtain the list of a specified node pool. This API is used when you need to obtain the details about a node pool, such as the configuration, status, or resource management. Before using this API, ensure that the node pool exists and you have the administrator permissions. After the API is called, the system returns the node pool list, including the node pool ID, name, number of nodes, and status. If the node pool does not exist, the user does not have the permission to perform the operation, or the node pool is unavailable, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/pools/{pool_name}/nodepools

Table 15-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
pool_name	Yes	String	Definition: Resource pool name. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 15-2 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: • *v2
kind	String	Definition: Resource type. Range: • NodePoolList: node list
items	Array of NodePool objects	Definition: Node pool list.

Table 15-3 NodePool

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: • v2
kind	String	Node pool type. The options are as follows: • NodePool: node pool
metadata	NodePoolMetadata object	Definition: Node pool metadata.

Parameter	Type	Description
spec	NodePoolSpec object	Definition: Node pool expectation.
status	NodePoolStatus object	Definition: Node pool status.

Table 15-4 NodePoolMetadata

Parameter	Type	Description
name	String	Definition: Node pool name. You can specify the name. If not specified, the default name is used. Range: N/A

Table 15-5 NodePoolSpec

Parameter	Type	Description
resources	PoolResource object	Definition: List of resources in a node pool, including resource flavors, quantity, and custom configurations. Range: N/A

Table 15-6 PoolResource

Parameter	Type	Description
flavor	String	Definition: Resource flavor name, for example, modelarts.vm.gpu.t4u8 . Range: N/A
count	Integer	Definition: Committed specifications. Range: N/A
maxCount	Integer	Definition: Elastic usage of the resource flavor. This parameter value is the same the count value in a physical pool. It is greater than or equal to the count value in a logical pool. Range: N/A
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the node pool.

Parameter	Type	Description
nodePool	String	Definition: Node pool name, for example, nodePool-1 . Range: N/A
taints	Array of Taints objects	Definition: Taints to be added to nodes to set anti-affinity. This parameter cannot be specified for a non-privileged pool.
labels	Map<String,String>	Definition: Kubernetes label, in key-value pair format. Range: N/A
tags	Array of UserTags objects	Definition: Resource tag. This parameter cannot be specified for a non-privileged pool. Range: N/A
network	NodeNetwork object	Definition: Network configuration. This parameter cannot be specified for a non-privileged pool.
extendParams	Map<String,String>	Definition: Custom configuration parameters. • dockerBaseSize: Specify the container engine space size of a resource pool node. The value 0 indicates that the size is not limited.
creatingStep	CreatingStep object	Definition: Information about batch creation.
os	Os object	Definition: OS image information.

Table 15-7 Taints

Parameter	Type	Description
key	String	Definition: Key. Range: N/A
value	String	Value.
effect	String	Effect.

Table 15-8 UserTags

Parameter	Type	Description
key	String	Definition: Key. The value cannot start with CCE- or __type_baremetal. Range: N/A
value	String	Value.

Table 15-9 NodeNetwork

Parameter	Type	Description
vpc	String	Definition: VPC ID. Constraints: N/A Range: N/A Default Value: N/A
subnet	String	Definition: Subnet ID. Constraints: N/A Range: N/A Default Value: N/A
securityGroups	Array of strings	Definition: Security group ID set. Constraints: N/A

Table 15-10 CreatingStep

Parameter	Type	Description
step	Integer	Definition: Step of a supernode. Constraints: N/A Range: Only the step contained in the resource specification details is supported. Default Value: N/A
type	String	Definition: Batch creation type. Constraints: N/A Range: hyperinstance: supernode Default Value: N/A

Table 15-11 Os

Parameter	Type	Description
name	String	Definition: OS name. Range: N/A
imageId	String	Definition: OS image ID. Range: N/A
imageType	String	Definition: OS image type. Range: • private: private image

Table 15-12 NodePoolStatus

Parameter	Type	Description
resources	resources object	Definition: Resources in different states in a node pool.

Table 15-13 resources

Parameter	Type	Description
creating	PoolResourceFlavorCount object	Definition: Number of resources that are being created.
available	PoolResourceFlavorCount object	Definition: Number of available resources.
abnormal	PoolResourceFlavorCount object	Definition: Number of abnormal resources.
deleting	PoolResourceFlavorCount object	Definition: Number of resources that are being deleted.

Table 15-14 PoolResourceFlavorCount

Parameter	Type	Description
flavor	String	Definition: Resource flavor ID. Range: N/A
count	Integer	Definition: Number of resource specification instances in a resource pool. Range: N/A

Parameter	Type	Description
maxCount	Integer	Definition: Number of elastic resource specification instances in a resource pool. The value of this parameter in a physical pool is the same as that of count . Range: N/A
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the resource specification instances to be created in a resource pool.
nodePool	String	Definition: Node pool ID. Range: N/A

Table 15-15 PoolNodeAz

Parameter	Type	Description
az	String	Definition: AZ name. Range: N/A
count	Integer	Definition: Number of AZ resource instances. Range: N/A

Example Requests

Obtain node pools.

```
GET https://{endpoint}/v2/{project_id}/pools/{pool_name}/nodepools
{ }
```

Example Responses

Status code: 200

OK.

```
{
  "kind": "NodePoolList",
  "apiVersion": "v2",
  "items": [ {
    "kind": "NodePool",
    "apiVersion": "v2",
    "metadata": {
      "name": "modelarts.vm.2u4g.dcc-Default"
    },
    "spec": {
      "resources": {
        "nodePool": "modelarts.vm.2u4g.dcc-Default",
        "flavor": "modelarts.vm.2u4g.dcc",
```

```
{
  "count" : 1,
  "maxCount" : 1,
  "network" : {
    "vpc" : "277e9abc-0e6b-431a-9232-cfd25d5fc566",
    "subnet" : "03796378-c356-4c14-826b-e4913aa9c8b9",
    "securityGroups" : [ "0a15b48d-06f1-41e4-b782-ade90087bf59" ]
  }
},
{
  "status" : {
    "resources" : {
      "available" : {
        "nodePool" : "modelarts.vm.2u4g.dcc-Default",
        "flavor" : "modelarts.vm.2u4g.dcc",
        "count" : 1,
        "maxCount" : 1,
        "azs" : [ {
          "az" : "cn-north-7c",
          "count" : 1
        } ]
      }
    }
  }
}, {
  "kind" : "NodePool",
  "apiVersion" : "v2",
  "metadata" : {
    "name" : "nodepool-1"
  },
  "spec" : {
    "resources" : {
      "nodePool" : "nodepool-1",
      "flavor" : "modelarts.vm.2u4g.dcc",
      "count" : 1,
      "maxCount" : 1,
      "network" : {
        "vpc" : "277e9abc-0e6b-431a-9232-cfd25d5fc566",
        "subnet" : "03796378-c356-4c14-826b-e4913aa9c8b9",
        "securityGroups" : [ "0a15b48d-06f1-41e4-b782-ade90087bf59" ]
      }
    }
  },
  "status" : {
    "resources" : {
      "available" : {
        "nodePool" : "nodepool-1",
        "flavor" : "modelarts.vm.2u4g.dcc",
        "count" : 1,
        "maxCount" : 1,
        "azs" : [ {
          "az" : "cn-north-7c",
          "count" : 1
        } ]
      }
    }
  }
}
}
```

Status Codes

Status Code	Description
200	OK.

Error Codes

See [Error Codes](#).

15.2 Creating a Node Pool

Function

This API is used to create a node pool. This API is used when you need to create a node pool with specified configurations when you need to expand compute resources, optimize resource allocation, or deploy new services. Before using this API, ensure that you have the administrator permission and the node pool parameters (such as the number of nodes, specifications, and network configurations) are correctly set. After the creation, the node pool will be created and be available, and the related node information will be recorded. If you do not have the required permission, the parameter settings are incorrect, or system resources are insufficient, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/pools/{pool_name}/nodepools

Table 15-16 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool name. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 15-17 Request body parameters

Parameter	Mandatory	Type	Description
apiVersion	Yes	String	Definition: API version. Range: • v2
kind	Yes	String	Definition: Node pool type. Range: • NodePool: node pool
metadata	Yes	CreateNodePoolMetaVO object	Definition: Node pool metadata.
spec	No	NodePoolSpec object	Definition: Node pool expectation.

Table 15-18 CreateNodePoolMetaVO

Parameter	Mandatory	Type	Description
name	Yes	String	Definition: Node pool name. Constraints: N/A Range: N/A Default Value: N/A
annotations	No	CreateNodePoolAnnotations object	Definition: Node pool annotations. Constraints: N/A Range: N/A Default Value: N/A

Table 15-19 CreateNodePoolAnnotations

Parameter	Mandatory	Type	Description
os.modelarts/billing.mode	No	String	Definition: Billing mode. Constraints: N/A Range: • 0: pay-per-use • 1: yearly/monthly Default Value: N/A

Parameter	Mandatory	Type	Description
os.modelarts/ period.num	No	String	Definition: Subscription period on a yearly/monthly basis, for example, 2 . This parameter is mandatory when the billing mode is yearly/monthly. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ period.type	No	String	Definition: Subscription type on a yearly/monthly basis. This parameter is mandatory when the billing mode is yearly/monthly. Constraints: N/A Range: • 2: month • 3: year • 4: hour Default Value: N/A
os.modelarts/ auto.renew	No	String	Definition: Specifies whether to automatically renew the subscription. Constraints: N/A Range: • 0: auto-renewal disabled • 1: auto-renewal enabled Default Value: 0
os.modelarts/ promotion.info	No	String	Definition: Discount selected on the operations platform. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ service.console.url	No	String	Definition: URL of the page displayed after the subscription order is paid. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
os.modelarts/ order.id	No	String	Definition: Order ID, which is mandatory for creating a yearly/monthly resource or changing the billing mode. Constraints: N/A Range: N/A Default Value: N/A

Table 15-20 NodePoolSpec

Parameter	Mandatory	Type	Description
resources	Yes	PoolResource object	Definition: List of resources in a node pool, including resource flavors, quantity, and custom configurations. Range: N/A

Table 15-21 PoolResource

Parameter	Mandatory	Type	Description
flavor	Yes	String	Definition: Resource flavor name, for example, modelarts.vm.gpu.t4u8 . Range: N/A
count	Yes	Integer	Definition: Committed specifications. Range: N/A
maxCount	Yes	Integer	Definition: Elastic usage of the resource flavor. This parameter value is the same the count value in a physical pool. It is greater than or equal to the count value in a logical pool. Range: N/A
azs	No	Array of PoolNodeAz objects	Definition: AZ distribution of the node pool.

Parameter	Mandatory	Type	Description
nodePool	No	String	Definition: Node pool name, for example, nodePool-1 . Range: N/A
taints	No	Array of Taints objects	Definition: Taints to be added to nodes to set anti-affinity. This parameter cannot be specified for a non-privileged pool.
labels	No	Map<String,String>	Definition: Kubernetes label, in key-value pair format. Range: N/A
tags	No	Array of UserTags objects	Definition: Resource tag. This parameter cannot be specified for a non-privileged pool. Range: N/A
network	No	NodeNetwork object	Definition: Network configuration. This parameter cannot be specified for a non-privileged pool.
extendParams	No	Map<String,String>	Definition: Custom configuration parameters. • dockerBaseSize: Specify the container engine space size of a resource pool node. The value 0 indicates that the size is not limited.
creatingStep	No	CreatingStep object	Definition: Information about batch creation.
os	No	Os object	Definition: OS image information.

Table 15-22 PoolNodeAz

Parameter	Mandatory	Type	Description
az	Yes	String	Definition: AZ name. Range: N/A
count	Yes	Integer	Definition: Number of AZ resource instances. Range: N/A

Table 15-23 Taints

Parameter	Mandatory	Type	Description
key	Yes	String	Definition: Key. Range: N/A
value	No	String	Value.
effect	Yes	String	Effect.

Table 15-24 UserTags

Parameter	Mandatory	Type	Description
key	Yes	String	Definition: Key. The value cannot start with CCE- or __type_baremetal . Range: N/A
value	Yes	String	Value.

Table 15-25 NodeNetwork

Parameter	Mandatory	Type	Description
vpc	No	String	Definition: VPC ID. Constraints: N/A Range: N/A Default Value: N/A
subnet	No	String	Definition: Subnet ID. Constraints: N/A Range: N/A Default Value: N/A
securityGroups	No	Array of strings	Definition: Security group ID set. Constraints: N/A

Table 15-26 CreatingStep

Parameter	Mandatory	Type	Description
step	No	Integer	Definition: Step of a supernode. Constraints: N/A Range: Only the step contained in the resource specification details is supported. Default Value: N/A
type	No	String	Definition: Batch creation type. Constraints: N/A Range: • hyperinstance: supernode Default Value: N/A

Table 15-27 Os

Parameter	Mandatory	Type	Description
name	No	String	Definition: OS name. Range: N/A
imageId	No	String	Definition: OS image ID. Range: N/A
imageType	No	String	Definition: OS image type. Range: • private: private image

Response Parameters

Status code: 200

Table 15-28 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: • v2

Parameter	Type	Description
kind	String	Definition: Node pool type. Range: • NodePool: node pool
metadata	CreateNodePoolMetaVO object	Definition: Node pool metadata.
spec	NodePoolSpec object	Definition: Node pool expectation.

Table 15-29 CreateNodePoolMetaVO

Parameter	Type	Description
name	String	Definition: Node pool name. Constraints: N/A Range: N/A Default Value: N/A
annotations	CreateNodePoolAnnotations object	Definition: Node pool annotations. Constraints: N/A Range: N/A Default Value: N/A

Table 15-30 CreateNodePoolAnnotations

Parameter	Type	Description
os.modelarts/ billing.mode	String	Definition: Billing mode. Constraints: N/A Range: • 0: pay-per-use • 1: yearly/monthly Default Value: N/A
os.modelarts/ period.num	String	Definition: Subscription period on a yearly/monthly basis, for example, 2 . This parameter is mandatory when the billing mode is yearly/monthly. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
os.modelarts/ period.type	String	Definition: Subscription type on a yearly/monthly basis. This parameter is mandatory when the billing mode is yearly/monthly. Constraints: N/A Range: • 2: month • 3: year • 4: hour Default Value: N/A
os.modelarts/ auto.renew	String	Definition: Specifies whether to automatically renew the subscription. Constraints: N/A Range: • 0: auto-renewal disabled • 1: auto-renewal enabled Default Value: 0
os.modelarts/ promotion.info	String	Definition: Discount selected on the operations platform. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ service.console.url	String	Definition: URL of the page displayed after the subscription order is paid. Constraints: N/A Range: N/A Default Value: N/A
os.modelarts/ order.id	String	Definition: Order ID, which is mandatory for creating a yearly/monthly resource or changing the billing mode. Constraints: N/A Range: N/A Default Value: N/A

Table 15-31 NodePoolSpec

Parameter	Type	Description
resources	PoolResource object	Definition: List of resources in a node pool, including resource flavors, quantity, and custom configurations. Range: N/A

Table 15-32 PoolResource

Parameter	Type	Description
flavor	String	Definition: Resource flavor name, for example, modelarts.vm.gpu.t4u8 . Range: N/A
count	Integer	Definition: Committed specifications. Range: N/A
maxCount	Integer	Definition: Elastic usage of the resource flavor. This parameter value is the same the count value in a physical pool. It is greater than or equal to the count value in a logical pool. Range: N/A
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the node pool.
nodePool	String	Definition: Node pool name, for example, nodePool-1 . Range: N/A
taints	Array of Taints objects	Definition: Taints to be added to nodes to set anti-affinity. This parameter cannot be specified for a non-privileged pool.
labels	Map<String,String>	Definition: Kubernetes label, in key-value pair format. Range: N/A
tags	Array of UserTags objects	Definition: Resource tag. This parameter cannot be specified for a non-privileged pool. Range: N/A
network	NodeNetwork object	Definition: Network configuration. This parameter cannot be specified for a non-privileged pool.

Parameter	Type	Description
extendParams	Map<String,String>	Definition: Custom configuration parameters. • dockerBaseSize: Specify the container engine space size of a resource pool node. The value 0 indicates that the size is not limited.
creatingStep	CreatingStep object	Definition: Information about batch creation.
os	Os object	Definition: OS image information.

Table 15-33 PoolNodeAz

Parameter	Type	Description
az	String	Definition: AZ name. Range: N/A
count	Integer	Definition: Number of AZ resource instances. Range: N/A

Table 15-34 Taints

Parameter	Type	Description
key	String	Definition: Key. Range: N/A
value	String	Value.
effect	String	Effect.

Table 15-35 UserTags

Parameter	Type	Description
key	String	Definition: Key. The value cannot start with CCE- or __type_baremetal . Range: N/A
value	String	Value.

Table 15-36 NodeNetwork

Parameter	Type	Description
vpc	String	• Definition: VPC ID. Constraints: N/A Range: N/A Default Value: N/A
subnet	String	Definition: Subnet ID. Constraints: N/A Range: N/A Default Value: N/A
securityGroups	Array of strings	Definition: Security group ID set. Constraints: N/A

Table 15-37 CreatingStep

Parameter	Type	Description
step	Integer	Definition: Step of a supernode. Constraints: N/A Range: Only the step contained in the resource specification details is supported. Default Value: N/A
type	String	Definition: Batch creation type. Constraints: N/A Range: • hyperinstance: supernode Default Value: N/A

Table 15-38 Os

Parameter	Type	Description
name	String	Definition: OS name. Range: N/A
imageId	String	Definition: OS image ID. Range: N/A

Parameter	Type	Description
imageType	String	Definition: OS image type. Range: • private: private image

Status code: 400

Table 15-39 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Create a node pool.

POST https://{endpoint}/v2/{project_id}/pools/{pool_name}/nodepools

```
{
  "kind": "NodePool",
  "apiVersion": "v2",
  "metadata": {
    "name": "nodepool-1",
    "annotations": { }
  },
  "spec": {
    "resources": {
      "nodePool": "nodepool-1",
      "flavor": "modelarts.vm.2u4g.dcc",
      "count": 1,
      "maxCount": 1,
      "network": {
        "vpc": "277e9abc-0e6b-431a-9232-cfd25d5fc566",
        "subnet": "03796378-c356-4c14-826b-e4913aa9c8b9",
        "securityGroups": [ "0a15b48d-06f1-41e4-b782-ade90087bf59" ]
      }
    }
  }
}
```

Example Responses

Status code: 200

OK.

```
{
  "kind": "NodePool",
  "apiVersion": "v2",
  "metadata": {
```

```
{
  "name": "nodepool-1",
  "annotations": { }
},
"spec": {
  "resources": {
    "nodePool": "nodepool-1",
    "flavor": "modelarts.vm.2u4g.dcc",
    "count": 1,
    "maxCount": 1,
    "network": {
      "vpc": "277e9abc-0e6b-431a-9232-cfd25d5fc566",
      "subnet": "03796378-c356-4c14-826b-e4913aa9c8b9",
      "securityGroups": [ "0a15b48d-06f1-41e4-b782-ade90087bf59" ]
    }
  }
}
}
```

Status code: 400

Bad request

```
{
  "error_code": "ModelArts.50004000",
  "error_msg": "Bad request."
}
```

Status Codes

Status Code	Description
200	OK.
400	Bad request

Error Codes

See [Error Codes](#).

15.3 Obtaining Details About a Specified Node Pool

Function

This API is used to obtain the details of a specified node pool. This API is used when you need to obtain the details about a node pool, such as the configuration, status, resource usage, or resource management. Before using this API, ensure that the node pool exists and you have the permission to access the node pool. After the API is called, the system returns the details about the node pool, including the node pool ID, name, number of nodes, status, creation time, and configuration parameters. If the node pool does not exist, the user does not have the permission to access the node pool, or the node pool is unavailable, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/pools/{pool_name}/nodepools/{nodepool_name}

Table 15-40 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool name. Constraints: N/A Range: N/A Default Value: N/A
nodepool_name	Yes	String	Definition: Node pool name. Constraints: N/A Range: N/A Default Value: N/A

Table 15-41 Query Parameters

Parameter	Mandatory	Type	Description
continue	No	String	Definition: Position of the previous page during pagination query. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
limit	No	String	Definition: Number of records returned in a single pagination query. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 15-42 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: v2
kind	String	Node pool type. The options are as follows: NodePool: node pool
metadata	NodePoolMetadata object	Definition: Node pool metadata.
spec	NodePoolSpec object	Definition: Node pool expectation.
status	NodePoolStatus object	Definition: Node pool status.

Table 15-43 NodePoolMetadata

Parameter	Type	Description
name	String	Definition: Node pool name. You can specify the name. If not specified, the default name is used. Range: N/A

Table 15-44 NodePoolSpec

Parameter	Type	Description
resources	PoolResource object	Definition: List of resources in a node pool, including resource flavors, quantity, and custom configurations. Range: N/A

Table 15-45 PoolResource

Parameter	Type	Description
flavor	String	Definition: Resource flavor name, for example, modelarts.vm.gpu.t4u8 . Range: N/A
count	Integer	Definition: Committed specifications. Range: N/A
maxCount	Integer	Definition: Elastic usage of the resource flavor. This parameter value is the same the count value in a physical pool. It is greater than or equal to the count value in a logical pool. Range: N/A
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the node pool.
nodePool	String	Definition: Node pool name, for example, nodePool-1 . Range: N/A
taints	Array of Taints objects	Definition: Taints to be added to nodes to set anti-affinity. This parameter cannot be specified for a non-privileged pool.
labels	Map<String,String>	Definition: Kubernetes label, in key-value pair format. Range: N/A
tags	Array of UserTags objects	Definition: Resource tag. This parameter cannot be specified for a non-privileged pool. Range: N/A
network	NodeNetwork object	Definition: Network configuration. This parameter cannot be specified for a non-privileged pool.

Parameter	Type	Description
extendParams	Map<String,String>	Definition: Custom configuration parameters. • dockerBaseSize: Specify the container engine space size of a resource pool node. The value 0 indicates that the size is not limited.
creatingStep	CreatingStep object	Definition: Information about batch creation.
os	Os object	Definition: OS image information.

Table 15-46 Taints

Parameter	Type	Description
key	String	Definition: Key. Range: N/A
value	String	Value.
effect	String	Effect.

Table 15-47 UserTags

Parameter	Type	Description
key	String	Definition: Key. The value cannot start with CCE- or __type_baremetal. Range: N/A
value	String	Value.

Table 15-48 NodeNetwork

Parameter	Type	Description
vpc	String	• Definition: VPC ID. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
subnet	String	Definition: Subnet ID. Constraints: N/A Range: N/A Default Value: N/A
securityGroups	Array of strings	Definition: Security group ID set. Constraints: N/A

Table 15-49 CreatingStep

Parameter	Type	Description
step	Integer	Definition: Step of a supernode. Constraints: N/A Range: Only the step contained in the resource specification details is supported. Default Value: N/A
type	String	Definition: Batch creation type. Constraints: N/A Range: • hyperinstance: supernode Default Value: N/A

Table 15-50 Os

Parameter	Type	Description
name	String	Definition: OS name. Range: N/A
imageId	String	Definition: OS image ID. Range: N/A
imageType	String	Definition: OS image type. Range: • private: private image

Table 15-51 NodePoolStatus

Parameter	Type	Description
resources	resources object	Definition: Resources in different states in a node pool.

Table 15-52 resources

Parameter	Type	Description
creating	PoolResourceFlavorCount object	Definition: Number of resources that are being created.
available	PoolResourceFlavorCount object	Definition: Number of available resources.
abnormal	PoolResourceFlavorCount object	Definition: Number of abnormal resources.
deleting	PoolResourceFlavorCount object	Definition: Number of resources that are being deleted.

Table 15-53 PoolResourceFlavorCount

Parameter	Type	Description
flavor	String	Definition: Resource flavor ID. Range: N/A
count	Integer	Definition: Number of resource specification instances in a resource pool. Range: N/A
maxCount	Integer	Definition: Number of elastic resource specification instances in a resource pool. The value of this parameter in a physical pool is the same as that of count . Range: N/A
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the resource specification instances to be created in a resource pool.
nodePool	String	Definition: Node pool ID. Range: N/A

Table 15-54 PoolNodeAz

Parameter	Type	Description
az	String	Definition: AZ name. Range: N/A
count	Integer	Definition: Number of AZ resource instances. Range: N/A

Status code: 400**Table 15-55** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Obtain details about a specified node pool.

```
GET https://{endpoint}/v2/{project_id}/pools/{pool_name}/nodepools/{nodepool_name}
{ }
```

Example Responses

Status code: 200

OK.

```
{
  "kind": "NodePool",
  "apiVersion": "v2",
  "metadata": {
    "name": "nodepool-1"
  },
  "spec": {
    "resources": {
      "nodePool": "nodepool-1",
      "flavor": "modelarts.vm.2u4g.dcc",
      "count": 1,
      "maxCount": 1,
      "network": {
        "vpc": "277e9abc-0e6b-431a-9232-cfd25d5fc566",
        "subnet": "03796378-c356-4c14-826b-e4913aa9c8b9",
        "securityGroups": [ "0a15b48d-06f1-41e4-b782-ade90087bf59" ]
      }
    }
  },
}
```

```
"status": {
  "resources": {
    "available": {
      "nodePool": "nodepool-1",
      "flavor": "modelarts.vm.2u4g.dcc",
      "count": 1,
      "maxCount": 1,
      "azs": [ {
        "az": "cn-north-7c",
        "count": 1
      } ]
    }
  }
}
```

Status code: 400

Bad request

```
{
  "error_code": "ModelArts.50004000",
  "error_msg": "Bad request. invalid nodepool name"
}
```

Status Codes

Status Code	Description
200	OK.
400	Bad request

Error Codes

See [Error Codes](#).

15.4 Updating a Node Pool

Function

This API is used to update the configurations of a specified node pool. This API is used when you need to expand the capacity of a node pool, adjust node specifications, optimize resource allocation, or repair node pool configurations. Before using this API, ensure that the node pool exists and you have the administrator permissions. After the update, the configurations of the node pool will be updated, including the number of nodes, node specifications, and network configurations. If the node pool does not exist, the user does not have the permission to operate the node pool, or the configuration parameters are incorrect, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

PATCH /v2/{project_id}/pools/{pool_name}/nodepools/{nodepool_name}

Table 15-56 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool name. Constraints: N/A Range: N/A Default Value: N/A
nodepool_name	Yes	String	Definition: Node pool name. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 15-57 Request header parameters

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Definition: Message body type (format). Constraints: N/A Range application/merge-patch+json Default Value: N/A

Table 15-58 Request body parameters

Parameter	Mandatory	Type	Description
spec	Yes	NodePoolSpec object	Definition: Request body for updating a node pool Constraints: N/A

Table 15-59 NodePoolSpec

Parameter	Mandatory	Type	Description
resources	Yes	PoolResource object	Definition: List of resources in a node pool, including resource flavors, quantity, and custom configurations. Range: N/A

Table 15-60 PoolResource

Parameter	Mandatory	Type	Description
flavor	Yes	String	Definition: Resource flavor name, for example, modelarts.vm.gpu.t4u8 . Range: N/A
count	Yes	Integer	Definition: Committed specifications. Range: N/A
maxCount	Yes	Integer	Definition: Elastic usage of the resource flavor. This parameter value is the same the count value in a physical pool. It is greater than or equal to the count value in a logical pool. Range: N/A
azs	No	Array of PoolNodeAz objects	Definition: AZ distribution of the node pool.
nodePool	No	String	Definition: Node pool name, for example, nodePool-1 . Range: N/A

Parameter	Mandatory	Type	Description
taints	No	Array of Taints objects	Definition: Taints to be added to nodes to set anti-affinity. This parameter cannot be specified for a non-privileged pool.
labels	No	Map<String,String>	Definition: Kubernetes label, in key-value pair format. Range: N/A
tags	No	Array of UserTags objects	Definition: Resource tag. This parameter cannot be specified for a non-privileged pool. Range: N/A
network	No	NodeNetwork object	Definition: Network configuration. This parameter cannot be specified for a non-privileged pool.
extendParams	No	Map<String,String>	Definition: Custom configuration parameters. • dockerBaseSize: Specify the container engine space size of a resource pool node. The value 0 indicates that the size is not limited.
creatingStep	No	CreatingStep object	Definition: Information about batch creation.
os	No	Os object	Definition: OS image information.

Table 15-61 PoolNodeAz

Parameter	Mandatory	Type	Description
az	Yes	String	Definition: AZ name. Range: N/A
count	Yes	Integer	Definition: Number of AZ resource instances. Range: N/A

Table 15-62 Taints

Parameter	Mandatory	Type	Description
key	Yes	String	Definition: Key. Range: N/A
value	No	String	Value.
effect	Yes	String	Effect.

Table 15-63 UserTags

Parameter	Mandatory	Type	Description
key	Yes	String	Definition: Key. The value cannot start with CCE- or __type_baremetal . Range: N/A
value	Yes	String	Value.

Table 15-64 NodeNetwork

Parameter	Mandatory	Type	Description
vpc	No	String	Definition: VPC ID. Constraints: N/A Range: N/A Default Value: N/A
subnet	No	String	Definition: Subnet ID. Constraints: N/A Range: N/A Default Value: N/A
securityGroups	No	Array of strings	Definition: Security group ID set. Constraints: N/A

Table 15-65 CreatingStep

Parameter	Mandatory	Type	Description
step	No	Integer	Definition: Step of a supernode. Constraints: N/A Range: Only the step contained in the resource specification details is supported. Default Value: N/A
type	No	String	Definition: Batch creation type. Constraints: N/A Range: • hyperinstance: supernode Default Value: N/A

Table 15-66 Os

Parameter	Mandatory	Type	Description
name	No	String	Definition: OS name. Range: N/A
imageId	No	String	Definition: OS image ID. Range: N/A
imageType	No	String	Definition: OS image type. Range: • private: private image

Response Parameters

Status code: 200

Table 15-67 Response body parameters

Parameter	Type	Description
spec	NodePoolSpec object	Definition: Request body for updating a node pool Constraints: N/A

Table 15-68 NodePoolSpec

Parameter	Type	Description
resources	PoolResource object	Definition: List of resources in a node pool, including resource flavors, quantity, and custom configurations. Range: N/A

Table 15-69 PoolResource

Parameter	Type	Description
flavor	String	Definition: Resource flavor name, for example, modelarts.vm.gpu.t4u8 . Range: N/A
count	Integer	Definition: Committed specifications. Range: N/A
maxCount	Integer	Definition: Elastic usage of the resource flavor. This parameter value is the same the count value in a physical pool. It is greater than or equal to the count value in a logical pool. Range: N/A
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the node pool.
nodePool	String	Definition: Node pool name, for example, nodePool-1 . Range: N/A
taints	Array of Taints objects	Definition: Taints to be added to nodes to set anti-affinity. This parameter cannot be specified for a non-privileged pool.
labels	Map<String,String>	Definition: Kubernetes label, in key-value pair format. Range: N/A
tags	Array of UserTags objects	Definition: Resource tag. This parameter cannot be specified for a non-privileged pool. Range: N/A
network	NodeNetwork object	Definition: Network configuration. This parameter cannot be specified for a non-privileged pool.

Parameter	Type	Description
extendParams	Map<String,String>	Definition: Custom configuration parameters. • dockerBaseSize: Specify the container engine space size of a resource pool node. The value 0 indicates that the size is not limited.
creatingStep	CreatingStep object	Definition: Information about batch creation.
os	Os object	Definition: OS image information.

Table 15-70 PoolNodeAz

Parameter	Type	Description
az	String	Definition: AZ name. Range: N/A
count	Integer	Definition: Number of AZ resource instances. Range: N/A

Table 15-71 Taints

Parameter	Type	Description
key	String	Definition: Key. Range: N/A
value	String	Value.
effect	String	Effect.

Table 15-72 UserTags

Parameter	Type	Description
key	String	Definition: Key. The value cannot start with CCE- or __type_baremetal . Range: N/A
value	String	Value.

Table 15-73 NodeNetwork

Parameter	Type	Description
vpc	String	• Definition: VPC ID. Constraints: N/A Range: N/A Default Value: N/A
subnet	String	Definition: Subnet ID. Constraints: N/A Range: N/A Default Value: N/A
securityGroups	Array of strings	Definition: Security group ID set. Constraints: N/A

Table 15-74 CreatingStep

Parameter	Type	Description
step	Integer	Definition: Step of a supernode. Constraints: N/A Range: Only the step contained in the resource specification details is supported. Default Value: N/A
type	String	Definition: Batch creation type. Constraints: N/A Range: • hyperinstance: supernode Default Value: N/A

Table 15-75 Os

Parameter	Type	Description
name	String	Definition: OS name. Range: N/A
imageId	String	Definition: OS image ID. Range: N/A

Parameter	Type	Description
imageType	String	Definition: OS image type. Range: • private: private image

Status code: 400

Table 15-76 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Update a node pool.

PATCH https://{endpoint}/v2/{project_id}/pools/{pool_name}/nodepools/{nodepool_name}

```
{
  "spec": {
    "resources": {
      "nodePool": "modelarts.vm.2u4g.dcc-Default",
      "flavor": "modelarts.vm.2u4g.dcc",
      "count": 1,
      "maxCount": 1,
      "network": {
        "vpc": "277e9abc-0e6b-431a-9232-cfd25d5fc566",
        "subnet": "03796378-c356-4c14-826b-e4913aa9c8b9",
        "securityGroups": [ "0a15b48d-06f1-41e4-b782-ade90087bf59" ]
      }
    }
  }
}
```

Example Responses

Status code: 200

OK.

```
{
  "spec": {
    "resources": {
      "nodePool": "modelarts.vm.2u4g.dcc-Default",
      "flavor": "modelarts.vm.2u4g.dcc",
      "count": 1,
      "maxCount": 1,
      "network": {
        "vpc": "277e9abc-0e6b-431a-9232-cfd25d5fc566",
        "subnet": "03796378-c356-4c14-826b-e4913aa9c8b9",

```

```
"securityGroups" : [ "0a15b48d-06f1-41e4-b782-ade90087bf59" ]
}
}
}
```

Status code: 400

Bad request

```
{
  "error_code" : "ModelArts.50004000",
  "error_msg" : "Bad request."
}
```

Status Codes

Status Code	Description
200	OK.
400	Bad request

Error Codes

See [Error Codes](#).

15.5 Deleting a Node Pool

Function

This API is used to remove a created node pool. This function is not supported for yearly/monthly resource pools. This API is used when you need to delete a specified node pool when the tasks in the node pool are complete, the configuration is incorrect, or resources need to be cleared. Before using this API, ensure that the node pool exists and you have the administrator permissions. After the deletion, the node pool is permanently removed, and related resources and configurations are cleared. If the node pool does not exist, the user does not have the permission to perform the operation, or the node pool cannot be deleted, for example, it is a yearly/monthly resource pool or the node pool is in use, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

DELETE /v2/{project_id}/pools/{pool_name}/nodepools/{nodepool_name}

Table 15-77 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool name. Constraints: N/A Range: N/A Default Value: N/A
nodepool_name	Yes	String	Definition: Node pool name. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 15-78 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: v2
kind	String	Node pool type. The options are as follows: NodePool: node pool
metadata	NodePoolMetadata object	Definition: Node pool metadata.
spec	NodePoolSpec object	Definition: Node pool expectation.

Parameter	Type	Description
status	NodePoolStatus object	Definition: Node pool status.

Table 15-79 NodePoolMetadata

Parameter	Type	Description
name	String	Definition: Node pool name. You can specify the name. If not specified, the default name is used. Range: N/A

Table 15-80 NodePoolSpec

Parameter	Type	Description
resources	PoolResource object	Definition: List of resources in a node pool, including resource flavors, quantity, and custom configurations. Range: N/A

Table 15-81 PoolResource

Parameter	Type	Description
flavor	String	Definition: Resource flavor name, for example, modelarts.vm.gpu.t4u8 . Range: N/A
count	Integer	Definition: Committed specifications. Range: N/A
maxCount	Integer	Definition: Elastic usage of the resource flavor. This parameter value is the same the count value in a physical pool. It is greater than or equal to the count value in a logical pool. Range: N/A
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the node pool.

Parameter	Type	Description
nodePool	String	Definition: Node pool name, for example, nodePool-1 . Range: N/A
taints	Array of Taints objects	Definition: Taints to be added to nodes to set anti-affinity. This parameter cannot be specified for a non-privileged pool.
labels	Map<String,String>	Definition: Kubernetes label, in key-value pair format. Range: N/A
tags	Array of UserTags objects	Definition: Resource tag. This parameter cannot be specified for a non-privileged pool. Range: N/A
network	NodeNetwork object	Definition: Network configuration. This parameter cannot be specified for a non-privileged pool.
extendParams	Map<String,String>	Definition: Custom configuration parameters. • dockerBaseSize: Specify the container engine space size of a resource pool node. The value 0 indicates that the size is not limited.
creatingStep	CreatingStep object	Definition: Information about batch creation.
os	Os object	Definition: OS image information.

Table 15-82 Taints

Parameter	Type	Description
key	String	Definition: Key. Range: N/A
value	String	Value.
effect	String	Effect.

Table 15-83 UserTags

Parameter	Type	Description
key	String	Definition: Key. The value cannot start with CCE- or __ type_baremetal . Range: N/A
value	String	Value.

Table 15-84 NodeNetwork

Parameter	Type	Description
vpc	String	Definition: VPC ID. Constraints: N/A Range: N/A Default Value: N/A
subnet	String	Definition: Subnet ID. Constraints: N/A Range: N/A Default Value: N/A
securityGroups	Array of strings	Definition: Security group ID set. Constraints: N/A

Table 15-85 CreatingStep

Parameter	Type	Description
step	Integer	Definition: Step of a supernode. Constraints: N/A Range: Only the step contained in the resource specification details is supported. Default Value: N/A
type	String	Definition: Batch creation type. Constraints: N/A Range: hyperinstance: supernode Default Value: N/A

Table 15-86 Os

Parameter	Type	Description
name	String	Definition: OS name. Range: N/A
imageId	String	Definition: OS image ID. Range: N/A
imageType	String	Definition: OS image type. Range: • private: private image

Table 15-87 NodePoolStatus

Parameter	Type	Description
resources	resources object	Definition: Resources in different states in a node pool.

Table 15-88 resources

Parameter	Type	Description
creating	PoolResourceFlavorCount object	Definition: Number of resources that are being created.
available	PoolResourceFlavorCount object	Definition: Number of available resources.
abnormal	PoolResourceFlavorCount object	Definition: Number of abnormal resources.
deleting	PoolResourceFlavorCount object	Definition: Number of resources that are being deleted.

Table 15-89 PoolResourceFlavorCount

Parameter	Type	Description
flavor	String	Definition: Resource flavor ID. Range: N/A
count	Integer	Definition: Number of resource specification instances in a resource pool. Range: N/A

Parameter	Type	Description
maxCount	Integer	Definition: Number of elastic resource specification instances in a resource pool. The value of this parameter in a physical pool is the same as that of count . Range: N/A
azs	Array of PoolNodeAz objects	Definition: AZ distribution of the resource specification instances to be created in a resource pool.
nodePool	String	Definition: Node pool ID. Range: N/A

Table 15-90 PoolNodeAz

Parameter	Type	Description
az	String	Definition: AZ name. Range: N/A
count	Integer	Definition: Number of AZ resource instances. Range: N/A

Status code: 400**Table 15-91** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Delete a node pool.

```
DELETE https://{endpoint}/v2/{project_id}/pools/{pool_name}/nodepools/{nodepool_name}
{ }
```


Example Responses

Status code: 200

SUCCESS

```
{
  "kind" : "NodePool",
  "apiVersion" : "v2",
  "metadata" : {
    "name" : "nodepool-1"
  },
  "spec" : {
    "resources" : {
      "nodePool" : "nodepool-1",
      "flavor" : "modelarts.vm.2u4g.dcc",
      "count" : 1,
      "maxCount" : 1,
      "network" : {
        "vpc" : "277e9abc-0e6b-431a-9232-cfd25d5fc566",
        "subnet" : "03796378-c356-4c14-826b-e4913aa9c8b9",
        "securityGroups" : [ "0a15b48d-06f1-41e4-b782-ade90087bf59" ]
      }
    }
  },
  "status" : {
    "resources" : {
      "available" : {
        "nodePool" : "nodepool-1",
        "flavor" : "modelarts.vm.2u4g.dcc",
        "count" : 1,
        "maxCount" : 1,
        "azs" : [ {
          "az" : "cn-north-7c",
          "count" : 1
        } ]
      }
    }
  }
}
```

Status code: 400

Bad request

```
{
  "error_code" : "ModelArts.50004000",
  "error_msg" : "Bad request."
}
```

Status Codes

Status Code	Description
200	success
400	Bad request

Error Codes

See [Error Codes](#).

15.6 Obtaining Nodes in a Node Pool

Function

This API is used to obtain details about all nodes in a specified node pool. This API is used when you need to obtain the details about a node pool, such as the node status, resource usage, or resource management. Before using this API, ensure that the node pool exists and you have the permission to access the node pool. After the API is called, the system returns the node list of the node pool, including the node ID, name, status, IP address, and resource usage. If the node pool does not exist, the user does not have the permission to access the node pool, or the node pool is unavailable, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/pools/{pool_name}/nodepools/{nodepool_name}/nodes

Table 15-92 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool name. Constraints: N/A Range: N/A Default Value: N/A
nodepool_name	Yes	String	Definition: Node pool name. Constraints: N/A Range: N/A Default Value: N/A

Table 15-93 Query Parameters

Parameter	Mandatory	Type	Description
continue	No	String	Definition: Position of the previous page during pagination query. Constraints: N/A Range: N/A Default Value: N/A
limit	No	String	Definition: Number of records returned in a single pagination query. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 15-94 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: • v2: The current resource version is v2.
kind	String	Definition: Resource type. Range: • NodeList: nodes
metadata	NodeListMetadata object	Definition: Metadata of a node list.
items	Array of Node objects	Definition: Node resource list.

Table 15-95 NodeListMetadata

Parameter	Type	Description
continue	String	Definition: Offset parameter of the pagination query. Range: The value is obtained from the metadata.continue field in the response to the last pagination query. An empty value indicates no offset.
remainingItemCount	Long	Definition: Number of remaining resources in a pagination query. Default Value: N/A

Table 15-96 Node

Parameter	Type	Description
apiVersion	String	Definition: API version of the resource. Range: • v2: The current resource version is v2.
kind	String	Definition: Resource type. Range: • Node: node
metadata	Object	Definition: Metadata of a node resource.
spec	NodeSpec object	Definition: Specifications of a node resource.
status	NodeStatus object	Definition: Status of a node resource.

Table 15-97 NodeSpec

Parameter	Type	Description
flavor	String	Definition: ID of node resource specifications. Range: N/A
extendParams	Object	Definition: Custom configuration information of a node.
os	Os object	Definition: OS of a node.

Table 15-98 Os

Parameter	Type	Description
name	String	Definition: OS name. Range: N/A
imageId	String	Definition: OS image ID. Range: N/A
imageType	String	Definition: OS image type. Range: • private: private image

Table 15-99 NodeStatus

Parameter	Type	Description
phase	String	Definition: Status of a node. Range: • Available: The node is available. • Creating: The node is being created. • Deleting: The node is being deleted. • Abnormal: The node is abnormal. • Checking: The node is performing a self-check.
az	String	Definition: AZ where a node is located. Range: N/A
privateIp	String	Definition: IP address of a node. Range: N/A
resources	NodeResource object	Definition: Resources of a node.
availableResources	NodeResource object	Definition: Available resources of a node.

Table 15-100 NodeResource

Parameter	Type	Description
cpu	String	Definition: Number of CPU cores on a node. Range: N/A
memory	String	Definition: Memory size of a node, in GiB. Range: N/A
nvidia.com/gpu	String	Definition: Number of GPUs on a node. Range: N/A
huawei.com/ascend-snt3	String	Definition: Number of snt3 NPUs on a node. Range: N/A
huawei.com/ascend-snt9	String	Definition: Number of snt9 NPUs on a node. Range: N/A

Status code: 400

Table 15-101 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Obtain nodes in a node pool.

GET https://{endpoint}/v2/{project_id}/pools/{pool_name}/nodepools/{nodepool_name}/nodes

```
{
  "kind": "NodeList",
  "apiVersion": "v2",
  "metadata": { },
  "items": [ {
    "kind": "Node",
    "apiVersion": "v2",
    "metadata": {
      "name": "node-dly-4",
      "creationTimestamp": "2024-01-29T09:28:26Z",
      "labels": {
```

```
{
  "os.modelarts.node/cluster" : "dly-lite",
  "os.modelarts.node/nodepool" : "nodepool-1"
},
"spec" : {
  "flavor" : "modelarts.vm.2u4g.dcc",
  "hostNetwork" : {
    "vpc" : "277e9abc-0e6b-431a-9232-cfd25d5fc566",
    "subnet" : "03796378-c356-4c14-826b-e4913aa9c8b9",
    "securityGroups" : [ "0a15b48d-06f1-41e4-b782-ade90087bf59" ]
  }
},
"status" : {
  "phase" : "Available",
  "az" : "cn-north-7c",
  "privateIp" : "192.168.1.132",
  "resources" : {
    "cpu" : "1930m",
    "memory" : "1912Mi"
  }
}
}]
}
```

Example Responses

Status code: 200

OK.

```
{
  "kind" : "NodeList",
  "apiVersion" : "v2",
  "metadata" : { },
  "items" : [ {
    "kind" : "Node",
    "apiVersion" : "v2",
    "metadata" : {
      "name" : "node-dly-4",
      "creationTimestamp" : "2024-01-29T09:28:26Z"
    },
    "spec" : {
      "flavor" : "modelarts.vm.2u4g.dcc"
    },
    "status" : {
      "phase" : "Available",
      "az" : "cn-north-7c",
      "privateIp" : "192.168.1.132",
      "resources" : {
        "cpu" : "1930m",
        "memory" : "1912Mi"
      }
    }
  }
]
}
```

Status code: 400

Bad request

```
{
  "error_code" : "ModelArts.50004000",
  "error_msg" : "Bad request. invalid nodepool name"
}
```

Status Codes

Status Code	Description
200	OK.
400	Bad request

Error Codes

See [Error Codes](#).

16 Order Management

16.1 Querying Order Details

Function

This API is used to query order details.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/orders/{order_name}

Table 16-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
order_name	Yes	String	Range: N/A

Request Parameters

Table 16-2 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Constraints: N/A

Response Parameters

Status code: 200

Table 16-3 Response body parameters

Parameter	Type	Description
count	Integer	Definition: Number of resources associated with the order. Constraints: N/A Range: N/A Default Value: N/A
items	Array of OrderDetailItem objects	Definition: Resource information list associated with the order. Constraints: N/A Range: N/A Default Value: N/A

Table 16-4 OrderDetailItem

Parameter	Type	Description
resourcename	String	Definition: Resource ID. The value is obtained from the metadata.name field in resource details. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
action	String	Definition: Type of the resource change associated with the order. Constraints: N/A Range: • createPool: Create a resource pool. • deletePool: Delete a resource pool. • createNode: Create a node. • deleteNode: Delete a node. This option is mainly used for unsubscribing from yearly/monthly nodes. • renew: Renew a subscription. • toPeriodic: Change the billing mode to yearly/monthly. Default Value: N/A
status	String	Definition: Change status of the resource associated with the order. Constraints: N/A Range: • processing: The resource is being processed. • succeed: The resource is processed. • failed: The resource fails to be processed. Default Value: N/A
begintimestamp	String	Definition: Timestamp when the resource starts to change, in milliseconds. For example, 1744285793000 . Constraints: N/A Range: N/A Default Value: N/A
updatetimestamp	String	Definition: Timestamp when the resource is last updated, in milliseconds. For example, 1744285793000 . Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
message	String	Definition: Execution information of resource change, for example, failure cause. Constraints: N/A Range: N/A Default Value: N/A

Status code: 400

Table 16-5 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Status code: 404

Table 16-6 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Query resource information in the order details.

```
GET /v1/{project_id}/orders/{order_name}
```

Example Responses

Status code: 200

Default Value: N/A

```
{  
  "count" : 4,  
  "items" : [ {
```

```
{
  "action": "createPool",
  "resourcename": "pool-9495-6f5da086876d4cd084d36f8bd3346036",
  "status": "succeed",
  "begintimestamp": 1744285793000,
  "updatetimestamp": 1744286479000
}, {
  "action": "createNode",
  "resourcename": "os-node-created-8jsnk",
  "status": "succeed",
  "begintimestamp": 1744286228000,
  "updatetimestamp": 1744286479000
}, {
  "action": "createNode",
  "resourcename": "os-node-created-lq4f8",
  "status": "succeed",
  "begintimestamp": 1744286228000,
  "updatetimestamp": 1744286479000
}, {
  "action": "createNode",
  "resourcename": "os-node-created-ggthb",
  "status": "succeed",
  "begintimestamp": 1744286228000,
  "updatetimestamp": 1744286479000
}
}]
}
```

Status code: 400

Bad request.

```
{
  "error_code": "ModelArts.50004000",
  "error_msg": "Bad request."
}
```

Status code: 404

Not found.

```
{
  "error_code": "ModelArts.50015001",
  "error_msg": "Order {name} not found."
}
```

Status Codes

Status Code	Description
200	Default Value: N/A
400	Bad request.
404	Not found.

Error Codes

See [Error Codes](#).

17 Plugin Management

17.1 Creating a Plugin

Function

This API is used to create plugin instances.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/pools/{pool_name}/plugins

Table 17-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Resource pool name.

Request Parameters

Table 17-2 Request body parameters

Parameter	Mandatory	Type	Description
apiVersion	Yes	String	Definition: API resource type. The value is fixed at Plugin and cannot be changed. Constraints: N/A Range: N/A Default Value: N/A
kind	Yes	String	API version. The value is fixed at v2 and cannot be changed.
spec	Yes	PluginSpec object	Detailed description of plugin installation or upgrade.

Table 17-3 PluginSpec

Parameter	Mandatory	Type	Description
template	Yes	Template object	Definition: Template information. Constraints: N/A

Table 17-4 Template

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the plugin template to be installed, for example, log-agent .
version	No	String	Version of the plugin to be installed or upgraded.

Parameter	Mandatory	Type	Description
inputs	No	Map<String, Object>	Plugin template installation parameters (varying depending on the plugin). During the plugin upgrade, you need to specify all the installation parameters. If the parameters are not specified, the default values in the plugin template are used. The current plugin installation parameters can be obtained through the API for querying plugin instances.

Response Parameters

Status code: 200

Table 17-5 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: v2
kind	String	Type of the plugin instance. Options: Plugin: plugin
metadata	PluginMetadata object	Metadata of the plugin instance.
spec	PluginSpec object	Plugin instance details.
status	PluginStatus object	Plugin instance status.

Table 17-6 PluginMetadata

Parameter	Type	Description
name	String	Name of the plugin instance.
creationtimestamp	String	Creation time.

Table 17-7 PluginSpec

Parameter	Type	Description
template	Template object	Definition: Template information. Constraints: N/A

Table 17-8 Template

Parameter	Type	Description
name	String	Name of the plugin template to be installed, for example, log-agent .
version	String	Version of the plugin to be installed or upgraded.
inputs	Map<String,Object>	Plugin template installation parameters (varying depending on the plugin). During the plugin upgrade, you need to specify all the installation parameters. If the parameters are not specified, the default values in the plugin template are used. The current plugin installation parameters can be obtained through the API for querying plugin instances.

Table 17-9 PluginStatus

Parameter	Type	Description
phase	String	Plugin instance status. Options: • Pending: The plugin is being installed. • Running: All of the plugin instances are running. This specifies that the plugin runs properly. • Updating: The plugin is being updated. • Abnormal: The plugin instances are abnormal and the plugin cannot be used. You can click the status to view the failure cause. • Deleting: The plugin is being deleted.
version	String	Version of the plugin instances.

Parameter	Type	Description
reason	String	Details about the plugin instance installation failure.
values	String	Installation parameters of the plugin instances. The parameters vary depending on the plugin.
resources	Array of PluginResources objects	Resources used by the plugin instances.

Table 17-10 PluginResources

Parameter	Type	Description
involvedobject	ObjectReference object	Resource objects referenced by the plugin.
replicas	Integer	Number of replicas of the resource object.
limits	Map<String,String>	Limit on requested resources.
requests	Map<String,String>	Requested resources.

Table 17-11 ObjectReference

Parameter	Type	Description
kind	String	API type of the resource object, for example, DaemonSet and Deployment .
apiVersion	String	Definition: API version of the resource object. Range: N/A
namespace	String	Namespace of the resource object.
name	String	Name of the resource object.
uid	String	Unique ID of the resource object.
resourceversion	String	Current version of the resource object.

Status code: 400

Table 17-12 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Create plugin instances.

POST https://{endpoint}/v2/{project_id}/pools/{pool_name}/plugins

```
{
  "apiVersion" : "v2",
  "kind" : "Plugin",
  "spec" : {
    "template" : {
      "version" : "1.6.36",
      "name" : "node-local-dns"
    }
  }
}
```

Example Responses

Status code: 200

Request succeeded.

```
{
  "apiVersion" : "v2",
  "kind" : "Plugin",
  "spec" : {
    "template" : {
      "name" : "node-local-dns",
      "version" : "1.6.36",
      "inputs" : {
        "flavor" : {
          "description" : "High available",
          "name" : "HA",
          "resources" : [ {
            "name" : "node-local-dns-admission-controller",
            "limitsCpu" : "250m",
            "requestsCpu" : "250m",
            "replicas" : 2,
            "limitsMem" : "512Mi",
            "requestsMem" : "512Mi"
          }, {
            "name" : "node-local-dns-cache",
            "limitsCpu" : "500m",
            "requestsCpu" : "25m",
            "limitsMem" : "512Mi",
            "requestsMem" : "5Mi"
          } ],
          "size" : "large"
        }
      },
      "custom" : {
        "enable_dnsconfig_admission" : true,
        "nameserver" : "135.0.0.1",

```

```
"ndots" : "8",  
  "search" : "1321"  
}  
}  
}  
}
```

Status code: 400

Bad request

```
{  
  "error_code" : "ModelArts.50004000",  
  "error_msg" : "Bad request."  
}
```

Status Codes

Status Code	Description
200	Request succeeded.
400	Bad request

Error Codes

See [Error Codes](#).

17.2 Querying the Plugin List

Function

This API is used to list plugin instances.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/pools/{pool_name}/plugins

Table 17-13 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Resource pool name.

Request Parameters

None

Response Parameters

Status code: 200

Table 17-14 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: v2
kind	String	Resource type. Options: PluginList: plugin list
items	Array of Plugin objects	Plugin list of the resource pool.

Table 17-15 Plugin

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: v2
kind	String	Type of the plugin instance. Options: Plugin: plugin
metadata	PluginMetadata object	Metadata of the plugin instance.

Parameter	Type	Description
spec	PluginSpec object	Plugin instance details.
status	PluginStatus object	Plugin instance status.

Table 17-16 PluginMetadata

Parameter	Type	Description
name	String	Name of the plugin instance.
creationtimestamp	String	Creation time.

Table 17-17 PluginSpec

Parameter	Type	Description
template	Template object	Definition: Template information. Constraints: N/A

Table 17-18 Template

Parameter	Type	Description
name	String	Name of the plugin template to be installed, for example, log-agent .
version	String	Version of the plugin to be installed or upgraded.
inputs	Map<String, Object>	Plugin template installation parameters (varying depending on the plugin). During the plugin upgrade, you need to specify all the installation parameters. If the parameters are not specified, the default values in the plugin template are used. The current plugin installation parameters can be obtained through the API for querying plugin instances.

Table 17-19 PluginStatus

Parameter	Type	Description
phase	String	Plugin instance status. Options: • Pending: The plugin is being installed. • Running: All of the plugin instances are running. This specifies that the plugin runs properly. • Updating: The plugin is being updated. • Abnormal: The plugin instances are abnormal and the plugin cannot be used. You can click the status to view the failure cause. • Deleting: The plugin is being deleted.
version	String	Version of the plugin instances.
reason	String	Details about the plugin instance installation failure.
values	String	Installation parameters of the plugin instances. The parameters vary depending on the plugin.
resources	Array of PluginResources objects	Resources used by the plugin instances.

Table 17-20 PluginResources

Parameter	Type	Description
involvedobject	ObjectReference object	Resource objects referenced by the plugin.
replicas	Integer	Number of replicas of the resource object.
limits	Map<String,String>	Limit on requested resources.
requests	Map<String,String>	Requested resources.

Table 17-21 ObjectReference

Parameter	Type	Description
kind	String	API type of the resource object, for example, DaemonSet and Deployment .
apiVersion	String	Definition: API version of the resource object. Range: N/A
namespace	String	Namespace of the resource object.
name	String	Name of the resource object.
uid	String	Unique ID of the resource object.
resourceversion	String	Current version of the resource object.

Example Requests

Query plugin instances.

GET https://{endpoint}/v2/{project_id}/pools/{pool_name}/plugins

```
{
  "kind" : "PluginList",
  "apiVersion" : "v2",
  "items" : [ {
    "kind" : "Plugin",
    "apiVersion" : "v2",
    "metadata" : {
      "name" : "lite-cluster-ac7339d4-4858-11ec-9d-0200b0b-gpu-beta",
      "creationTimestamp" : "2025-01-22T03:01:53Z"
    },
    "spec" : {
      "template" : {
        "name" : "gpu-beta"
      }
    },
    "status" : {
      "phase" : "Running",
      "version" : "1.2.15",
      "reason" : "Upgrade complete"
    }
  }, {
    "kind" : "Plugin",
    "apiVersion" : "v2",
    "metadata" : {
      "name" : "lite-cluster-ac7339d4-4858-11ec-a79d-0255ac100b0b-os-node-agent",
      "creationTimestamp" : "2025-01-22T03:01:53Z"
    },
    "spec" : {
      "template" : {
        "name" : "os-node-agent",
        "version" : "6.8.0-20250219120620",
        "inputs" : {
          "configs" : {
            "metric_config" : {
              "backNodeUp" : true,
              "enable" : true,
              "exporter" : {
```



```
        "enable" : false,
        "port" : "10120"
      },
      "namespaces" : [ "monitoring" ],
      "prometheus" : {
        "accessCode" : "",
        "prometheusId" : ""
      },
      "uplink" : "both"
    }
  }
},
"status" : {
  "phase" : "Running",
  "version" : "6.8.0-20250219120620",
  "reason" : "Upgrade complete"
}
}]
}
```

Example Responses

Status code: 200

Request succeeded.

```
{
  "kind" : "PluginList",
  "apiVersion" : "v2",
  "items" : [ {
    "kind" : "Plugin",
    "apiVersion" : "v2",
    "metadata" : {
      "name" : "lite-cluster-ac7339d4-4858-11ec-9d-0200b0b-gpu-beta",
      "creationtimestamp" : "2025-01-22T03:01:53Z"
    },
    "spec" : {
      "template" : {
        "name" : "gpu-beta"
      }
    },
    "status" : {
      "phase" : "Running",
      "version" : "1.2.15",
      "reason" : "Upgrade complete"
    }
  }, {
    "kind" : "Plugin",
    "apiVersion" : "v2",
    "metadata" : {
      "name" : "lite-cluster-ac7339d4-4858-11ec-a79d-0255ac100b0b-os-node-agent",
      "creationtimestamp" : "2025-01-22T03:01:53Z"
    },
    "spec" : {
      "template" : {
        "name" : "os-node-agent",
        "version" : "6.8.0-20250219120620",
        "inputs" : {
          "configs" : {
            "metric_config" : {
              "backNodeUp" : true,
              "enable" : true,
              "exporter" : {
                "enable" : false,
                "port" : "10120"
              }
            }
          }
        },
        "namespaces" : [ "monitoring" ],
```

```
    "prometheus" : {  
      "accessCode" : "",  
      "prometheusId" : ""  
    },  
    "uplink" : "both"  
  }  
}  
},  
"status" : {  
  "phase" : "Running",  
  "version" : "6.8.0-20250219120620",  
  "reason" : "Upgrade complete"  
}  
}]  
}
```

Status Codes

Status Code	Description
200	Request succeeded.

Error Codes

See [Error Codes](#).

18 Task Management

18.1 Querying Tasks

Function

This API is used to obtain the jobs of the current user.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/jobs

Table 18-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 18-2 Query Parameters

Parameter	Mandatory	Type	Description
type	No	String	Task type. Options: • replace-node: faulty node replacement task • reboot-node: node restart task • reset-nodes: node reset task
limit	No	Integer	Maximum number of records on each page. If this parameter is left blank, 100 records are returned by default. A maximum of 500 records are allowed on each page.
offset	No	Integer	Offset of the pagination query. This parameter is left blank when the first page is queried.
since	No	Long	Start time of the query, in milliseconds. By default, the query starts from 30 days ago.
until	No	Long	End time of the query, in milliseconds. The current time is used by default.
resource	No	String	Type of the resource associated with the job. Options: • pools: resource pool
name	No	String	Name of the associated resource. This parameter is used together with resource .

Request Parameters

None

Response Parameters

Status code: 200

Table 18-3 Response body parameters

Parameter	Type	Description
count	Integer	Total number of results.
items	Array of PoolJob objects	Job list.

Table 18-4 PoolJob

Parameter	Type	Description
startTimestamp	Long	Time when a job starts to be processed, in milliseconds.
endTimestamp	Long	Job end time, in milliseconds.
jobId	String	Task ID.
jobName	String	Task name.
involvedObjects	String	Resources associated with a job, for example, resource pool description.
inputs	String	Job input parameters.
phase	String	Job status. Options: • Running: The job is running. • Success: The task has been executed. • Failed: The task failed to be executed.
suspend	Boolean	Indicates whether the job is suspended.
type	String	Job type.
conditions	String	Job execution process information.
message	String	Execution information returned when a job fails to be executed.

Status code: 400**Table 18-5** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range : N/A

Parameter	Type	Description
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Query the node restart task list.

```
GET https://{endpoint}/v2/{project_id}/jobs?type=reboot-node
{ }
```

Example Responses

Status code: 200

Job list response body.

```
{
  "count" : 22,
  "items" : [ {
    "startTimestamp" : 1757935854000,
    "endTimestamp" : 1757935891000,
    "jobId" : "8777d6bc-fee5-4c47-b46d-884189898ecb",
    "jobName" : "reboot-node-pool-b15e-6f5da086876d4cd084d36f8bd3346036-tbl97",
    "inputs" : "[{"name":"PoolName","value":"pool-b15e-6f5da086876d4cd084d36f8bd3346036"}]",
    {"name":"NodeName","value":"os-node-created-4n6s7"}]",
    "involvedObjects" : [{"kind":"Pool","name":"pool-b15e-6f5da086876d4cd084d36f8bd3346036","uid":"df88e877-08fa-44ab-9f0c-2926c4814ea2","apiVersion":"os.modelarts.huaweicloud/v1","resourceVersion":"1804287231"}]",
    "type" : "reboot-node",
    "phase" : "Success",
    "conditions" : [{"type":"Complete","status":"True","lastTransitionTime":"2025-09-15T11:31:31Z","reason":"Success","message":"reboot progress: total: 1, completd: 1, rebooting: 0, failed: 0"}]
  }, {
    "startTimestamp" : 1757934802000,
    "endTimestamp" : 1757934803000,
    "jobId" : "52cf3c70-4e3a-4a28-8e03-3ce075482a0c",
    "jobName" : "reboot-node-pool-b15e-6f5da086876d4cd084d36f8bd3346036-mn4vh",
    "inputs" : "[{"name":"PoolName","value":"pool-b15e-6f5da086876d4cd084d36f8bd3346036"}]",
    {"name":"NodeName","value":"os-node-created-62g8b"}]",
    "involvedObjects" : [{"kind":"Pool","name":"pool-b15e-6f5da086876d4cd084d36f8bd3346036","uid":"df88e877-08fa-44ab-9f0c-2926c4814ea2","apiVersion":"os.modelarts.huaweicloud/v1","resourceVersion":"1804282251"}]",
    "type" : "reboot-node",
    "phase" : "Failed",
    "conditions" : [{"type":"Complete","status":"False","lastTransitionTime":"2025-09-15T11:13:22Z","reason":"Failed","message":"reboot progress: total: 1, completd: 0, rebooting: 0, failed: 1, failedNodes[os-node-created-62g8b: duration must between 900 seconds(15 minutes) and 43200 seconds(12 hours)]"}],
    "message" : "os-node-created-62g8b: duration must between 900 seconds(15 minutes) and 43200 seconds(12 hours)"
  } ]
}
```

Status Codes

Status Code	Description
200	Job list response body.
400	Error response

Error Codes

See [Error Codes](#).

19 Node configuration template

19.1 Obtaining a Node Configuration Template

Function

This API is used to obtain details about a node configuration template. This API is used when you need to view a node configuration template, manage node configurations, or perform related operations. Before using this API, ensure that the node configuration template exists and you have the required permission. After this API is called, the system returns the details of the specified node configuration template, including the template name, version, configuration parameters, and description. If the node configuration template does not exist or you do not have the access permission, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/nodeconfigtemplates/{nodeconfigtemplate_name}

Table 19-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
nodeconfigtemplate_name	Yes	String	Definition: Name of the node configuration template. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 19-2 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: v1
kind	String	Definition: Resource type. Range: NodeConfigTemplate: node configuration template
metadata	NodeConfigTemplateMeta object	Definition: Metadata of the node configuration template.
spec	NodeConfigTemplateSpec object	Definition: Specifications of the node configuration template.

Table 19-3 NodeConfigTemplateMeta

Parameter	Type	Description
name	String	Definition: Name of the node configuration template. Range: N/A

Table 19-4 NodeConfigTemplateSpec

Parameter	Type	Description
dockerBaseSize	Integer	Definition: Available disk space of a single container on a resource pool node, in GB. Range: N/A
dockerLvmConfig	DockerLvmConfig object	Definition: Docker data disk configuration of a resource pool node.

Table 19-5 DockerLvmConfig

Parameter	Type	Description
dockerThinPool	Integer	Definition: Percentage of Docker disks to data disks on nodes in a resource pool. For example, if the Docker disks take 20% of the data disks, the value of this parameter is 20 . Range: N/A
kubernetesLV	Integer	Definition: Percentage of Kubernetes disks to data disks on nodes in a resource pool. For example, if the Docker disks take 20% of the data disks, the value of this parameter is 20 . Range: N/A
dockerDiskType	String	Definition: Disk type. Range: • evs: EVS disks • ssd: local SSDs
lvType	String	Definition: LVM write mode. Range: • striped: striped mode in which multiple disks are used to form a strip to improve disk performance • linear: linear mode

Status code: 404

Table 19-6 Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

None

Example Responses

Status code: 200

OK.

```
{
  "kind" : "NodeConfigTemplate",
  "apiVersion" : "v1",
  "metadata" : {
    "name" : "base.template"
  },
  "spec" : {
    "dockerBaseSize" : 50,
    "dockerLvmConfig" : {
      "dockerThinPool" : 90,
      "kubernetesLV" : 10,
      "dockerDiskType" : "evs"
    }
  }
}
```

Status code: 404

Not found.

```
{
  "error_code" : "ModelArts.50005101",
  "error_msg" : "Nodeconfigtemplate {name} not found"
}
```

Status Codes

Status Code	Description
200	OK.
404	Not found.

Error Codes

See [Error Codes](#).

20 Resource Pool Management

20.1 Obtaining Custom Node Configurations of a Resource Pool

Function

This API is used to obtain custom node configurations of a resource pool.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/pools/{pool_name}/node-config

Table 20-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Constraints: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 20-2 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: The value is fixed at v2 . Range: N/A
kind	String	The value is fixed at NodeConfig .
metadata	NodeconfigMeta object	Definition: Metadata of a resource pool node.
spec	NodeconfigSpec object	Definition: Specifications of a resource pool node.
status	NodeconfigStatus object	Definition: Status of a resource pool node.

Table 20-3 NodeconfigMeta

Parameter	Type	Description
name	String	The value is fixed at node-config .

Table 20-4 NodeconfigSpec

Parameter	Type	Description
configs	Object	Custom node configurations, including binding cores to nodes, enabling cache clearing, and enabling transparent huge pages currently. "configs": { "cpu_manager": { "mode": "static/none" // static indicates to enable core binding, and none indicates to disable core binding. }, "drop_cache": { "mode": "enable/disable" // enable indicates to enable cache clearing. }, "transparent_hugepage": { "mode": "always/madvise/never" // always indicates to enable transparent huge pages, never indicates to disable transparent huge pages, and madvice indicates that the system determines whether to enable this function. } }

Table 20-5 NodeconfigStatus

Parameter	Type	Description
phase	String	Plugin instance status. Options: • Pending: The plugin is being installed. • Running: All of the plugin instances are running. This specifies that the plugin runs properly. • Updating: The plugin is being updated. • Abnormal: The plugin instances are abnormal and the plugin cannot be used. You can click the status to view the failure cause. • Deleting: The plugin is being deleted.

Status code: 400**Table 20-6** Response header parameters

Parameter	Type	Description
X-request-id	String	This field is the request ID number for task tracking. Format is request_uuid-timestamp-hostname.

Table 20-7 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

None

Example Responses

None

Status Codes

Status Code	Description
200	Range: N/A
400	Error response

Error CodesSee [Error Codes](#).

21 Node Management

21.1 Locking Node Functions in Batches

Function

This API is used to lock node functions in batches. The locked functions cannot be used on the console. This API is used when you need to temporarily disable functions of some nodes to prevent misoperations, or perform system maintenance or tests. You can use this API to lock node functions in batches. Before using this API, ensure that the node function exists and you have the administrator permissions. After the lock operation is complete, the functions of the specified node are disabled on the console, and related operations cannot be performed. If the node function does not exist, you do not have the permission to perform the operation, or the request parameters are invalid, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/pools/{pool_name}/nodes/batch-lock

Table 21-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool ID. The value is the metadata.name field in the resource pool details. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 21-2 Request body parameters

Parameter	Mandatory	Type	Description
nodeNames	Yes	Array of strings	Definition: Names of nodes whose lock status needs to be changed. Constraints: N/A
actions	Yes	Array of strings	Definition: Function type to be changed. Constraints: N/A

Response Parameters

Status code: 200

Table 21-3 Response body parameters

Parameter	Type	Description
nodes	Array of NodesResultMsg objects	Definition: IDs and statuses of resource pool nodes that are operated in batches. Range: N/A

Table 21-4 NodesResultMsg

Parameter	Type	Description
name	String	<i>Definition*</i> : ID of the unlocked resource pool node. The value is the same as that of metadata.name in the node details. Range: N/A
status	String	Definition: Batch operation result of resource pool nodes. Range: • failed: The operation failed. • success: The operation succeeded.

Status code: 404**Table 21-5** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Lock node functions in batches.

```
POST /v2/{project_id}/pools/{pool_name}/nodes/batch-lock
```

```
{
  "nodeNames" : [ "os-node-created-xzz78" ],
  "actions" : [ "delete" ]
}
```

Example Responses

Status code: 200

OK

```
{
  "nodes" : [ {
    "name" : "os-node-created-xzz78",
    "status" : "success"
  } ]
}
```

Status code: 404

Not found

```
{
  "error_code" : "ModelArts.50015001",
  "error_msg" : "pool not found"
}
```

Status Codes

Status Code	Description
200	OK
404	Not found

Error Codes

See [Error Codes](#).

21.2 Unlocking Node Functions in Batches

Function

This API is used to unlock functions of a specified node in batches. After the unlocking, the functions become available on the console. This API is used when you need to unlock the locked functions in batches after the system maintenance or test. Before using this API, ensure that the node function has been locked and the user has the administrator permission. After the unlocking, the functions of the specified node become available on the console, and the user can use the functions. If the node function is not locked, the user does not have the permission to perform the operation, or the request parameters are invalid, the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/pools/{pool_name}/nodes/batch-unlock

Table 21-6 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool ID. The value is the metadata.name field in the resource pool details. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 21-7 Request body parameters

Parameter	Mandatory	Type	Description
nodeNames	Yes	Array of strings	Definition: Names of nodes whose lock status needs to be changed. Constraints: N/A
actions	Yes	Array of strings	Definition: Function type to be changed. Constraints: N/A

Response Parameters

Status code: 200

Table 21-8 Response body parameters

Parameter	Type	Description
nodes	Array of NodesResultMsg objects	Definition: IDs and statuses of resource pool nodes that are operated in batches. Range: N/A

Table 21-9 NodesResultMsg

Parameter	Type	Description
name	String	<i>Definition*</i> : ID of the unlocked resource pool node. The value is the same as that of metadata.name in the node details. Range: N/A
status	String	Definition: Batch operation result of resource pool nodes. Range: • failed: The operation failed. • success: The operation succeeded.

Status code: 404**Table 21-10** Response body parameters

Parameter	Type	Description
error_code	String	• Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Unlock node functions in batches.

```
POST /v2/{project_id}/pools/{pool_name}/nodes/batch-unlock
```

```
{
  "nodeNames" : [ "os-node-created-xzz78" ],
  "actions" : [ "delete" ]
}
```

Example Responses

Status code: 200

OK

```
{
  "nodes" : [ {
    "name" : "os-node-created-xzz78",
    "status" : "success"
  } ]
}
```

Status code: 404

Not found

```
{
  "error_code" : "ModelArts.50015001",
  "error_msg" : "pool not found"
}
```

Status Codes

Status Code	Description
200	OK
404	Not found

Error Codes

See [Error Codes](#).

21.3 Resetting Nodes

Function

This API is used to reset a node to the initial state and clear data and configurations on the node. This API is used when you need to reset a node to the factory or initial state when the node is faulty, the configuration is incorrect, the node needs to be redeployed, or the system needs to be restored. Before using this API, ensure that the node exists and the user has the administrator permission. After the reset, all data and configurations on the node are cleared, and the node is restarted and restored to the initial state. If the node does not exist, you do not have the permission to perform operations on the node, or the node cannot be reset (for example, a task is running), the API will return an error message.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/pools/{pool_name}/nodes/batch-reset

Table 21-11 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool ID. The value is the metadata.name field in the resource pool details. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 21-12 Request body parameters

Parameter	Mandatory	Type	Description
nodeNames	Yes	Array of strings	Definition: List of names of nodes to be reset. Constraints: N/A
rollingConfig	Yes	rollingConfig object	Definition: Node reset is a rolling configuration. Constraints: N/A
nodeConfig	Yes	Object	Definition: Node configuration parameters. Constraints: N/A

Table 21-13 rollingConfig

Parameter	Mandatory	Type	Description
strategy	Yes	String	Definition: Rolling policy. Constraints: N/A Range: • RollingByNumber: Indicates the number of nodes that can be reset at the same time. For example, if this parameter is set to 10, a maximum of 10 nodes can be reset at a time. • RollingByPercent: Indicates the maximum percentage of nodes that can be reset at the same time. For example, if this parameter is set to 10, a maximum of 10/ %nodes can be reset at a time. Default Value: N/A
maxUnavailable	Yes	Integer	Definition: Number or percentage of nodes to be reset in rolling mode. If strategy is set to RollingByNumber , this parameter indicates the number of nodes that can be reset at the same time. If strategy is set to RollingByPercent , this parameter indicates the maximum percentage of nodes that can be reset at the same time. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 21-14 Response body parameters

Parameter	Type	Description
job_id	String	Definition: ID of an asynchronous task. Range: N/A

Status code: 404**Table 21-15** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
POST /v2/{project_id}/pools/{pool_name}/nodes/batch-reset
{
  "nodeNames" : [ "os-node-created-lv29s" ],
  "rollingConfig" : {
    "strategy" : "RollingByPercent",
    "maxUnavailable" : 25
  },
  "nodeConfig" : {
    "imageId" : "3f2ee6e8-b19b-4683-8c9d-c10b197d51d6",
    "imageType" : "private"
  }
}
```

Example Responses

Status code: 200

OK

```
{
  "job_id" : "f234a869-f8ee-4b51-8255-3cbede368aba"
}
```

Status code: 404

Not found

```
{
  "error_code" : "ModelArts.50015001",
  "error_msg" : "pool not found"
}
```

Status Codes

Status Code	Description
200	OK
404	Not found

Error Codes

See [Error Codes](#).

21.4 Changing the Node Specifications

Function

This API is used to adjust the specifications (such as step) of a specified node. For example, you can expand the node from 8-node supernode to 16-node supernode. This API is used when you need to adjust the resource capacity of a node, optimize resource utilization, or upgrade the system based on service requirements. Before using this API, ensure that the node has been created and can be modified, the target specifications are supported, and the user has the administrator permissions. After the specifications are changed, the resource capacity of the node is adjusted as required, and related services and configurations are reloaded to adapt to the new specifications. If the node does not exist, the node cannot be modified, the target specifications are not supported, or the user does not have the permission to perform the operation, an error message will be returned.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/pools/{pool_name}/nodes/batch-resize

Table 21-16 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A
pool_name	Yes	String	Definition: Resource pool ID. The value is the metadata.name field in the resource pool details. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

Table 21-17 Request body parameters

Parameter	Mandatory	Type	Description
nodes	Yes	Array of ResizeNodeInfo objects	Definition: Information about the batch of supernodes to be scaled. Constraints: A maximum of 50 supernodes can be scaled at a time.
source	Yes	NodeResizeParams object	Definition: Source node pool and specifications information of the supernode to be changed. Constraints: N/A
target	Yes	NodeResizeParams object	Definition: Target node pool and specifications information of the supernode to be changed. Constraints: N/A

Table 21-18 ResizeNodeInfo

Parameter	Mandatory	Type	Description
batchUID	No	String	Definition: Node batch ID, which is required for batch change and can be obtained from the os.modelarts.node/batch.uid tag of the node. Constraints: N/A Range: N/A Default Value: N/A
deleteNodeNames	No	Array of strings	Definition: List of nodes to be scaled in a batch scale-in scenario. Constraints: N/A

Table 21-19 NodeResizeParams

Parameter	Mandatory	Type	Description
nodePool	No	String	Definition: Node pool. Constraints: N/A Range: N/A Default Value: N/A
flavor	No	String	Definition: Flavor. Constraints: N/A Range: N/A Default Value: N/A
creatingStep	No	Object	Definition: Step. Constraints: N/A

Response Parameters

Status code: 200

OK

Status code: 404

Table 21-20 Response body parameters

Parameter	Type	Description
error_code	String	● Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Increasing the number of nodes from 8 to 10 in a supernode batch **e7d2ad87-f082-445e-ade0-e493147a1570**

```
/v2/{project_id}/pools/{pool_name}/nodes/scale-hyperinstance-batch
```

```
{
  "nodes": [ {
    "batchUID": "e7d2ad87-f082-445e-ade0-e493147a1570"
  } ],
  "source": {
    "nodePool": "np01",
    "flavor": "modelarts.bm.npu.arm.snt9c",
    "creatingStep": {
      "type": "hyperinstance",
      "step": 8
    }
  },
  "target": {
    "nodePool": "np02",
    "flavor": "modelarts.bm.npu.arm.snt9c",
    "creatingStep": {
      "type": "hyperinstance",
      "step": 10
    }
  }
}
```

Example Responses

Status code: 200

OK

```
{ }
```

Status code: 404

Not found

```
{
  "error_code": "ModelArts.50015001",
  "error_msg": "pool not found"
}
```

Status Codes

Status Code	Description
200	OK
404	Not found

Error Codes

See [Error Codes](#).

21.5 Migrating Nodes in Batches

Function

This API is used to migrate nodes in batches between clusters in a resource pool. If a resource pool has only one node, the migration is not supported.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/pools/{pool_name}/nodes/batch-migrate

Table 21-21 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Resource pool name. The value is the same as the metadata.name value of the resource pool.

Request Parameters

Table 21-22 Request body parameters

Parameter	Mandatory	Type	Description
migratenoden ames	No	Array of strings	Names of the nodes to be migrated.
fromclusterna me	No	String	Name of the source cluster.
toclustername	No	String	Name of the destination cluster.
topoolname	No	String	Name of the target resource pool.
resourcespec	No	MigrateReso urceSpec object	Configurations of the node to be migrated in the target resource pool. This parameter is mandatory when a node is migrated across resource pools.

Table 21-23 MigrateResourceSpec

Parameter	Mandatory	Type	Description
flavor	Yes	String	Resource flavor name. This parameter is mandatory for cross-resource-pool migration.
creatingstep	No	CreatingStep object	Resource step information. When the entire cabinet or supernode is migrated, the step information needs to be specified.
nodepool	No	String	Name of the target node pool to which resources are migrated.
rootvolume	No	RootVolume object	System disk information of the target node pool. This parameter is valid only when a node pool is created.
datavolumes	No	Array of DataVolume tem objects	Data disk information of the target node pool. This parameter is valid only when a node pool is created.

Parameter	Mandatory	Type	Description
volumeGroupConfigs	No	Array of VolumeGroupConfig objects	Advanced disk configurations. This parameter is mandatory when a custom data disk exists. This parameter is valid when a node pool is created.
labels	No	Map<String,String>	Kubernetes label, in the format of a key-value pair. This parameter cannot be specified for a non-privileged pool. This parameter is valid when a node pool is created.
taints	No	Array of Taints objects	Taints to be added to nodes to set anti-affinity. This parameter cannot be specified for a non-privileged pool. This parameter is valid when a node pool is created.
tags	No	Array of UserTags objects	Resource tag. This parameter is valid when a node pool is created.
network	No	NodeNetwork object	Network configuration. This parameter cannot be specified for a non-privileged pool. This parameter is valid when a node pool is created.
extendParams	No	ResourceExtendParams object	Custom configuration, for example, setting dockerSize for the node. This parameter is valid when a node pool is created.

Table 21-24 CreatingStep

Parameter	Mandatory	Type	Description
step	No	Integer	Definition: Step of a supernode. Constraints: N/A Range: Only the step contained in the resource specification details is supported. Default Value: N/A

Parameter	Mandatory	Type	Description
type	No	String	Definition: Batch creation type. Constraints: N/A Range: • hyperinstance: supernode Default Value: N/A

Table 21-25 RootVolume

Parameter	Mandatory	Type	Description
volumetype	No	String	Disk type. For details, see "Disk Types and Performance". Options: • SSD: ultra-high I/O disk • GPSSD: general-purpose SSD
size	Yes	String	e Disk size, in GiB.

Table 21-26 DataVolumeItem

Parameter	Mandatory	Type	Description
volumetype	No	String	Disk type. Options: • SSD: ultra-high I/O disk • GPSSD: general-purpose SSD • SAS: high I/O disk
size	Yes	String	Disk size, in GiB.
count	No	Integer	Number of disks.
extendparams	No	VolumeExtendedParams object	Custom disk configuration.

Table 21-27 VolumeExtendParams

Parameter	Mandatory	Type	Description
volumeGroup	No	String	Name of a disk group, which is used to divide storage space. Options: • vgpaas: container disk. • default: common data disk, which is mounted in default mode. • vguser{num}: common data disk, which is mounted to a specified path. The group name varies depending on the path, for example, vguser1 and vguser2. • vg-everest-localvolume-persistent: common data disk, which is used as the persistent storage volume. • vg-everest-localvolume-ephemeral: common data disk, which is used as a temporary storage volume.

Table 21-28 VolumeGroupConfig

Parameter	Mandatory	Type	Description
volumeGroup	No	String	Disk group name. Index of the volume group in the dataVolumes.
dockerthinpool	No	Integer	Percentage of container disks to data disks on nodes in a resource pool. This parameter can be specified only when volumeGroup is vgpaas (container disk).
lvmconfig	No	LvmConfig object	LVM configuration management.

Parameter	Mandatory	Type	Description
types	No	Array of strings	Storage type. Options: • volume: cloud hard disk. When dataVolumes is specified, the default value is used. • local: local disk. This parameter must be specified when a local disk is used.

Table 21-29 LvmConfig

Parameter	Mandatory	Type	Description
lvtype	No	String	LVM write mode. Options: • linear: linear mode. • striped: striped mode in which multiple disks are used to form a strip to improve disk performance.
path	No	String	Disk mount path. This parameter takes effect only in user configuration. The value is an absolute path. Digits, letters, periods (.), hyphens (-), and underscores (_) are allowed.

Table 21-30 Taints

Parameter	Mandatory	Type	Description
key	Yes	String	Definition : Key. Range : N/A
value	No	String	Value.
effect	Yes	String	Effect.

Table 21-31 UserTags

Parameter	Mandatory	Type	Description
key	Yes	String	Definition: Key. The value cannot start with CCE- or __type_baremetal . Range: N/A
value	Yes	String	Value.

Table 21-32 NodeNetwork

Parameter	Mandatory	Type	Description
vpc	No	String	Definition: VPC ID. Constraints: N/A Range: N/A Default Value: N/A
subnet	No	String	Definition: Subnet ID. Constraints: N/A Range: N/A Default Value: N/A
securityGroups	No	Array of strings	Definition: Security group ID set. Constraints: N/A

Table 21-33 ResourceExtendParams

Parameter	Mandatory	Type	Description
dockerbasesize	No	String	Size of the container image space on a node.
postinstall	No	String	Post-installation script. The entered value must be encoded using Base64.

Response Parameters

Status code: 200

Table 21-34 Response body parameters

Parameter	Type	Description
kind	String	Definition: Type of a training job. Range • job: common job • federated_pool_job: resource pool federated job • edge_job: edge job • hetero_job: heterogeneous job • mrs_job: MRS job • autosearch_job: auto search job • diag_job: diagnosis job • visualization_job: visualization job
metadata	JobMetadataResponse object	Definition: Training job metadata.
status	Status object	Definition: Training job status information.
algorithm	JobAlgorithmResponse object	Definition: Training job algorithm.
tasks	Array of TaskResponse objects	Definition: Heterogeneous training tasks.
spec	SpecResponse object	Definition: Training job specifications.
endpoints	JobEndpointsResponse object	Definition: Configurations required for remotely accessing a training job.

Table 21-35 JobMetadataResponse

Parameter	Type	Description
id	String	Definition: Training job ID, which is generated and returned by ModelArts after a training job is created. Range: N/A
name	String	Definition: Name of a training job. Range: The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-).

Parameter	Type	Description
workspace_id	String	Definition: Workspace where a specified job is located. Range: N/A
description	String	Definition: Definition of a training job. Range: N/A
create_time	Long	Definition: Time when a training job was created, in milliseconds. The value is generated and returned by ModelArts after a training job is created. Range: N/A
user_name	String	Definition: Username for creating a training job. The username is generated and returned by ModelArts after a training job is created. Range: N/A
annotations	Map<String,String>	Definition: Advanced functions of a training job.

Table 21-36 Status

Parameter	Type	Description
phase	String	Definition: Level-1 status of a training job. Range: • Creating: The job is being created. • Pending: The job is pending. • Running: The job is running. • Failed: The job failed to run. • Completed: The job is complete. • Terminating: The job is being stopped. • Terminated: The job has been stopped. • Abnormal: The job is abnormal.

Parameter	Type	Description
secondary_phase	String	Definition: Level-2 status of a training job. The values are internal detailed statuses and may be added, changed, or deleted. Dependency on the status is not recommended. Range: • Creating: The job is being created. • Queuing: The job is queuing. • Running: The job is running. • Failed: The job failed to run. • Completed: The job is complete. • Terminating: The job is being stopped. • Terminated: The job has been stopped. • CreateFailed: The job fails to be created. • TerminatedFailed: The job fails to be stopped. • Unknown: The job is in an unknown state. • Lost: The job is abnormal.
duration	Long	Definition: Running duration of a training job, in ms. Range: N/A
node_count_metrics	Array<Array<Integer>>	Definition: Node quantity change metric during a training job runtime.
tasks	Array of strings	Definition: Training job subtask name.
start_time	Long	Definition: Timestamp when a training job is started. Range: N/A
task_statuses	Array of TaskStatuses objects	Definition: Status of the first failed subtask of a training job.
running_records	Array of RunningRecord objects	Definition: Running and fault recovery records of a training job.

Table 21-37 TaskStatuses

Parameter	Type	Description
task	String	Definition: Training job subtask name. Range: N/A
exit_code	Integer	Definition: Exit code of a training job subtask. Range: N/A
message	String	Definition: Error message of a training job subtask. Range: N/A

Table 21-38 RunningRecord

Parameter	Type	Description
start_at	Integer	Definition: Unix timestamp of the start time in the current running record, in seconds. Range: N/A
end_at	Integer	Definition: Unix timestamp of the end time in the current running record, in seconds. Range: N/A
xpu_start_at	Integer	Definition: Unix timestamp of the accelerator card startup time in the current running record, in seconds. Range: N/A
start_type	String	Definition: Startup mode of the current execution. Range • init_or_rescheduled: This startup is the first running after scheduling, including the first startup and the running after scheduling recovery. • restarted: This startup is not the first running after scheduling but the running after a process restart.
end_reason	String	Definition: Reason why the running ends. Range: N/A

Parameter	Type	Description
end_related_task	String	Definition: ID of the task worker (for example, worker-0) that ends the running. Range: N/A
end_recover	String	Definition: Fault tolerance policy adopted when the execution ends abnormally. Range • npu_proc_restart: NPU in-place hot recovery • proc_restart: in-place process recovery • npu_step_retry: step recomputation • pod_reschedule: pod-level rescheduling • job_reschedule: job-level rescheduling • job_reschedule_with_taint: isolated job-level rescheduling
end_recover_before_downgrade	String	Definition: There is a downgrade relationship between policies. If a policy fails to be executed, it will be downgraded to another specified policy. end_recover_before_downgrade indicates the tolerance policy used before end_recover is downgraded. Range: same as that of end_recover .
recover_records	Array of RecoverRecord objects	Definition: details about all fault tolerance policies adopted when the execution ends abnormally.

Table 21-39 RecoverRecord

Parameter	Type	Description
recover_start_at	Integer	Unix timestamp of the start time of the fault tolerance policy, in seconds. The timestamp is also the fault occurrence time.
recover_end_at	Integer	Unix timestamp of the end time of the fault tolerance policy, in seconds.

Parameter	Type	Description
recover	String	Fault tolerance policy. Options: • npu_step_retry: step recomputation • npu_proc_restart: NPU in-place hot recovery • proc_restart: in-place process recovery • pod_reschedule: pod-level rescheduling • job_reschedule: job-level rescheduling • job_reschedule_with_taint: isolated job-level rescheduling
fault_scenario	String	Fault scenario. Options: • chip_fault: chip fault • node_fault: node fault • job_failed: job exit upon a failure • job_hanged: job suspension • job_subhealth: job subhealth • error_in_log: log exception
reason	String	Cause of the fault.
related_task	String	ID of the task worker that causes the end of the current running record, for example, worker-0 .
recover_result	String	Execution result of the fault. Options: • recovering: executing • success: successful • failed: failed • downgrade: policy downgrade

Table 21-40 JobAlgorithmResponse

Parameter	Type	Description
id	String	Definition: Training job algorithm. Range: • id: Only the algorithm ID is used. • subscription_id+item_version_id: The subscription ID and version ID of the algorithm are used. • code_dir+boot_file: The code directory and boot file of the training job are used.
name	String	Definition: Algorithm name. Range: N/A
subscription_id	String	Definition: Subscription ID of a subscription algorithm, which must be used with item_version_id . Range: N/A
item_version_id	String	Definition: Version of a subscription algorithm, which must be used with subscription_id . Range: N/A
code_dir	String	Definition: Code directory of a training job, for example, /usr/app/ . This parameter must be used with boot_file . Leave this parameter blank if id , or subscription_id and item_version_id are specified. Range: N/A
boot_file	String	Definition: Boot file of a training job, which must be stored in the code directory, for example, /usr/app/boot.py . This parameter must be used with code_dir . Leave this parameter blank if id , or subscription_id and item_version_id are specified. Range: N/A
autosearch_config_path	String	Definition: YAML configuration path of an auto search job. An OBS URL is required. For example, obs://bucket/file.yaml . Range: N/A

Parameter	Type	Description
autosearch_framework_path	String	Definition: Framework code directory of an auto search job. An OBS URL is required. For example, obs://bucket/files/ . Range: N/A
command	String	Definition: Boot command for starting the container of a custom image for a training job. For example, python train.py . Range: N/A
parameters	Array of ParameterResp objects	Definition: Running parameters of the training job.
policies	policies object	Definition: Policy supported by a job.
inputs	Array of InputResp objects	Definition: Data input of a training job.
outputs	Array of OutputResp objects	Definition: Output of the training job.
engine	JobEngineResp object	Definition: Engine of a training job. Leave this parameter blank if the job is created using id of the algorithm in algorithm management, or subscription_id+item_version_id of the subscribed algorithm.
local_code_dir	String	Definition: Local directory of the training container to which the algorithm code directory is downloaded. The rules are as follows: • The directory must be under /home. • In v1 compatibility mode, the current field does not take effect. • When code_dir is prefixed with file://, the current field does not take effect. Range: N/A
working_dir	String	Definition: Work directory where an algorithm is executed. Rules: In v1 compatibility mode, this parameter does not take effect. Range: N/A

Parameter	Type	Description
environments	Array of Map<String,String> objects	Definition: Environment variables of a training job. The format is key:value . Leave this parameter blank.
summary	SummaryResp object	Definition: Visualization log summary.

Table 21-41 ParameterResp

Parameter	Type	Description
name	String	Definition: Parameter name. Range: N/A
value	String	Definition: Parameter value. Range: N/A
description	String	Definition: Parameter description. Range: N/A
constraint	constraint object	Definition: Parameter attribute.
i18n_description	i18n_description object	Definition: Internationalization description.

Table 21-42 constraint

Parameter	Type	Description
type	String	Definition: Parameter type. Range: N/A
editable	Boolean	Definition: Whether the parameter can be edited. Range: true: editable false: Not uneditable
required	Boolean	Definition: Whether the parameter is mandatory. Range: true: mandatory false: optional

Parameter	Type	Description
sensitive	Boolean	Definition: Whether the parameter is sensitive. This function is unavailable currently. Range: • true: sensitive • false: insensitive
valid_type	String	Definition: Valid type. Range: N/A
valid_range	Array of strings	Definition: Valid range.

Table 21-43 i18n_description

Parameter	Type	Description
language	String	Definition: Internationalization language. The options are as follows: • zh-cn: Chinese • en-us: English](tag:hc,hk) Range: N/A
description	String	Definition: Internationalization language description. Range: N/A

Table 21-44 policies

Parameter	Type	Description
auto_search	auto_search object	Definition: Hyperparameter search configuration.

Table 21-45 auto_search

Parameter	Type	Description
skip_search_params	String	Definition: Hyperparameter parameters that need to be skipped. Range: N/A
reward_attrs	Array of reward_attrs objects	Definition: Search metrics.

Parameter	Type	Description
search_params	Array of search_params objects	Definition: Search parameters.
algo_configs	Array of algo_configs objects	Definition: Search algorithm configurations.

Table 21-46 reward_attrs

Parameter	Type	Description
name	String	Definition: Metric name. Range: N/A
mode	String	Definition: Search mode. Range: • max: A larger metric value is preferred. • min: A smaller metric value is preferred.
regex	String	Definition: Regular expression of a metric. Range: N/A

Table 21-47 search_params

Parameter	Type	Description
name	String	Definition: Hyperparameter name. Range: N/A

Parameter	Type	Description
param_type	String	Definition: Parameter type. Range: • continuous: The hyperparameter is of the continuous type. When an algorithm is used in a training job, continuous hyperparameters are displayed as text boxes on the console. • discrete: The hyperparameter is of the discrete type. When an algorithm is used in a training job, discrete hyperparameters are displayed as drop-down lists on the console.
lower_bound	String	Definition: Lower bound of the hyperparameter. Range: N/A
upper_bound	String	Definition: Upper bound of the hyperparameter. Range: N/A
discrete_points_num	String	Definition: Number of discrete points of a hyperparameter with continuous values. Range: N/A
discrete_values	Array of strings	Definition: Discrete hyperparameter values.

Table 21-48 algo_configs

Parameter	Type	Description
name	String	Definition: Search algorithm name. Range: N/A
params	Array of AutoSearchAlgoConfigParameterResp objects	Definition: Search algorithm parameters.

Table 21-49 AutoSearchAlgoConfigParameterResp

Parameter	Type	Description
key	String	Definition: Parameter key. Range: N/A
value	String	Definition: Parameter value. Range: N/A
type	String	Definition: Parameter type. Range: N/A

Table 21-50 InputResp

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
description	String	Definition: Description of the data input channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data input channels are mapped. Example: /home/ma-user/modelarts/inputs/data_url_0 Range: N/A
access_method	String	Definition: Access method of the input data channel path (local_dir). Range: • parameter: hyperparameters • env: environment variables
remote	InputDataInfoResp object	Definition: Description of the actual data input.
remote_constraint	Array of remote_constraint objects	Definition: Data input constraint.

Table 21-51 InputDataInfoResp

Parameter	Type	Description
dataset	dataset object	Definition: The input is a dataset.

Parameter	Type	Description
obs	obs object	Definition: OBS in which data input and output are stored.

Table 21-52 dataset

Parameter	Type	Description
id	String	Definition: Dataset ID of a training job. Range: N/A
version_id	String	Definition: Dataset version ID of a training job. Range: N/A
obs_url	String	Definition: OBS URL of the dataset for a training job. It is automatically parsed by ModelArts based on the dataset ID and dataset version ID. For example, /usr/data/ . Range: N/A

Table 21-53 obs

Parameter	Type	Description
obs_url	String	Definition: OBS URL of the dataset for a training job, For example, /usr/data/ . Range: N/A

Table 21-54 remote_constraint

Parameter	Type	Description
data_type	String	Definition: Data input type, including the data storage location and dataset. Constraints: N/A Range: N/A Default Value: N/A

Parameter	Type	Description
attributes	String	Definition: Related attributes. Constraints: N/A Range: If the input is a dataset: • data_format: data format • data_segmentation: data segmentation method • dataset_type: data labeling type Default Value: N/A

Table 21-55 OutputResp

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A
description	String	Definition: Description of the data output channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data output channels are mapped. Range: N/A
access_method	String	Definition: Access method of the input data channel path (local_dir). Range: • parameter: hyperparameters • env: environment variables
remote	RemoteResp object	Definition: Description of the actual data output.

Table 21-56 JobEngineResp

Parameter	Type	Description
engine_id	String	Definition: Engine ID selected for a training job. Range: N/A

Parameter	Type	Description
engine_name	String	Definition: Engine name selected for a training job. Range: N/A
engine_version	String	Definition: Engine version selected for a training job. Range: N/A
image_url	String	Definition: Custom image URL selected for a training job. The URL is obtained from SWR. Range: N/A
install_sys_packages	Boolean	Definition: Specifies whether to install the MoXing version specified by the training platform. Range: • true: yes • false: no

Table 21-57 SummaryResp

Parameter	Type	Description
log_type	String	Definition: Visualization log type of a training job. After this parameter is configured, the training job can be used as the data source of a visualization job. Range: • tensorboard: TensorBoard • mindstudio-insight: MindStudio Insight
log_dir	LogDirResp object	Definition: Visualization log output of a training job.
data_sources	Array of DataSourceResp objects	Definition: Visualization log input of the visualization job or training job debugging mode.

Table 21-58 LogDirResp

Parameter	Type	Description
pfs	PFSSummaryResp object	Definition: Output of an OBS parallel file system.

Table 21-59 PFSSummaryResp

Parameter	Type	Description
pfs_path	String	Definition: URL of the OBS parallel file system. Range: N/A

Table 21-60 DataSourceResp

Parameter	Type	Description
job	JobSummaryResp object	Definition: Job data source.

Table 21-61 JobSummaryResp

Parameter	Type	Description
job_id	String	Definition: ID of a training job. Range: N/A

Table 21-62 TaskResponse

Parameter	Type	Description
role	String	Definition: Task role. This function is not supported currently. Range: N/A
algorithm	TaskResponseAlgorithm object	Definition: Algorithm configurations for algorithm management.
task_resource	FlavorResponse object	Definition: Specifications of a training job or algorithm.
log_export_path	log_export_path object	Definition: Saved information about training job logs.

Table 21-63 TaskResponseAlgorithm

Parameter	Type	Description
code_dir	String	Definition: Absolute path of the directory where the algorithm boot file is stored. Range: N/A
boot_file	String	Definition: Absolute path of an algorithm boot file. Range: N/A
inputs	AlgorithmInput object	Definition: Information about the algorithm input channel.
outputs	AlgorithmOutput object	Definition: Information about the algorithm output channel.
engine	AlgorithmEngine object	Definition: Engine that a heterogeneous job depends on.
local_code_dir	String	Definition: Local directory of the training container to which the algorithm code directory is downloaded. The rules are as follows: • The directory must be under / home. • In v1 compatibility mode, the current field does not take effect. • When code_dir is prefixed with file://, the current field does not take effect. Range: N/A
working_dir	String	Definition: Work directory where an algorithm is executed. Note that this parameter does not take effect in v1 compatibility mode. Range: N/A
environments	Map<String,String>	Definition: Environment variables related to a training job. Range: N/A

Table 21-64 AlgorithmInput

Parameter	Type	Description
name	String	Definition: Name of the data input channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data input and output channels are mapped. Range: N/A
remote	AlgorithmRemote object	Definition: Actual data input, which can only be OBS for heterogeneous jobs.

Table 21-65 AlgorithmRemote

Parameter	Type	Description
obs	RemoteObsResp object	Definition: OBS in which data input and output are stored.

Table 21-66 AlgorithmOutput

Parameter	Type	Description
name	String	Definition: Name of the data output channel. Range: N/A
local_dir	String	Definition: Local path of the container to which the data output channels are mapped. Range: N/A
remote	RemoteResp object	Definition: Description of the actual data output.
mode	String	Definition: Data transmission mode. The default value is upload_periodically . Range: N/A
period	String	Definition: Data transmission period. The default value is 30s . Range: N/A

Table 21-67 RemoteResp

Parameter	Type	Description
obs	RemoteObsResp object	Definition: Data actually output to OBS.

Table 21-68 RemoteObsResp

Parameter	Type	Description
obs_url	String	Definition: Path of the data output to OBS. Range: N/A

Table 21-69 AlgorithmEngine

Parameter	Type	Description
engine_id	String	Definition: Engine flavor ID, for example, caffe-1.0.0-python2.7 . Range: N/A
engine_name	String	Definition: Engine flavor name, for example, Caffe . Range: N/A
engine_version	String	Definition: Engine flavor version. Engines with the same name have multiple versions, for example, Caffe-1.0.0-python2.7 of Python 2.7. Range: N/A
v1_compatible	Boolean	Definition: Specifies whether the v1 compatibility mode is used. Range: • true: The v1 compatibility mode is used. • false: The v1 compatibility mode is not used.
run_user	String	Definition: Default UID for the engine startup. Range: N/A
image_url	String	Definition: Custom image URL selected for an algorithm. Range: N/A

Table 21-70 FlavorResponse

Parameter	Type	Description
pool_id	String	Definition: ID of the resource pool selected for a training job. Range: N/A
flavor_id	String	Definition: Resource flavor ID. Range: N/A
flavor_name	String	Definition: Resource flavor name. Range: N/A
max_num	Integer	Definition: Maximum number of nodes supported by a flavor. Range: N/A
flavor_type	String	Definition: Resource flavor type. Range: • CPU • GPU • Ascend
billing	BillingInfo object	Definition: Billing information of a resource flavor.
flavor_info	FlavorInfoResponse object	Definition: Resource flavor details.
attributes	Map<String,String>	Definition: Other flavor attributes. Range: N/A

Table 21-71 FlavorInfoResponse

Parameter	Type	Description
max_num	Integer	Definition: Maximum number of nodes that can be selected. The value 1 indicates that the distributed mode is not supported. Range: N/A
cpu	Cpu object	Definition: CPU specifications.
gpu	Gpu object	Definition: GPU specifications.
npu	Npu object	Definition: Ascend specifications.
memory	Memory object	Definition: Memory information.

Parameter	Type	Description
disk	DiskResponse object	Definition: Disk information.

Table 21-72 DiskResponse

Parameter	Type	Description
size	Integer	Definition: Disk size. Range: N/A
unit	String	Definition: Unit of the disk size. Range: N/A

Table 21-73 log_export_path

Parameter	Type	Description
obs_url	String	Definition: OBS path for storing training job logs.

Table 21-74 SpecResponse

Parameter	Type	Description
resource	Resource object	Definition: Resource flavor of a training job. Select either flavor_id or pool_id and flavor_id .
volumes	Array of JobVolumeResp objects	Definition: Mounting volume information of a training job.
log_export_path	LogExportPathResp object	Definition: Log output of a training job.
schedule_policy	SchedulePolicyResp object	Definition: Scheduling policy of a training job.
custom_metrics	Array of CustomMetrics objects	Definition: Metric collection configuration.

Table 21-75 Resource

Parameter	Type	Description
policy	String	Definition: Resource flavor mode of a training job. Range: • regular: standard mode
flavor_id	String	Definition: ID of the resource flavor of a training job. Range: The flavor_id parameter cannot be specified for a dedicated resource pool of CPU specifications. The options for dedicated resource pools with GPU/Ascend specifications are as follows: • modelarts.pool.visual.xlarge (1 PU) • modelarts.pool.visual.2xlarge (2 PUs) • modelarts.pool.visual.4xlarge (4 PUs) • modelarts.pool.visual.8xlarge (8 PUs)
flavor_name	String	Definition: Read-only flavor name returned by ModelArts when flavor_id is used. Range: N/A
node_count	Integer	Definition: Number of resource replicas selected for a training job. Range: N/A
pool_id	String	Definition: ID of the resource pool selected for a training job. Range: N/A
pool_group_id	String	Definition: ID of the resource pool federation selected for a training job. Range: N/A
flavor_detail	FlavorDetail object	Definition: Flavor details of a training job or algorithm. This parameter is available only for public resource pools.
main_container_allocated_resources	MainContainerAllocatedResources object	Definition: Resource specifications actually obtained by the training container of a training job.

Parameter	Type	Description
main_container_customized_flavor	MainContainerCustomizedFlavor object	Definition: Custom flavor of a training job. Range: The number of CPU cores and memory size must be greater than 0, and the number of accelerator PUs must be greater than or equal to 0.

Table 21-76 FlavorDetail

Parameter	Type	Description
flavor_type	String	Definition: Resource flavor type. Range: • CPU • GPU • Ascend
billing	BillingInfo object	Definition: Billing information of a resource flavor.
flavor_info	FlavorInfo object	Definition: Resource flavor details.

Table 21-77 BillingInfo

Parameter	Type	Description
code	String	Definition: Billing code. Range: N/A
unit_num	Integer	Definition: Billing unit. Range: N/A

Table 21-78 FlavorInfo

Parameter	Type	Description
max_num	Integer	Definition: Maximum number of nodes that can be selected. The value 1 indicates that the distributed mode is not supported. Range: N/A
cpu	Cpu object	Definition: CPU specifications.
gpu	Gpu object	Definition: GPU specifications.

Parameter	Type	Description
npu	Npu object	Definition: Ascend specifications.
memory	Memory object	Definition: Memory information.
disk	Disk object	Definition: Disk information.

Table 21-79 Cpu

Parameter	Type	Description
arch	String	Definition: CPU architecture. Range: N/A
core_num	Integer	Definition: Number of cores. Range: N/A

Table 21-80 Gpu

Parameter	Type	Description
unit_num	Integer	Definition: Number of GPUs. Range: N/A
product_name	String	Definition: Product name. Range: N/A
memory	String	Definition: Memory. Range: N/A

Table 21-81 Npu

Parameter	Type	Description
unit_num	String	Definition: Number of NPUs. Range: N/A
product_name	String	Definition: Product name. Range: N/A
memory	String	Definition: Memory. Range: N/A

Table 21-82 Memory

Parameter	Type	Description
size	Integer	Definition: Memory size. Range: N/A
unit	String	Definition: Number of memory units. Range: N/A

Table 21-83 Disk

Parameter	Type	Description
size	String	Definition: Disk size. Range: N/A
unit	String	Definition: Unit of the disk size. Generally, the unit is GB. Range: N/A

Table 21-84 MainContainerAllocatedResources

Parameter	Type	Description
cpu_arch	String	Definition: CPU architecture. Range: N/A
cpu_core_num	Float	Definition: Number of cores. Range: N/A
mem_size	Float	Definition: Memory information. Range: N/A
accelerator_num	Float	Definition: Number of accelerator cards. Range: N/A
accelerator_type	String	Definition: Type of accelerator cards. Range: N/A

Table 21-85 MainContainerCustomizedFlavor

Parameter	Type	Description
cpu_core_num	Float	Definition: Number of CPU cores. Range: greater than 0

Parameter	Type	Description
mem_size	Float	Definition: Memory size. Range: greater than 0
accelerator_num	Float	Definition: Number of accelerator cards. Range: greater than or equal to 0

Table 21-86 JobVolumeResp

Parameter	Type	Description
nfs	NfsResp object	Definition: Volumes attached in NFS mode.

Table 21-87 NfsResp

Parameter	Type	Description
nfs_server_path	String	Definition: NFS server path, for example, 10.10.10.10:/example/path . Range: N/A
local_path	String	Definition: Path for attaching volumes to the training container, for example, /example/path . Range: N/A
read_only	Boolean	Definition: Specifies whether the disks attached to the container in NFS mode are read-only. Range: • true: read only • false: non-read-only

Table 21-88 LogExportPathResp

Parameter	Type	Description
obs_url	String	Definition: OBS path for storing training job logs, for example, obs://example/path . Range: N/A

Parameter	Type	Description
host_path	String	Definition: Path of the host where training job logs are stored, for example, /example/path . Range: N/A

Table 21-89 SchedulePolicyResp

Parameter	Type	Description
required_affinity	RequiredAffinityResp object	Definition: Affinity requirements of a training job.
priority	Integer	Definition: Priority of a training job. Range: 0 to 3
preemptible	Boolean	Definition: Whether the resource can be preempted. Range: • true: The resource can be preempted. • false: The resource cannot be preempted.

Table 21-90 RequiredAffinityResp

Parameter	Type	Description
affinity_type	String	Definition: Affinity scheduling policy. Range: • cabinet: strong cabinet scheduling • hyperinstance: supernode affinity scheduling
affinity_group_size	Integer	Definition: Size of an affinity group. Range: N/A

Table 21-91 CustomMetrics

Parameter	Type	Description
exec	Exec object	Definition: Metrics are collected in CLI mode.

Parameter	Type	Description
http_get	HttpGet object	Definition: Metrics are collected in HTTP mode.

Table 21-92 Exec

Parameter	Type	Description
command	Array of strings	Definition: Metrics are collected in CLI mode.

Table 21-93 HttpGet

Parameter	Type	Description
path	String	Definition: URL for obtaining metrics over HTTP. Both the URL and the port below must either be configured together or remain empty. Range: N/A
port	Integer	Definition: Port for obtaining metrics over HTTP. This parameter and the URL above must be set or left blank at the same time. Range: N/A

Table 21-94 JobEndpointsResp

Parameter	Type	Description
ssh	SSHResp object	Definition: SSH connection information.
jupyter_lab	JupyterLab object	Definition: JupyterLab connection information.
tensorboard	Tensorboard object	Definition: TensorBoard connection information.
mindstudio_insight	MindStudioInsight object	Definition: MindStudio Insight connection information.

Table 21-95 SSHResp

Parameter	Type	Description
key_pair_names	Array of strings	Definition: Name of the SSH key pair, which can be created and viewed on the Key Pair page of the Elastic Cloud Server (ECS) console. Range: N/A
task_urls	Array of TaskUrls objects	Definition: SSH connection address.

Table 21-96 TaskUrls

Parameter	Type	Description
task	String	Definition: Task ID of a training job. Range: N/A
url	String	Definition: SSH connection address of a training job. Range: N/A

Table 21-97 JupyterLab

Parameter	Type	Description
url	String	Definition: JupyterLab address of a training job. Range: N/A
token	String	Definition: JupyterLab token of a training job. Range: N/A

Table 21-98 Tensorboard

Parameter	Type	Description
url	String	Definition: TensorBoard address of a training job. Range: N/A
token	String	Definition: TensorBoard token of a training job. Range: N/A

Table 21-99 MindStudioInsight

Parameter	Type	Description
url	String	Definition: MindStudio Insight address of a training job. Range: N/A
token	String	Definition: MindStudio Insight token of a training job. Range: N/A

Status code: 404**Table 21-100** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

```
POST /v2/{project_id}/pools/{pool_name}/nodes/batch-migrate
{
  "migratenodenames": [ "os-node-created-mnmcf" ]
}
```

Example Responses

Status code: 404

Not found.

```
{
  "error_code": "ModelArts.50015001",
  "error_msg": "pool not found"
}
```

Status Codes

Status Code	Description
200	Request succeeded.
404	Not found.

Error Codes

See [Error Codes](#).

21.6 Binding Nodes to a Logical Subpool in Batches

Function

This API is used to bind nodes in a logical subpool to another logical subpool when node binding is enabled for a physical dedicated pool.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v2/{project_id}/pools/{pool_name}/nodes/batch-bind

Table 21-101 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A
pool_name	Yes	String	Resource pool ID. The value is the metadata.name field in the resource pool details.

Request Parameters

Table 21-102 Request body parameters

Parameter	Mandatory	Type	Description
nodes	Yes	Array of BindNodeItem objects	List of nodes to be bound with another pool.
drain	No	Boolean	Specifies whether to drain the node to be bound with another pool. true: The node will be drained.

Table 21-103 BindNodeItem

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the node to be bound with another pool.
quotaname	No	String	ID of the logical subpool bound to the node. If the value is empty, the node is not bound to any logical subpool.

Response Parameters

Status code: 200

Request succeeded.

Status code: 404

Table 21-104 Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Bind nodes to logical subpool pool-a26d-prjid.

```
POST /v2/{project_id}/pools/{pool_name}/nodes/batch-bind
{
  "nodes": [ {
    "name": "os-node-created-8888g",
    "quotaname": "pool-a26d-prjid"
  } ]
}
```

Example Responses

Status code: 200

Request succeeded.

```
{}
```

Status code: 404

Not found.

```
{  
  "error_code" : "ModelArts.50015001",  
  "error_msg" : "pool not found"  
}
```

Status Codes

Status Code	Description
200	Request succeeded.
404	Not found.

Error Codes

See [Error Codes](#).

22 Plugin Template Management

22.1 Query Plugin Templates

Function

This API is used to obtain plugin templates.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v2/{project_id}/plugintemplates

Table 22-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 22-2 Query Parameters

Parameter	Mandatory	Type	Description
templateName	No	String	Definition: Plug-in name. If this parameter is set, the plug-in with the specified name is queried. Constraints: N/A Range: N/A Default Value: N/A
poolName	No	String	Definition: Resource pool name. If this parameter is set, the list of plug-ins that meet the resource pool's installation requirements is queried. Constraints: N/A Range: N/A Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 22-3 Response body parameters

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: v1
kind	String	API type. Options: PluginTemplateList: plugin template list
items	Array of PluginTemplateV2 objects	List of plugin templates.

Table 22-4 PluginTemplateV2

Parameter	Type	Description
apiVersion	String	Definition: API version. Range: • v2
kind	String	Resource type. Options: • PluginTemplate: plugin template
metadata	PluginTemplateMetadata object	Plugin template metadata.
spec	PluginTemplateSpecV2 object	Detailed information about the plugin template, for example, the version list.

Table 22-5 PluginTemplateMetadata

Parameter	Type	Description
name	String	Definition: Name of the plugin template. Range: N/A
annotations	Map<String,String>	Plugin template annotations in the format of key-value pairs.

Table 22-6 PluginTemplateSpecV2

Parameter	Type	Description
optional	Boolean	Controls whether the plugin is mandatory.
type	String	Plugin template type. Options: • helm: Helm type • ccePlugin: CCE type
logoURL	String	Definition: URL of the logo image. Range: N/A
description	String	Plugin template description.
versions	Array of PluginTemplateVersionV2 objects	Details about the plugin template version.

Table 22-7 PluginTemplateVersionV2

Parameter	Type	Description
version	String	Version number of the plugin template.
creationtimestamp	String	Creation time.
inputs	Object	Plugin installation parameters.
translate	Object	Translation information used by the GUI.
description	String	Version description.
detail	String	Version description.

Status code: 404**Table 22-8** Response body parameters

Parameter	Type	Description
error_code	String	Definition: ModelArts error code. Range: N/A
error_msg	String	Definition: Error message. Range: N/A

Example Requests

Query details about node-local-dns plugin templates.

```
GET /v2/{projectId}/plugintemplates?templateName=node-local-dns
```

```
{
  "kind": "PluginTemplateList",
  "apiVersion": "v2",
  "items": [ {
    "kind": "PluginTemplate",
    "apiVersion": "v2",
    "metadata": {
      "name": "node-local-dns",
      "annotations": {
        "os.modelarts.plugin/release.name": "NodeLocal DNSCache"
      }
    },
    "spec": {
      "optional": true,
      "versions": [ {
        "version": "1.6.63",
        "description": "NodeLocal DNSCache improves Cluster DNS performance by running a dns caching agent on cluster nodes as a DaemonSet.",
        "creationTimestamp": "2023-05-20T08:50:31Z",
        "inputs": {
```

```
"parameters" : {
  "custom" : {
    "annotations" : { },
    "enable_dnsconfig_admission" : true,
    "enable_namespace_admission" : true,
    "image" : {
      "args" : {
        "healthPort" : 8080,
        "interfaceName" : "nodelocaldns",
        "setupiptables" : false,
        "skipTeardown" : true,
        "skipteardown" : true,
        "syncInterval" : "1ns",
        "upstreamSvc" : "coredns"
      },
      "name" : "node-cache",
      "pullPolicy" : "Always"
    },
    "multiAZBalance" : false,
    "multiAZEnabled" : false,
    "nameserver" : "",
    "ndots" : "5",
    "node_match_expressions" : [ ],
    "search" : "",
    "tolerations" : [ {
      "effect" : "NoExecute",
      "key" : "node.kubernetes.io/not-ready",
      "operator" : "Exists",
      "tolerationSeconds" : 60
    }, {
      "effect" : "NoExecute",
      "key" : "node.kubernetes.io/unreachable",
      "operator" : "Exists",
      "tolerationSeconds" : 60
    } ],
    "zones" : [ {
      "plugins" : {
        "cache" : {
          "denial" : { },
          "parameters" : 30,
          "prefetch" : { },
          "server_stale" : false,
          "success" : { }
        },
        "debug" : false,
        "errors" : true,
        "forward" : {
          "expire" : "",
          "force_tcp" : false,
          "health_check" : "",
          "max_fails" : "",
          "parameters" : "__PILLAR_UPSTREAM_SERVERS__",
          "policy" : "",
          "prefer_udp" : false
        },
        "log" : {
          "classes" : "all",
          "format" : "combined"
        },
        "prometheus" : true,
        "reload" : true
      },
      "zone" : ".:53"
    }, {
      "plugins" : {
        "cache" : {
          "parameters" : 30
        },
        "debug" : false,
```

```
"errors" : true,
"forward" : {
  "force_tcp" : true,
  "parameters" : "__PILLAR_CLUSTER_DNS__"
},
"log" : {
  "classes" : "all",
  "format" : "combined"
},
"prometheus" : true,
"reload" : true
},
"zone" : "ip6.arpa:53"
}, {
  "plugins" : {
    "cache" : {
      "parameters" : 30
    },
    "debug" : false,
    "errors" : true,
    "forward" : {
      "force_tcp" : true,
      "parameters" : "__PILLAR_CLUSTER_DNS__"
    },
    "log" : {
      "classes" : "all",
      "format" : "combined"
    },
    "prometheus" : true,
    "reload" : true
  },
  "zone" : "in-addr.arpa:53"
}, {
  "plugins" : {
    "cache" : {
      "denial" : {
        "size" : 9984,
        "ttl" : 5
      },
      "parameters" : 30,
      "prefetch" : { },
      "success" : {
        "size" : 9984,
        "ttl" : 30
      }
    },
    "debug" : false,
    "errors" : true,
    "forward" : {
      "force_tcp" : true,
      "parameters" : "__PILLAR_CLUSTER_DNS__"
    },
    "health" : {
      "port" : 8080
    },
    "log" : {
      "classes" : "all",
      "format" : "combined"
    },
    "prometheus" : true,
    "reload" : true
  },
  "zone" : "cluster.local:53"
} ]
},
"flavor1" : {
  "description" : "High available",
  "is_default" : true,
  "name" : "HA",
```

```
"replicas" : 2,
"resources" : [ {
  "limitsCpu" : "250m",
  "limitsMem" : "512Mi",
  "name" : "node-local-dns-admission-controller",
  "replicas" : 2,
  "requestsCpu" : "250m",
  "requestsMem" : "512Mi"
}, {
  "limitsCpu" : "500m",
  "limitsMem" : "512Mi",
  "name" : "node-local-dns-cache",
  "requestsCpu" : "25m",
  "requestsMem" : "5Mi"
} ],
"size" : "large"
},
"flavor2" : {
  "description" : "Has only one instance",
  "name" : "Single",
  "replicas" : 1,
  "resources" : [ {
    "limitsCpu" : "250m",
    "limitsMem" : "512Mi",
    "name" : "node-local-dns-admission-controller",
    "replicas" : 1,
    "requestsCpu" : "250m",
    "requestsMem" : "512Mi"
  }, {
    "limitsCpu" : "500m",
    "limitsMem" : "512Mi",
    "name" : "node-local-dns-cache",
    "requestsCpu" : "25m",
    "requestsMem" : "5Mi"
  } ],
  "size" : "small"
},
"flavor3" : {
  "description" : "custom resources",
  "name" : "custom-resources",
  "replicas" : 2,
  "resources" : [ {
    "limitsCpu" : "250m",
    "limitsMem" : "512Mi",
    "name" : "node-local-dns-admission-controller",
    "replicas" : 2,
    "requestsCpu" : "250m",
    "requestsMem" : "512Mi"
  }, {
    "limitsCpu" : "500m",
    "limitsMem" : "512Mi",
    "name" : "node-local-dns-cache",
    "requestsCpu" : "25m",
    "requestsMem" : "5Mi"
  } ],
  "size" : "custom"
}
}
},
"translate" : {
  "zh_CN" : {
    "description" : {
      "Parameters" : {
        "flavor1" : {
          "description" : "Dual-instance deployment features high availability but requires more compute resources.",
          "name" : "High availability"
        },
        "flavor2" : {
```

```
        "description" : "Single-instance deployment.",
        "name" : "Single instance"
    },
    "flavor3" : {
        "description" : "Custom specifications",
        "name" : "Custom"
    }
},
"Parameters.flavor1.description" : "Dual-instance deployment features high availability but
requires more compute resources.",
"Parameters.flavor1.name" : "High availability",
"Parameters.flavor2.description" : "Single-instance deployment.",
"Parameters.flavor2.name" : "Single instance",
"Parameters.flavor3.description" : "Custom specifications",
"Parameters.flavor3.name" : "Custom"
},
"key" : null,
"pluginTemplate" : {
    "changeLog" : "Kubernetes v1.31 is supported. The admission-controller logs have been updated
to stdout logs. node-local-dns supports custom health check ports.",
    "components" : {
        "node-local-dns-admission-controller" : {
            "description" : "Automatically adds DNSConfig to pods. The node-local-dns-cache address is
injected into the container's **/etc/resolv.conf** file. The container service then uses the local cache for DNS
domain name resolution.",
            "kind" : "Deployment"
        },
        "node-local-dns-cache" : {
            "description" : "Deploys a DNS cache proxy on each cluster node to boost DNS performance.",
            "kind" : "DaemonSet"
        }
    },
    "description" : "A DaemonSet that runs on cluster nodes and improves cluster DNS performance
using DNS cache proxies"
}
}
},
"logoURL" : "https://obs.com/plugintemplates/node-local-dnslogo.svg"
}
}]
}
```

Example Responses

Status code: 200

Request succeeded.

```
{
  "kind" : "PluginTemplateList",
  "apiVersion" : "v2",
  "items" : [ {
    "kind" : "PluginTemplate",
    "apiVersion" : "v2",
    "metadata" : {
      "name" : "node-local-dns",
      "annotations" : {
        "os.modelarts.plugin/release.name" : "NodeLocal DNSCache"
      }
    },
    "spec" : {
      "optional" : true,
      "versions" : [ {
        "version" : "1.6.63",
        "description" : "NodeLocal DNSCache improves Cluster DNS performance by running a dns caching
agent on cluster nodes as a DaemonSet.",
        "creationtimestamp" : "2023-05-20T08:50:31Z",
        "inputs" : {

```

```
"parameters" : {
  "custom" : {
    "annotations" : { },
    "enable_dnsconfig_admission" : true,
    "enable_namespace_admission" : true,
    "image" : {
      "args" : {
        "healthPort" : 8080,
        "interfaceName" : "nodelocaldns",
        "setupiptables" : false,
        "skipTeardown" : true,
        "skipteardown" : true,
        "syncInterval" : "1ns",
        "upstreamSvc" : "coredns"
      },
      "name" : "node-cache",
      "pullPolicy" : "Always"
    },
    "multiAZBalance" : false,
    "multiAZEnabled" : false,
    "nameserver" : "",
    "ndots" : "5",
    "node_match_expressions" : [ ],
    "search" : "",
    "tolerations" : [ {
      "effect" : "NoExecute",
      "key" : "node.kubernetes.io/not-ready",
      "operator" : "Exists",
      "tolerationSeconds" : 60
    }, {
      "effect" : "NoExecute",
      "key" : "node.kubernetes.io/unreachable",
      "operator" : "Exists",
      "tolerationSeconds" : 60
    } ],
    "zones" : [ {
      "plugins" : {
        "cache" : {
          "denial" : { },
          "parameters" : 30,
          "prefetch" : { },
          "server_stale" : false,
          "success" : { }
        },
        "debug" : false,
        "errors" : true,
        "forward" : {
          "expire" : "",
          "force_tcp" : false,
          "health_check" : "",
          "max_fails" : "",
          "parameters" : "__PILLAR_UPSTREAM_SERVERS__",
          "policy" : "",
          "prefer_udp" : false
        },
        "log" : {
          "classes" : "all",
          "format" : "combined"
        },
        "prometheus" : true,
        "reload" : true
      },
      "zone" : ".:53"
    }, {
      "plugins" : {
        "cache" : {
          "parameters" : 30
        },
        "debug" : false,
```



```
"errors" : true,
"forward" : {
  "force_tcp" : true,
  "parameters" : "__PILLAR_CLUSTER_DNS__"
},
"log" : {
  "classes" : "all",
  "format" : "combined"
},
"prometheus" : true,
"reload" : true
},
"zone" : "ip6.arpa:53"
}, {
  "plugins" : {
    "cache" : {
      "parameters" : 30
    },
    "debug" : false,
    "errors" : true,
    "forward" : {
      "force_tcp" : true,
      "parameters" : "__PILLAR_CLUSTER_DNS__"
    },
    "log" : {
      "classes" : "all",
      "format" : "combined"
    },
    "prometheus" : true,
    "reload" : true
  },
  "zone" : "in-addr.arpa:53"
}, {
  "plugins" : {
    "cache" : {
      "denial" : {
        "size" : 9984,
        "ttl" : 5
      },
      "parameters" : 30,
      "prefetch" : { },
      "success" : {
        "size" : 9984,
        "ttl" : 30
      }
    },
    "debug" : false,
    "errors" : true,
    "forward" : {
      "force_tcp" : true,
      "parameters" : "__PILLAR_CLUSTER_DNS__"
    },
    "health" : {
      "port" : 8080
    },
    "log" : {
      "classes" : "all",
      "format" : "combined"
    },
    "prometheus" : true,
    "reload" : true
  },
  "zone" : "cluster.local:53"
} ]
},
"flavor1" : {
  "description" : "High available",
  "is_default" : true,
  "name" : "HA",
```

```
"replicas" : 2,
"resources" : [ {
  "limitsCpu" : "250m",
  "limitsMem" : "512Mi",
  "name" : "node-local-dns-admission-controller",
  "replicas" : 2,
  "requestsCpu" : "250m",
  "requestsMem" : "512Mi"
}, {
  "limitsCpu" : "500m",
  "limitsMem" : "512Mi",
  "name" : "node-local-dns-cache",
  "requestsCpu" : "25m",
  "requestsMem" : "5Mi"
} ],
"size" : "large"
},
"flavor2" : {
  "description" : "Has only one instance",
  "name" : "Single",
  "replicas" : 1,
  "resources" : [ {
    "limitsCpu" : "250m",
    "limitsMem" : "512Mi",
    "name" : "node-local-dns-admission-controller",
    "replicas" : 1,
    "requestsCpu" : "250m",
    "requestsMem" : "512Mi"
  }, {
    "limitsCpu" : "500m",
    "limitsMem" : "512Mi",
    "name" : "node-local-dns-cache",
    "requestsCpu" : "25m",
    "requestsMem" : "5Mi"
  } ],
  "size" : "small"
},
"flavor3" : {
  "description" : "custom resources",
  "name" : "custom-resources",
  "replicas" : 2,
  "resources" : [ {
    "limitsCpu" : "250m",
    "limitsMem" : "512Mi",
    "name" : "node-local-dns-admission-controller",
    "replicas" : 2,
    "requestsCpu" : "250m",
    "requestsMem" : "512Mi"
  }, {
    "limitsCpu" : "500m",
    "limitsMem" : "512Mi",
    "name" : "node-local-dns-cache",
    "requestsCpu" : "25m",
    "requestsMem" : "5Mi"
  } ],
  "size" : "custom"
}
}
},
"translate" : {
  "zh_CN" : {
    "description" : {
      "Parameters" : {
        "flavor1" : {
          "description" : "Dual pods for the automatic DNSConfig injection controller increase the plug-in reliability.",
          "name" : "High availability"
        },
        "flavor2" : {
```

```
      "description" : "Single-instance deployment.",
      "name" : "Single instance"
    },
    "flavor3" : {
      "description" : "Custom resource specifications for deployment.",
      "name" : "Custom"
    }
  },
  "Parameters.flavor1.description" : "Dual pods for the automatic DNSConfig injection controller
increase the plug-in reliability.",
  "Parameters.flavor1.name" : "High availability",
  "Parameters.flavor2.description" : "Single-instance deployment.",
  "Parameters.flavor2.name" : "Single instance",
  "Parameters.flavor3.description" : "Custom resource specifications for deployment.",
  "Parameters.flavor3.name" : "Custom"
},
"key" : null,
"plugintemplate" : {
  "changeLog" : "Kubernetes v1.31 is supported. The admission-controller logs have been updated
to stdout logs. node-local-dns supports custom health check ports.",
  "components" : {
    "node-local-dns-admission-controller" : {
      "description" : "Automatically adds DNSConfig to pods. The node-local-dns-cache address is
injected into the container's **/etc/resolv.conf** file. The container service then uses the local cache for DNS
domain name resolution.",
      "kind" : "Deployment"
    },
    "node-local-dns-cache" : {
      "description" : "Deploys a DNS cache proxy on each cluster node to boost DNS performance.",
      "kind" : "DaemonSet"
    }
  },
  "description" : "A DaemonSet that runs on cluster nodes and improves cluster DNS performance
using DNS cache proxies"
}
}
},
"logoURL" : "https://obs.com/plugintemplates/node-local-dnslogo.svg"
}
}]
}
```

Status code: 404

Not found.

```
{
  "error_code" : "ModelArts.50005101",
  "error_msg" : "Plugintemplate {name} not found."
}
```

Status Codes

Status Code	Description
200	Request succeeded.
404	Not found.

Error Codes

See [Error Codes](#).

23 Scheduled Events

23.1 Authorizing Scheduled Events

Function

Specifies the authorization of a scheduled event.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

POST /v1/{project_id}/scheduled-events/{event_id}/accept

Table 23-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Parameter	Mandatory	Type	Description
event_id	Yes	String	Definition: Scheduled event ID. The value is the event_id field in the API for querying the scheduled event list. Constraints: N/A Range: The value is automatically generated by the system. It must start with a lowercase letter and consist of digits and hyphens (-). It cannot end with a hyphen (-) and can contain a maximum of 63 characters. Default Value: N/A

Request Parameters

Table 23-2 Request body parameters

Parameter	Mandatory	Type	Description
notBefore	No	String	Definition: Planned start time of an event, in the format of yyyy-MM-ddTHH:mm:ssZ. Constraints: N/A Range: later than the current time. Default Value: If this parameter is left empty, the event is executed immediately.

Response Parameters

Status code: 200

Table 23-3 Response header parameters

Parameter	Type	Description
X-request-id	String	This field is the request ID number for task tracking. Format is request_uuid-timestamp-hostname.

Table 23-4 Response body parameters

Parameter	Type	Description
id	String	Event ID.
catalog	String	Category.
type	String	Event type. system-maintenance : system maintenance localdisk-recovery : local disk recovery node_reboot : node reboot operation-request : O&M authorization node_maintenance : supernode maintenance node_redeploy : supernode redeployment
description	String	Description.
state	String	Event status. inquiring : The request is to be authorized. scheduled : The request has been authorized. executing : The request is being executed. completed : The request is completed. failed : The request failed. canceled : The request is canceled.
instanceType	String	Definition : node type. Range : • devserver: lite-server node • lite-cluster: lite pool • standard: standard pool
instanceId	String	Definition : server ID. Instance ID automatically generated by the compute service system. The length of the ID is fewer than 63 characters. Range : N/A

Parameter	Type	Description
nodeName	String	Definition: node name, which is the value of metadata.name in the node details. The value is automatically generated by the system. It must start with a lowercase letter and consist of digits and hyphens (-). It cannot end with a hyphen (-) and can contain no more than 63 characters. Range: N/A
poolName	String	Definition: Name of the resource pool. This parameter is only available for lite-cluster and standard . The value is obtained from the metadata.name field in resource pool details. The value is automatically generated by the system. It must start with a lowercase letter and consist of digits and hyphens (-). It cannot end with a hyphen (-) and can contain no more than 63 characters. Range: N/A
poolDisplayName	String	Definition: Name of the resource pool displayed externally. This parameter is only available for lite-cluster and standard . The value is obtained from the metadata.name field in resource pool details. The value can contain 36 to 63 characters. It must start with a lowercase letter and cannot end with a hyphen (-). Digits and hyphens (-) are allowed. Range: N/A
publishTime	String	Definition: Event release time. Constraints: The value is a UTC time string, for example, 2025-09-15T07:02:30Z . Range: N/A Default Value: N/A
startTime	String	Definition: Start time of an event. Constraints: The value is a UTC time string, for example, 2025-09-15T07:02:30Z . Range: N/A Default Value: N/A

Parameter	Type	Description
finishTime	String	Definition: Event completion time. Constraints: The value is a UTC time string, for example, 2025-09-15T07:02:30Z . Range: N/A Default Value: N/A
notBefore	String	Definition: start time of the event plan, in UTC time string format, for example, 2025-09-15T07:02:30Z . Constraints: later than the current time. Range: N/A Default Value: If this parameter is left empty, the event is executed immediately.
probeMsg	String	Definition: Prompt information. Constraints: The value is automatically generated by the system. It must start with a lowercase letter and consist of digits and hyphens (-). It cannot end with a hyphen (-) and can contain no more than 63 characters. Range: N/A Default Value: N/A
redeployType	Array of strings	Definition: Node redeployment type. Constraints: N/A Range: - HARD: forcible redeployment; - SOFT: redeployment Default Value: N/A

Status code: 400

Table 23-5 Response header parameters

Parameter	Type	Description
X-request-id	String	This field is the request ID number for task tracking. Format is request_uuid-timestamp-hostname.

Table 23-6 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

```
/v1/{project_id}/scheduled-events/{event_id}/accept
{
  "notBefore" : "xxxx"
}
```

Example Responses

None

Status Codes

Status Code	Description
200	Event details.
400	Error response

Error Codes

See [Error Codes](#).

23.2 Obtaining the Scheduled Event List

Function

This API is used to obtain the scheduled event list.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/scheduled-events

Table 23-7 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Definition: User project ID. For details, see Obtaining a Project ID and Name . Constraints: N/A Range: N/A Default Value: N/A

Table 23-8 Query Parameters

Parameter	Mandatory	Type	Description
workspaceId	No	String	Definition: Workspace ID. The default value is 0 . The value is the id field in the API for querying the workspace list. Constraints: The value is automatically generated by the system. It must start with a lowercase letter and consist of digits and hyphens (-). It cannot end with a hyphen (-) and can contain no more than 63 characters. Range: N/A Default Value: N/A
state	No	Array of strings	Definition: Event status. Constraints: N/A Range • inquiring: To be authorized. • scheduled: To be executed. • executing: Being executed. • completed: Executed. • failed: Execution failed. canceled: Canceled. Default Value: N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 23-9 Response header parameters

Parameter	Type	Description
X-request-id	String	This field is the request ID number for task tracking. Format is request_uuid-timestamp-hostname.

Table 23-10 Response body parameters

Parameter	Type	Description
events	Array of ScheduledEvent objects	Definition: Scheduled event list.

Table 23-11 ScheduledEvent

Parameter	Type	Description
id	String	Event ID.
catalog	String	Category.
type	String	Event type. system-maintenance: system maintenance localdisk-recovery: local disk recovery node_reboot: node reboot operation-request: O&M authorization node_maintenance: supernode maintenance node_redeploy: supernode redeployment
description	String	Description.

Parameter	Type	Description
state	String	Event status. inquiring : The request is to be authorized. scheduled : The request has been authorized. executing : The request is being executed. completed : The request is completed. failed : The request failed. canceled : The request is canceled.
instanceType	String	Definition : node type. Range : • devserver: lite-server node • lite-cluster: lite pool • standard: standard pool
instanceId	String	Definition : server ID. Instance ID automatically generated by the compute service system. The length of the ID is fewer than 63 characters. Range : N/A
nodeName	String	Definition : node name, which is the value of metadata.name in the node details. The value is automatically generated by the system. It must start with a lowercase letter and consist of digits and hyphens (-). It cannot end with a hyphen (-) and can contain no more than 63 characters. Range : N/A
poolName	String	Definition : Name of the resource pool. This parameter is only available for lite-cluster and standard . The value is obtained from the metadata.name field in resource pool details. The value is automatically generated by the system. It must start with a lowercase letter and consist of digits and hyphens (-). It cannot end with a hyphen (-) and can contain no more than 63 characters. Range : N/A

Parameter	Type	Description
poolDisplayName	String	Definition: Name of the resource pool displayed externally. This parameter is only available for lite-cluster and standard . The value is obtained from the metadata.name field in resource pool details. The value can contain 36 to 63 characters. It must start with a lowercase letter and cannot end with a hyphen (-). Digits and hyphens (-) are allowed. Range: N/A
publishTime	String	Definition: Event release time. Constraints: The value is a UTC time string, for example, 2025-09-15T07:02:30Z . Range: N/A Default Value: N/A
startTime	String	Definition: Start time of an event. Constraints: The value is a UTC time string, for example, 2025-09-15T07:02:30Z . Range: N/A Default Value: N/A
finishTime	String	Definition: Event completion time. Constraints: The value is a UTC time string, for example, 2025-09-15T07:02:30Z . Range: N/A Default Value: N/A
notBefore	String	Definition: start time of the event plan, in UTC time string format, for example, 2025-09-15T07:02:30Z . Constraints: later than the current time. Range: N/A Default Value: If this parameter is left empty, the event is executed immediately.

Parameter	Type	Description
probeMsg	String	Definition: Prompt information. Constraints: The value is automatically generated by the system. It must start with a lowercase letter and consist of digits and hyphens (-). It cannot end with a hyphen (-) and can contain no more than 63 characters. Range: N/A Default Value: N/A
redeployType	Array of strings	Definition: Node redeployment type. Constraints: N/A Range: - HARD: forcible redeployment; - SOFT: redeployment Default Value: N/A

Status code: 400

Table 23-12 Response header parameters

Parameter	Type	Description
X-request-id	String	This field is the request ID number for task tracking. Format is request_uuid-timestamp-hostname.

Table 23-13 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

None

Example Responses

None

Status Codes

Status Code	Description
200	Response to the request for querying the scheduled event list.
400	Error response

Error Codes

See [Error Codes](#).

24 Application Authentication Management

24.1 Querying the API Authentication Information of an Application

Function

This API is used to query the API authentication information of an application.

Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

URI

GET /v1/{project_id}/services/{service_id}/app-auth-apis

Table 24-1 Path Parameters

Parameter	Mandatory	Type	Description
service_id	Yes	String	Service ID
project_id	Yes	String	Definition: Project ID. For details, see Obtaining a Project ID and Name . Constraints: The value can contain 1 to 64 characters. Letters, digits, and hyphens (-) are allowed. Range: N/A Default Value: N/A

Table 24-2 Query Parameters

Parameter	Mandatory	Type	Description
workspace_id	No	String	Definition: Workspace ID. . Constraints: There must be a workspace in use. Range: N/A Default Value: 0

Request Parameters

Table 24-3 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Definition: User token. It can be obtained by calling the IAM API. The token is the value of X-Subject-Token in the response header. Constraints: N/A Range: N/A Default Value: N/A

Response Parameters

Status code: 200

Table 24-4 Response body parameters

Parameter	Type	Description
apis	Array of AuthTypeApiBasicInfo objects	API authentication information list.
count	Integer	Number of records.
total_count	Integer	Total number of records.

Table 24-5 AuthTypeApiBasicInfo

Parameter	Type	Description
api_id	String	API ID

Parameter	Type	Description
api_method	String	Request method, which can be GET , POST , PUT , DELETE , HEAD , PATCH , OPTIONS , or ANY . ANY is the default value.
api_name	String	API name
api_remark	String	API description. The value contains a maximum of 255 characters.
auth_type	String	API authentication mode. The options are: Enums: • NONE: no authentication • APP: App authentication • IAM: IAM authentication
predict_url	String	Prediction URL
service_id	String	Service ID
service_name	String	Service name
support_app_code	Boolean	Whether to support the App code

Example Requests

None

Example Responses

Status code: 200

OK

```
{
  "apis": [ {
    "api_id": "528087f0cfec48f7959db7834ee441cb",
    "api_method": "ANY",
    "api_name": "testNoneAuth",
    "api_remark": "string",
    "auth_type": "APP",
    "predict_url": "https://3565150c2e5c45d0989be40350dd80ed.apig.xxxxxx.com/test",
    "service_id": "bb149aac-5ff4-497c-bb73-acb751e20a11",
    "service_name": "service-hutest",
    "support_app_code": false
  } ],
  "count": 1,
  "total_count": 1
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

25 Use Cases

25.1 Creating a Development Environment Instance

This section describes how to create a development environment instance by calling ModelArts APIs.

Overview

The process for creating a development environment instance is as follows:

1. Call the API for [authentication](#) to obtain a user token, which will be added in a request header for authentication.
2. Call the API for [querying supported images](#) to view the image type and version in the development environment.
3. Call the API for [creating a notebook instance](#) to create an instance.
4. Call the API for [querying details of a notebook instance](#) to query the instance creation details based on the instance ID.
5. Call the API for [prolonging a notebook instance](#) to reset the usage duration of the instance.
6. Call the API for [stopping a notebook instance](#) to stop the instance that is running.
7. Call the API for [starting a notebook instance](#) to restart the instance.
8. Call the API for [deleting a notebook instance](#) to delete the instance that is no longer needed.

Prerequisites

- You have obtained the endpoints of [IAM](#) and ModelArts.
- The following information is available: region where ModelArts is deployed, project ID and name, account name and ID, and username and user ID.

Procedure

1. Call the API for [authentication](#) to obtain a user token.

a. Request body:

URI: POST `https://{iam_endpoint}/v3/auth/tokens`

Request header: Content-Type → application/json

Request body:

```
{
  "auth": {
    "identity": {
      "methods": ["password"],
      "password": {
        "user": {
          "name": "user_name",
          "password": "user_password",
          "domain": {
            "name": "domain_name"
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "ap-southeast-1"
      }
    }
  }
}
```

Set the following parameters based on site requirements:

- *iam_endpoint*: IAM endpoint
- **user_name**: IAM username
- **user_password**: password of the login user
- **domain_name**: account to which the user belongs
- **ap-southeast-1**: project name, which is the region where ModelArts is deployed

b. Status code **201 Created** is returned. The **X-Subject-Token** value in the response header is the token.

x-subject-token
→ *MIIZmgYJKoZIhvcNAQcColIZizCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...*

2. Call the API for **querying supported images** to view the image type and version in the development environment.

a. Request body:

URI: GET `https://{ma_endpoint}/v1/{project_id}/images`

Request header:

- X-auth-Token
→ *MIIZmgYJKoZIhvcNAQcColIZizCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...*
- Content-Type → application/json

Set the following parameters based on site requirements:

- *ma_endpoint*: ModelArts endpoint
- *project_id*: user's project ID

- **X-auth-Token:** token obtained in the previous step
- b. Status code **200** is returned. The response body is as follows:

```
{
  "current": 0,
  "data": [
    {
      "arch": "x86_64",
      "description": "CPU and GPU general algorithm development and training, preconfigured with
AI engine PyTorch1.8",
      "dev_services": [
        "NOTEBOOK",
        "SSH"
      ],
      "id": "278e88d1-5b71-4766-8502-b3ba72e824d9",
      "name": "pytorch1.8-cuda10.2-cudnn7-ubuntu18.04",
      "resource_categories": [
        "CPU",
        "GPU"
      ],
      "service_type": "COMMON",
      "status": "ACTIVE",
      "swr_path": "swr.myhuaweicloud.com/atelier/pytorch_1_8:pytorch_1.8.0-cuda_10.2-py_3.7-
ubuntu_18.04-x86_64-20221118143845-d65d817",
      "tag": "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64-20221118143845-d65d817",
      "tags": [],
      "type": "BUILD_IN",
      "update_at": 1648866992843,
      "workspace_id": "0"
    },
    {
      "arch": "x86_64",
      "description": "CPU and GPU general algorithm development and training, preconfigured with
AI engine MindSpore1.7.0 and cuda10.1",
      "dev_services": [
        "NOTEBOOK",
        "SSH"
      ],
      "id": "e1a07296-22a8-4f05-8bc8-e936c8e54202",
      "name": "mindspore1.7.0-cuda10.1-py3.7-ubuntu18.04",
      "resource_categories": [
        "GPU"
      ],
      "service_type": "TRAIN",
      "status": "ACTIVE",
      "swr_path": "swr.myhuaweicloud.com/atelier/mindspore_1_7_0:mindspore_1.7.0-cuda_10.1-
py_3.7-ubuntu_18.04-x86_64-20221118143809-d65d817",
      "tag": "mindspore_1.7.0-cuda_10.1-py_3.7-ubuntu_18.04-x86_64-20221118143809-d65d817",
      "tags": [],
      "type": "BUILD_IN",
      "workspace_id": "0"
    },
    {
      "arch": "x86_64",
      "description": "CPU general algorithm development and training, preconfigured with AI
engine MindSpore1.7.0",
      "dev_services": [
        "NOTEBOOK",
        "SSH"
      ],
      "id": "c0b31f09-1490-4555-9b8b-ab0b2de35b20",
      "name": "mindspore1.7.0-py3.7-ubuntu18.04",
      "resource_categories": [
        "CPU"
      ],
      "service_type": "TRAIN",
      "status": "ACTIVE",
      "swr_path": "swr.myhuaweicloud.com/atelier/mindspore_1_7_0:mindspore_1.7.0-cpu-py_3.7-
ubuntu_18.04-x86_64-20221118143809-d65d817",
    }
  ]
}
```

```
"tag": "mindspore_1.7.0-cpu-py_3.7-ubuntu_18.04-x86_64-20221118143809-d65d817",
"tags": [],
"type": "BUILD_IN",
"workspace_id": "0"
},
{
  "arch": "x86_64",
  "description": "CPU and GPU general algorithm development and training, preconfigured with
AI engine TensorFlow2.1",
  "dev_services": [
    "NOTEBOOK",
    "SSH"
  ],
  "id": "e1a07296-22a8-4f05-8bc8-e936c8e54100",
  "name": "tensorflow2.1-cuda10.1-cudnn7-ubuntu18.04",
  "resource_categories": [
    "CPU",
    "GPU"
  ],
  "service_type": "COMMON",
  "status": "ACTIVE",
  "swr_path": "swr.myhuaweicloud.com/atelier/tensorflow_2_1:tensorflow_2.1.0-cuda_10.1-
py_3.7-ubuntu_18.04-x86_64-20221121111529-d65d817",
  "tag": "tensorflow_2.1.0-cuda_10.1-py_3.7-ubuntu_18.04-x86_64-20221121111529-d65d817",
  "tags": [],
  "type": "BUILD_IN",
  "update_at": 1643166780367,
  "workspace_id": "0"
},
{
  "arch": "x86_64",
  "description": "CPU and GPU general algorithm development and training, preconfigured with
AI engine PyTorch1.10 and cuda10.2",
  "dev_services": [
    "NOTEBOOK",
    "SSH"
  ],
  "id": "d996b661-e127-48c4-a90a-fca29535f201",
  "name": "pytorch1.10-cuda10.2-cudnn7-ubuntu18.04",
  "resource_categories": [
    "CPU",
    "GPU"
  ],
  "service_type": "UNKNOWN",
  "status": "ACTIVE",
  "swr_path": "swr.myhuaweicloud.com/atelier/pytorch_1_10:pytorch_1.10.2-cuda_10.2-py_3.7-
ubuntu_18.04-x86_64-20221118143845-d65d817",
  "tag": "pytorch_1.10.2-cuda_10.2-py_3.7-ubuntu_18.04-x86_64-20221118143845-d65d817",
  "tags": [],
  "type": "BUILD_IN",
  "workspace_id": "0"
},
{
  "arch": "x86_64",
  "description": "Clean user customized base image include cuda10.2, conda",
  "dev_services": [
    "NOTEBOOK",
    "SSH"
  ],
  "id": "d937149a-785c-4d2d-a568-8dde7c06cca0",
  "name": "conda3-cuda10.2-cudnn7-ubuntu18.04",
  "resource_categories": [
    "GPU"
  ],
  "service_type": "UNKNOWN",
  "status": "ACTIVE",
  "swr_path": "swr.myhuaweicloud.com/atelier/user_defined_base:cuda_10.2-ubuntu_18.04-
x86_64-20230404095316-7fcd503",
  "tag": "cuda_10.2-ubuntu_18.04-x86_64-20230404095316-7fcd503",
```



```
"tags": [],
"type": "BUILD_IN",
"workspace_id": "0"
},
{
  "arch": "x86_64",
  "description": "Clean user customized base image only include conda",
  "dev_services": [
    "NOTEBOOK",
    "SSH"
  ],
  "id": "27542a4a-3b37-404d-add9-a7d2d2ce6893",
  "name": "conda3-ubuntu18.04",
  "resource_categories": [
    "CPU"
  ],
  "service_type": "UNKNOWN",
  "status": "ACTIVE",
  "swr_path": "swr.myhuaweicloud.com/atelier/user_defined_base:ubuntu_18.04-x86_64-20230404095316-7fcd503",
  "tag": "ubuntu_18.04-x86_64-20230404095316-7fcd503",
  "tags": [],
  "type": "BUILD_IN",
  "workspace_id": "0"
},
{
  "arch": "x86_64",
  "description": "CPU and GPU general algorithm development and training, preconfigured with AI engine PyTorch1.4",
  "dev_services": [
    "NOTEBOOK",
    "SSH"
  ],
  "id": "e1a07296-22a8-4f05-8bc8-e936c8e54099",
  "name": "pytorch1.4-cuda10.1-cudnn7-ubuntu18.04",
  "resource_categories": [
    "CPU",
    "GPU"
  ],
  "service_type": "TRAIN",
  "status": "ACTIVE",
  "swr_path": "swr.myhuaweicloud.com/atelier/pytorch_1_4:pytorch_1.4-cuda_10.1-py37-ubuntu_18.04-x86_64-20221118143845-d65d817",
  "tag": "pytorch_1.4-cuda_10.1-py37-ubuntu_18.04-x86_64-20221118143845-d65d817",
  "tags": [],
  "type": "BUILD_IN",
  "update_at": 1648866992868,
  "workspace_id": "0"
},
{
  "arch": "x86_64",
  "description": "GPU algorithm development and training, preconfigured with AI engine TensorFlow1.13.1",
  "dev_services": [
    "NOTEBOOK",
    "SSH"
  ],
  "id": "b80bbf3d-a7af-42f6-ad12-33ff9116ab0d",
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  "status": "ACTIVE",  
  "swr_path": "swr.myhuaweicloud.com/atelier/notebook2.0-mul-kernel-mls-feature-  
engineering-cpu-py37:3.2.0109",  
  "tag": "3.2.0109",  
  "tags": [],  
  "type": "BUILD_IN",  
  "update_at": 1623899357995,  
  "workspace_id": "0"  
},  
{  
  "arch": "x86_64",  
  "description": "MindSpore1.7.0 and MindQuantum0.6.0",  
  "dev_services": [  
    "NOTEBOOK",  
    "SSH"  
  ],  
  "id": "6592fa02-a40a-4054-a05f-f22215e45ec1",  
  "name": "mindquantum0.6.0-mindspore1.7.0-ubuntu18.04",  
  "resource_categories": [  
    "CPU"  
  ],  
  "service_type": "TRAIN",  
  "status": "ACTIVE",  
  "swr_path": "swr.myhuaweicloud.com/atelier/mindspore_1_7_0:mindspore_1.7.0-cpu-py_3.7-  
ubuntu_18.04-x86_64-20220727174747-6a4cdd5",  
  "tag": "mindspore_1.7.0-cpu-py_3.7-ubuntu_18.04-x86_64-20220727174747-6a4cdd5",  
  "tags": [],  
  "type": "BUILD_IN",  
  "workspace_id": "0"  
},  
{  
  "arch": "x86_64",  
  "create_at": 1628757853111,  
  "description": "CPU and GPU algorithm development and training, preconfigured with AI  
engine ray for reinforcement learning.",  
  "dev_services": [  
    "NOTEBOOK",  
    "SSH"  
  ],  
  "id": "4233d6f9-c3b5-4cf2-9ee6-2ef565935d6d",  
  "name": "rlstudio1.0.0-ray1.3.0-cuda10.1-ubuntu18.04",  
  "namespace": "rl-dev",  
  "resource_categories": [  
    "CPU",  
    "GPU"  
  ],  
  "service_type": "TRAIN",  
  "size": 4857883146,  
  "status": "ACTIVE",
```

```
"swr_path": "swr.myhuaweicloud.com/atelier/notebook2.0-rl-1.0.0-kernel-cp37:rl-
v1220211203",
"tag": "rl-v1220211203",
"tags": [],
"type": "BUILD_IN",
"update_at": 1642836699527,
"workspace_id": "0"
},
{
  "arch": "aarch64",
  "description": "Ascend+ARM algorithm development and training. TensorFlow and MindSpore
are preset in the AI engine.",
  "dev_services": [
    "NOTEBOOK",
    "SSH"
  ],
  "id": "59a6e9f5-93c0-44dd-85b0-82f390c5d53b",
  "name": "tensorflow1.15-mindspore1.7.0-cann5.1.0-euler2.8-aarch64",
  "resource_categories": [
    "CPU",
    "ASCEND"
  ],
  "service_type": "TRAIN",
  "status": "ACTIVE",
  "swr_path": "swr.myhuaweicloud.com/atelier/notebook2.0-mul-kernel-arm-ascend-cp37:5.0.1-
c81-20220726",
  "tag": "5.0.1-c81-20220726",
  "tags": [],
  "type": "BUILD_IN",
  "update_at": 1640398185602,
  "workspace_id": "0"
},
{
  "arch": "x86_64",
  "description": "CPU general algorithm development and training, preconfigured with AI
engine MindSpore1.7.0",
  "dev_services": [
    "NOTEBOOK",
    "SSH"
  ],
  "id": "9d63f4d1-dc09-4873-b669-3483cea777c0",
  "name": "mindspore1.7.0-ubuntu18.04-default",
  "resource_categories": [
    "CPU"
  ],
  "service_type": "TRAIN",
  "status": "ACTIVE",
  "swr_path": "swr.myhuaweicloud.com/atelier/mindspore_1_7_0:mindspore_1.7.0-cpu-py_3.7-
ubuntu_18.04-x86_64-20220625205423-5a13f29",
  "tag": "mindspore_1.7.0-cpu-py_3.7-ubuntu_18.04-x86_64-20220625205423-5a13f29",
  "tags": [],
  "type": "BUILD_IN",
  "workspace_id": "0"
},
{
  "arch": "x86_64",
  "description": "CPU and GPU general algorithm development and training, preconfigured with
AI engine MindSpore1.7.0 and cuda10.1",
  "dev_services": [
    "NOTEBOOK",
    "SSH"
  ],
  "id": "e1a07296-22a8-4f05-8bc8-e936c8e54203",
  "name": "mindspore1.7.0-ubuntu18.04-default",
  "resource_categories": [
    "GPU"
  ],
  "service_type": "TRAIN",
  "status": "ACTIVE",
```

```
"swr_path": "swr.myhuaweicloud.com/atelier/mindspore_1_7_0:mindspore_1.7.0-cuda_10.1-  
py_3.7-ubuntu_18.04-x86_64-20220625205423-5a13f29",  
"tag": "mindspore_1.7.0-cuda_10.1-py_3.7-ubuntu_18.04-x86_64-20220625205423-5a13f29",  
"tags": [],  
"type": "BUILD_IN",  
"workspace_id": "0"  
}  
],  
"pages": 1,  
"size": 200,  
"total": 39  
}
```

Select the image required for creating a notebook instance based on the **description** and **name** parameters and record its ID. This section provides an example of using TensorFlow to create a notebook instance with an **id** of **e1a07296-22a8-4f05-8bc8-e936c8e54100**.

3. Call the API for [creating a notebook instance](#) to create an instance.

- a. Request body:

URI: POST `https://{ma_endpoint}/v1/{project_id}/notebooks`

Request header:

- X-auth-Token
→ *MIIZmgYJKoZIhvcNAQcCollZizCCGYcCAQExDTALBgIghkgBZQMEAgEwgXXXXXX...*
- Content-Type → application/json

Request body:

```
{  
  "name" : "notebooks_test",  
  "feature" : "NOTEBOOK",  
  "workspace_id" : "0",  
  "description" : "api-test",  
  "flavor" : "modelarts.vm.cpu.2u",  
  "image_id" : "e1a07296-22a8-4f05-8bc8-e936c8e54090",  
  "volume" : {  
    "category" : "efs",  
    "ownership" : "managed",  
    "capacity" : 50  
  }  
}
```

Set the following parameters based on site requirements:

- *ma_endpoint*: ModelArts endpoint
 - *project_id*: user's project ID
 - **X-auth-Token**: token obtained in the previous step
 - **flavor**: flavor of the notebook instance
 - **image_id**: image ID of the notebook instance
- b. Status code **200** is returned. The response body is as follows:

```
{  
  "action_progress": [  
    {  
      "step": 4,  
      "status": "WAITING",  
      "description": "Initialize the notebook instance."  
    },  
  ],  
}
```

```
{
  "step": 3,
  "status": "WAITING",
  "description": "Configuring the network."
},
{
  "step": 2,
  "status": "WAITING",
  "description": "Prepare the compute resource."
},
{
  "step": 1,
  "status": "WAITING",
  "description": "Prepare the storage."
}
],
"create_at": 1687656452472,
"description": "api-test",
"endpoints": [],
"feature": "NOTEBOOK",
"flavor": "modelarts.vm.cpu.2u",
"id": "936bea3e-d3df-435e-8b58-d817283284ae",
"image": {
  "description": "",
  "id": "e1a07296-22a8-4f05-8bc8-e936c8e54090",
  "name": "notebook2.0-mul-kernel-cpu-cp36",
  "swr_path": "swr.myhuaweicloud.com/atelier/notebook2.0-mul-kernel-cpu-cp36:5.0.1-release-v2-20220505",
  "tag": "5.0.1-release-v2-20220505",
  "type": "BUILD_IN"
},
"lease": {
  "create_at": 1687656452470,
  "duration": 3600000,
  "enable": true,
  "type": "TIMING",
  "update_at": 1687656452470
},
"name": "notebooks_test",
"status": "RUNNING",
"tags": [],
"token": "3452e0d5-15fe-a20d-18a2-010a574aeaf",
"update_at": 1687656452588,
"user_id": "99250e439b33431081xxxxxxxxxa885",
"workspace_id": "0",
"billing_items": []
}
```

You can view the notebook instance details in the response. If **status** is **RUNNING**, the notebook instance is successfully created.

4. Call the API for [querying details of a notebook instance](#) to query the instance creation details based on the instance ID.

- a. Request body:

URI: GET `https://{ma_endpoint}/v1/{project_id}/notebooks/{id}`

Request header: X-auth-Token

→ **MIIZmgYJKoZlhvcNAQcCollZizCCGYcCAQExDTALBgIghkgBZQMEAgEwgXXXXXX...**

Set the bold parameters based on site requirements.

- b. Status code **200** is returned. The response body is as follows:

```
{
  "create_at": 1687656452472,
  "data_volumes": [],
  "description": "api-test",
  "endpoints": [
```

```
{
  "service": "NOTEBOOK",
  "uri": "https://authoring-modelarts.huaweicloud.com/936bea3e-d3df-435e-8b58-d817283284ae/lab"
},
{
  "feature": "NOTEBOOK",
  "flavor": "modelarts.vm.cpu.2u",
  "id": "936bea3e-d3df-435e-8b58-d817283284ae",
  "image": {
    "description": "",
    "id": "e1a07296-22a8-4f05-8bc8-e936c8e54090",
    "name": "notebook2.0-mul-kernel-cpu-cp36",
    "swr_path": "swr.myhuaweicloud.com/atelier/notebook2.0-mul-kernel-cpu-cp36:5.0.1-release-v2-20220505",
    "tag": "5.0.1-release-v2-20220505",
    "type": "BUILD_IN"
  },
  "lease": {
    "create_at": 1687656452470,
    "duration": 3627372,
    "enable": true,
    "type": "TIMING",
    "update_at": 1687656479842
  },
  "name": "notebooks_test",
  "status": "RUNNING",
  "tags": [],
  "token": "3452e0d5-15fe-a20d-18a2-010a574aeaaf",
  "update_at": 1687656479880,
  "url": "https://authoring-modelarts.huaweicloud.com/936bea3e-d3df-435e-8b58-d817283284ae/lab",
  "user": {
    "domain": {
      "id": "878991804cdc4ba597xxxxxxxxx9dd9",
      "name": "hwstaff_pub_CBUInfo_EI"
    },
    "id": "99250e439b33431081xxxxxxxxxa885",
    "name": "xwx1128222"
  },
  "user_id": "99250e439b33431081xxxxxxxxxa885",
  "volume": {
    "category": "EFS",
    "ownership": "MANAGED",
    "mount_path": "/home/ma-user/work/",
    "capacity": 50,
    "read_only": false
  },
  "workspace_id": "0",
  "billing_items": [
    "COMPUTE"
  ]
}
```

5. Call the API for **prolonging a notebook instance** to reset the usage duration of the instance.

- a. Request body:

URI: PATCH `https://{ma_endpoint}/v1/{project_id}/notebooks/{id}/lease`

Request header:

- X-auth-Token
→ *MIIZmgYJKoZlhcNAQcCollIZizCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...*

- Content-Type → application/json

Request body:

```
{
  "duration": 3600000,
  "type": "timing"
}
```

Set the following parameters based on site requirements:

- **duration**: instance running duration, which is calculated based on the instance creation time. If the instance creation time plus the duration is greater than the current time, the system automatically stops the instance.
 - **type**: auto stop type. The default value is **timing**.
- b. Status code **200** is returned, indicating that labeling is successful. The response body is as follows:

```
{
  "create_at": 1687656452470,
  "duration": 4657544,
  "enable": true,
  "type": "TIMING",
  "update_at": 1687657510014
}
```

6. Call the API for **stopping a notebook instance** to stop the instance that is running.

- a. Request body.

URI: POST `https://{ma_endpoint}/v1/{project_id}/notebooks/{id}/stop`

Request header: X-auth-Token

→ **MIIZmgYJKoZlhvcNAQcColIZizCCGYcCAQExDTALBgIghkgBZQMEAgEwgXXXXXX...**

Set the bold parameters based on site requirements.

- b. Status code **200** is returned. The response body is as follows:

```
{
  "create_at": 1687656452472,
  "data_volumes": [],
  "description": "api-test",
  "endpoints": [
    {
      "service": "NOTEBOOK",
      "uri": "https://authoring-modelarts.huaweicloud.com/936bea3e-d3df-435e-8b58-d817283284ae/lab"
    }
  ],
  "feature": "NOTEBOOK",
  "flavor": "modelarts.vm.cpu.2u",
  "id": "936bea3e-d3df-435e-8b58-d817283284ae",
  "image": {
    "description": "",
    "id": "e1a07296-22a8-4f05-8bc8-e936c8e54090",
    "name": "notebook2.0-mul-kernel-cpu-cp36",
    "swr_path": "swr.myhuaweicloud.com/atelier/notebook2.0-mul-kernel-cpu-cp36:5.0.1-release-v2-20220505",
    "tag": "5.0.1-release-v2-20220505",
    "type": "BUILD_IN"
  },
  "lease": {
    "create_at": 1687656452470,
    "duration": 6199814,
    "enable": true,
    "type": "TIMING",
    "update_at": 1687659052284
  },
  "name": "notebooks_test",
}
```

```
"status": "STOPPING",
"tags": [],
"token": "3452e0d5-15fe-a20d-18a2-010a574aeaaf",
"update_at": 1687656479880,
"url": "https://authoring-modelarts.huaweicloud.com/936bea3e-d3df-435e-8b58-d817283284ae/lab",
"user": {
  "domain": {
    "id": "878991804cdc4ba597xxxxxxxxx9dd9",
    "name": "hwstaff_test"
  },
  "id": "99250e439b33431081xxxxxxxxxa885",
  "name": "test"
},
"user_id": "99250e439b33431081xxxxxxxxxa885",
"volume": {
  "category": "EFS",
  "ownership": "MANAGED",
  "mount_path": "/home/ma-user/work/",
  "capacity": 50,
  "read_only": false
},
"workspace_id": "0",
"billing_items": []
}
```

7. Call the API for **starting a notebook instance** to restart the instance.

- a. Request body.

URI: GET `https://{ma_endpoint}/v1/{project_id}/notebooks/{id}/start`

Request header: X-auth-Token

→ ***MIIZmgYJKoZlIhvcNAQcColIZizCCGYcCAQExDTALBgIghkgBZQMEAgEwgXXXXXX...***

Set the bold parameters based on site requirements.

- b. Status code **200** is returned. The response body is as follows:

```
{
  "create_at": 1687656452472,
  "data_volumes": [],
  "description": "api-test",
  "endpoints": [
    {
      "service": "NOTEBOOK",
      "uri": "https://authoring-modelarts.huaweicloud.com/936bea3e-d3df-435e-8b58-d817283284ae/lab"
    }
  ],
  "feature": "NOTEBOOK",
  "flavor": "modelarts.vm.cpu.2u",
  "id": "936bea3e-d3df-435e-8b58-d817283284ae",
  "image": {
    "description": "",
    "id": "e1a07296-22a8-4f05-8bc8-e936c8e54090",
    "name": "notebook2.0-mul-kernel-cpu-cp36",
    "swr_path": "swr.myhuaweicloud.com/atelier/notebook2.0-mul-kernel-cpu-cp36:5.0.1-release-v2-20220505",
    "tag": "5.0.1-release-v2-20220505",
    "type": "BUILD_IN"
  },
  "lease": {
    "create_at": 1687656452470,
    "duration": 6540099,
    "enable": true,
    "type": "TIMING",
    "update_at": 1687659392569
  },
  "name": "notebooks_test",
  "status": "STARTING",
}
```



```
"tags": [],
"token": "6f773860-21d4-9fe8-75c8-a38ea13ebf08",
"update_at": 1687659203630,
"url": "https://authoring-modelarts.huaweicloud.com/936bea3e-d3df-435e-8b58-d817283284ae/lab",
"user": {
  "domain": {
    "id": "878991804cdc4ba597xxxxxxxxx9dd9",
    "name": "hwstaff_test"
  },
  "id": "99250e439b33431081xxxxxxxxxa885",
  "name": "test"
},
"user_id": "99250e439b33431081xxxxxxxxxa885",
"volume": {
  "category": "EFS",
  "ownership": "MANAGED",
  "mount_path": "/home/ma-user/work/",
  "capacity": 50,
  "read_only": false
},
"workspace_id": "0",
"billing_items": []
}
```

8. Call the API for **deleting a notebook instance** to delete the instance that is no longer needed.
 - a. Request body:
URI: DELETE `https://{ma_endpoint}/v1/{project_id}/notebooks/{id}`
Request header:
 - X-auth-Token
→ ***MIIZmgYJKoZIhvcNAQcCollIZizCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...***
 - Content-Type → application/jsonSet the bold parameters based on site requirements.
 - b. Status code **200** is returned, indicating that the instance is successfully deleted.

25.2 Using PyTorch to Create a Training Job (New-Version Training)

This section describes how to train a model by calling ModelArts APIs.

Overview

The process for creating a training job using PyTorch is as follows:

1. Call the API for authentication to obtain a user token, which will be added in a request header for authentication.
2. Call the API for **obtaining general flavors supported by a training job** to obtain the required flavors.
3. Call the API for **obtaining the preset AI frameworks supported by a training job** to view the engines and their versions supported by a training job.

4. Call the API for [creating an algorithm](#) to create an algorithm and record the algorithm ID.
5. Call the API for [creating a training job](#) to create a training job using the UUID returned by the created algorithm and record the job ID.
6. Call the API for [querying details about a training job](#) to query the job status using the job ID.
7. Call the API for [querying the logs of a specified task in a training job \(OBS link\)](#) to obtain the OBS path of the training job logs.
8. Call the API for [querying the running metrics of a specified task in a training job](#) to view detailed metrics of the job.
9. Call the API for [deleting a training job](#) to delete the job if it is no longer needed.

Prerequisites

- You have obtained the endpoints of [IAM](#) and ModelArts.
- The following information is available: region where ModelArts is deployed, project ID and name, account name and ID, and username and user ID.
- The training code of PyTorch is available. For example, the startup file **test-pytorch.py** has been stored in the **obs://cnnorth4-job-test-v2/pytorch/fast_example/code/cpu** directory of OBS.
- A data file for the training job is available. For example, a training dataset has been stored in the **obs://cnnorth4-job-test-v2/pytorch/fast_example/data** directory of OBS.
- A path for outputting the training job model has been created, for example, **obs://cnnorth4-job-test-v2/pytorch/fast_example/outputs**.
- A path for outputting the training job logs has been created, for example, **obs://cnnorth4-job-test-v2/pytorch/fast_example/log**.

Procedure

1. Call the API for [authentication](#) to obtain a user token.
 - a. Request body:

URI: POST `https://{iam_endpoint}/v3/auth/tokens`

Request header: Content-Type → application/json

Request body:

```
{
  "auth": {
    "identity": {
      "methods": ["password"],
      "password": {
        "user": {
          "name": "user_name",
          "password": "user_password",
          "domain": {
            "name": "domain_name"
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "ap-southeast-1"
      }
    }
  }
}
```

```
}  
}  
}  
}
```

Set the following parameters based on site requirements:

- *iam_endpoint*: IAM endpoint
 - **user_name**: IAM username
 - **user_password**: password of the login user
 - **domain_name**: account to which the user belongs
 - **ap-southeast-1**: project name, which is the region where ModelArts is deployed
- b. Status code **201 Created** is returned. The **X-Subject-Token** value in the response header is the token.

```
x-subject-token  
→ MIIZmgYJKoZIhvcNAQcColIZizCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...
```

2. Call the API for **obtaining general flavors supported by a training job** to obtain the required flavors.

- a. Request body:

URI: GET `https://{ma_endpoint}/v2/{project_id}/training-job-flavors?flavor_type=CPU`

Request header: X-Auth-Token

→ **MIIZmgYJKoZIhvcNAQcColIZizCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...**

Set the following parameters based on site requirements:

- *ma_endpoint*: ModelArts endpoint
 - *project_id*: user's project ID
 - **X-auth-Token**: token obtained in the previous step
- b. Status code **200** is returned. The response body is as follows:

```
{  
  "total_count": 2,  
  "flavors": [  
    {  
      "flavor_id": "modelarts.vm.cpu.2u",  
      "flavor_name": "Computing CPU(2U) instance",  
      "flavor_type": "CPU",  
      "billing": {  
        "code": "modelarts.vm.cpu.2u",  
        "unit_num": 1  
      },  
      "flavor_info": {  
        "max_num": 1,  
        "cpu": {  
          "arch": "x86",  
          "core_num": 2  
        },  
        "memory": {  
          "size": 8,  
          "unit": "GB"  
        },  
        "disk": {  
          "size": 50,  
          "unit": "GB"  
        }  
      }  
    }  
  ]  
}
```

```
        "unit": "GB"
      }
    },
    {
      "flavor_id": "modelarts.vm.cpu.8u",
      "flavor_name": "Computing CPU(8U) instance",
      "flavor_type": "CPU",
      "billing": {
        "code": "modelarts.vm.cpu.8u",
        "unit_num": 1
      },
      "flavor_info": {
        "max_num": 16,
        "cpu": {
          "arch": "x86",
          "core_num": 8
        },
        "memory": {
          "size": 32,
          "unit": "GB"
        },
        "disk": {
          "size": 50,
          "unit": "GB"
        }
      }
    }
  ]
}
```

- Select and record the flavor required for creating the training job based on the **flavor_id** value. This section uses flavor **modelarts.vm.cpu.8u** with its **max_num** set to **16** as an example.
3. Call the API for **obtaining the preset AI frameworks supported by a training job** to view the engines and their versions supported by a training job.
- a. Request body:
URI: GET `https://{ma_endpoint}/v2/{project_id}/job/training-job-engines`
Request header:
X-Auth-Token → **MIIZmgYJKoZIhvcNAQcColIZizCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...**
Content-Type → application/json
Set the bold parameters based on site requirements.
 - b. Status code **200** is returned. The response body is as follows (only part of the response body is displayed because there are many engines):

```
{
  "total": 28,
  "items": [
    .....
    {
      "engine_id": "mindspore_1.6.0-cann_5.0.3.6-py_3.7-euler_2.8.3-aarch64",
      "engine_name": "Ascend-Powered-Engine",
      "engine_version": "mindspore_1.6.0-cann_5.0.3.6-py_3.7-euler_2.8.3-aarch64",
      "v1_compatible": false,
      "run_user": "1000",
      "image_info": {
        "cpu_image_url": "",
        "gpu_image_url": "atelier/mindspore_1_6_0:train",
        "image_version": "mindspore_1.6.0-cann_5.0.3.6-py_3.7-euler_2.8.3-aarch64-snt9-
```

```
roma-20211231193205-33131ee"
  },
  .....
  {
    "engine_id": "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64",
    "engine_name": "PyTorch",
    "engine_version": "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64",
    "tags": [
      {
        "key": "auto_search",
        "value": "True"
      }
    ],
    "v1_compatible": false,
    "run_user": "1102",
    "image_info": {
      "cpu_image_url": "aip/pytorch_1_8:train",
      "gpu_image_url": "aip/pytorch_1_8:train",
      "image_version": "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-
x86_64-20210912152543-1e0838d"
    }
  },
  .....
  {
    "engine_id": "tensorflow_2.1.0-cuda_10.1-py_3.7-ubuntu_18.04-x86_64",
    "engine_name": "TensorFlow",
    "engine_version": "tensorflow_2.1.0-cuda_10.1-py_3.7-ubuntu_18.04-x86_64",
    "tags": [
      {
        "key": "auto_search",
        "value": "True"
      }
    ],
    "v1_compatible": false,
    "run_user": "1102",
    "image_info": {
      "cpu_image_url": "aip/tensorflow_2_1:train",
      "gpu_image_url": "aip/tensorflow_2_1:train",
      "image_version": "tensorflow_2.1.0-cuda_10.1-py_3.7-ubuntu_18.04-
x86_64-20210912152543-1e0838d"
    }
  },
  .....
]
}
```

Select the engine flavor required for creating a training job based on the **engine_name** and **engine_version** fields, and record the field values. This section uses the PyTorch engine as an example to describe how to create a job. In this example, the **engine_name** value is **PyTorch**, and the **engine_version** value is **pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64**.

4. Call the API for **creating an algorithm** to create an algorithm and record the algorithm ID.
 - a. Request body:
URI: POST `https://{ma_endpoint}/v2/{project_id}/algorithms`
Request header:
X-Auth-Token → **MIIZmgYJKoZlhvcNAQcCoIIzizCCGYcCAQExDTALBgIghkgBZQM EAgEwgXXXXXX...**
Content-Type → application/json
Set the bold parameters based on site requirements.

Request body:

```
{
  "metadata": {
    "name": "test-pytorch-cpu",
    "description": "test pytorch job in cpu in mode gloo"
  },
  "job_config": {
    "boot_file": "/cnnorth4-job-test-v2/pytorch/fast_example/code/cpu/test-pytorch.py",
    "code_dir": "/cnnorth4-job-test-v2/pytorch/fast_example/code/cpu/",
    "engine": {
      "engine_name": "PyTorch",
      "engine_version": "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64"
    },
    "inputs": [{
      "name": "data_url",
      "description": "Data source 1"
    }],
    "outputs": [{
      "name": "train_url",
      "description": "Output data 1"
    }],
    "parameters": [{
      "name": "dist",
      "description": "",
      "value": "False",
      "constraint": {
        "editable": true,
        "required": false,
        "sensitive": false,
        "type": "Boolean",
        "valid_range": [],
        "valid_type": "None"
      }
    }],
    {
      "name": "world_size",
      "description": "",
      "value": "1",
      "constraint": {
        "editable": true,
        "required": false,
        "sensitive": false,
        "type": "Integer",
        "valid_range": [],
        "valid_type": "None"
      }
    }
  ],
  "parameters_customization": true
},
"resource_requirements": []
}
```

Set the following parameters based on site requirements:

- **name** and **description** in the **metadata** field indicate the algorithm name and description, respectively.
- **code_dir** and **boot_file** in the **job_config** field indicate the code directory and code startup file of the algorithm, respectively. The code directory is the level-1 directory of the code startup file.
- **inputs** and **outputs** in the **job_config** field indicate the input and output of the algorithm, respectively. You can specify **data_url** and **train_url** based on the instance, and parse hyperparameters in the

code to specify the local path of the data file required for training and the local output path of the model generated during training.

- **parameters_customization** in the **job_config** field indicates whether to support custom hyperparameters. Set this parameter to **true**.
 - **parameters** in the **job_config** field indicates the hyperparameters of the algorithm. Set **name** to the hyperparameter name (a maximum of 64 characters, including uppercase letters, lowercase letters, digits, underscores (_), and hyphens (-)). Set **value** to the default value of the hyperparameter. Set **constraint** to the constraints of the hyperparameter. For example, set **type** to **String** (**String**, **Integer**, **Float**, and **Boolean** are supported), set **editable** to **true**, and set **required** to **false**.
 - **engine** in the **job_config** field indicates the engine on which the algorithm depends. Use the **engine_name** and **engine_version** values recorded in [3](#).
- b. Status code **200 OK** is returned, indicating that the algorithm is successfully created. The response body is as follows:

```
{
  "metadata": {
    "id": "01c399ae-8593-4ef5-9e4d-085950aacde1",
    "name": "test-pytorch-cpu",
    "description": "test pytorch job in cpu in mode gloo",
    "create_time": 1641890623262,
    "workspace_id": "0",
    "ai_project": "default-ai-project",
    "user_name": "",
    "domain_id": "0659fbf6de00109b0ff1c01fc037d240",
    "source": "custom",
    "api_version": "",
    "is_valid": true,
    "state": "",
    "size": 4790,
    "tags": null,
    "attr_list": null,
    "version_num": 0,
    "update_time": 0
  },
  "share_info": {},
  "job_config": {
    "code_dir": "/cnnorth4-job-test-v2/pytorch/fast_example/code/cpu/",
    "boot_file": "/cnnorth4-job-test-v2/pytorch/fast_example/code/cpu/test-pytorch.py",
    "parameters": [
      {
        "name": "dist",
        "description": "",
        "i18n_description": null,
        "value": "False",
        "constraint": {
          "type": "Boolean",
          "editable": true,
          "required": false,
          "sensitive": false,
          "valid_type": "None",
          "valid_range": []
        }
      },
      {
        "name": "world_size",
        "description": "",
        "i18n_description": null,
        "value": "1",
```

```
        "constraint": {
            "type": "Integer",
            "editable": true,
            "required": false,
            "sensitive": false,
            "valid_type": "None",
            "valid_range": []
        }
    },
    "parameters_customization": true,
    "inputs": [
        {
            "name": "data_url",
            "description": "Data source 1"
        }
    ],
    "outputs": [
        {
            "name": "train_url",
            "description": "Output data 1"
        }
    ],
    "engine": {
        "engine_id": "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64",
        "engine_name": "PyTorch",
        "engine_version": "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64",
        "tags": [
            {
                "key": "auto_search",
                "value": "True"
            }
        ]
    },
    "v1_compatible": false,
    "run_user": "1102",
    "image_info": {
        "cpu_image_url": "aip/pytorch_1.8:train",
        "gpu_image_url": "aip/pytorch_1.8:train",
        "image_version": "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64-20210912152543-1e0838d"
    },
    "code_tree": {
        "name": "cpu/",
        "children": [
            {
                "name": "test-pytorch.py"
            }
        ]
    },
    "resource_requirements": [],
    "advanced_config": {}
}
```

Record the value of **id** (algorithm ID, 32-bit UUID) in the **metadata** field for subsequent steps.

5. Call the API for **creating a training job** to create a training job using the UUID returned by the created algorithm and record the job ID.

- a. Request body:

URI: POST `https://{ma_endpoint}/v2/{project_id}/training-jobs`

Request header:

- X-Auth-Token
→ *MIIZmgYJKoZIhvcNAQcCollZizCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...*

- Content-Type → application/json

Set the bold parameters based on site requirements.

Request body:

```
{
  "kind": "job",
  "metadata": {
    "name": "test-pytorch-cpu01",
    "description": "test pytorch work cpu in mode gloo"
  },
  "algorithm": {
    "id": "01c399ae-8593-4ef5-9e4d-085950aacde1",
    "parameters": [{
      "name": "dist",
      "value": "False"
    },
    {
      "name": "world_size",
      "value": "1"
    }
  ],
  "inputs": [{
    "name": "data_url",
    "remote": {
      "obs": {
        "obs_url": "/cnnorth4-job-test-v2/pytorch/fast_example/data/"
      }
    }
  }],
  "outputs": [{
    "name": "train_url",
    "remote": {
      "obs": {
        "obs_url": "/cnnorth4-job-test-v2/pytorch/fast_example/outputs/"
      }
    }
  }],
  "spec": {
    "resource": {
      "flavor_id": "modelarts.vm.cpu.8u",
      "node_count": 1
    },
    "log_export_path": {
      "obs_url": "/cnnorth4-job-test-v2/pytorch/fast_example/log/"
    }
  }
}
```

Set the following parameters based on site requirements:

- Set **kind** to the type of the training job. The default value is **job**.
- Set **name** and **description** in the **metadata** field to the name and description of the training job.
- Set **id** in the **algorithm** field to the algorithm ID obtained in [4](#).
- Set **inputs** and **outputs** in the **algorithm** field to the information about the input and output URLs of the training job. In this example, **obs_url** in **remote** of the **inputs** parameter indicates the OBS path for selecting the training data from the OBS bucket. **obs_url** in **remote** of the **outputs** parameter indicates the OBS path for storing the training output.

- Set **flavor_id** in the **spec** field to the flavor on which the training job depends. Use the **flavor_id** recorded in [2. node_count](#) indicates whether to use multi-node training (distributed training). Set it to **1** for a single-node training by default. **log_export_path** specifies the OBS path to which logs are uploaded.
- b. Status code **201 Created** is returned, indicating that the training job has been created. The response body is as follows:

```
{
  "kind": "job",
  "metadata": {
    "id": "66ff6991-fd66-40b6-8101-0829a46d3731",
    "name": "test-pytorch-cpu01",
    "description": "test pytorch work cpu in mode gloo",
    "create_time": 1641892642625,
    "workspace_id": "0",
    "ai_project": "default-ai-project",
    "user_name": "",
    "annotations": {
      "job_template": "Template DL",
      "key_task": "worker"
    }
  },
  "status": {
    "phase": "Creating",
    "secondary_phase": "Creating",
    "duration": 0,
    "start_time": 0,
    "node_count_metrics": null,
    "tasks": [
      "worker-0"
    ]
  },
  "algorithm": {
    "id": "01c399ae-8593-4ef5-9e4d-085950aacde1",
    "name": "test-pytorch-cpu",
    "code_dir": "/cnnorth4-job-test-v2/pytorch/fast_example/code/cpu/",
    "boot_file": "/cnnorth4-job-test-v2/pytorch/fast_example/code/cpu/test-pytorch.py",
    "parameters": [
      {
        "name": "dist",
        "description": "",
        "i18n_description": null,
        "value": "False",
        "constraint": {
          "type": "Boolean",
          "editable": true,
          "required": false,
          "sensitive": false,
          "valid_type": "None",
          "valid_range": []
        }
      },
      {
        "name": "world_size",
        "description": "",
        "i18n_description": null,
        "value": "1",
        "constraint": {
          "type": "Integer",
          "editable": true,
          "required": false,
          "sensitive": false,
          "valid_type": "None",
          "valid_range": []
        }
      }
    ]
  }
}
```

```
],
"parameters_customization": true,
"inputs": [
  {
    "name": "data_url",
    "description": "Data source 1",
    "local_dir": "/home/ma-user/modelarts/inputs/data_url_0",
    "remote": {
      "obs": {
        "obs_url": "/cnnorth4-job-test-v2/pytorch/fast_example/data/"
      }
    }
  }
],
"outputs": [
  {
    "name": "train_url",
    "description": "Output data 1",
    "local_dir": "/home/ma-user/modelarts/outputs/train_url_0",
    "remote": {
      "obs": {
        "obs_url": "/cnnorth4-job-test-v2/pytorch/fast_example/outputs/"
      }
    },
    "mode": "upload_periodically",
    "period": 30
  }
],
"engine": {
  "engine_id": "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64",
  "engine_name": "PyTorch",
  "engine_version": "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64",
  "usage": "training",
  "support_groups": "public",
  "tags": [
    {
      "key": "auto_search",
      "value": "True"
    }
  ],
  "v1_compatible": false,
  "run_user": "1102"
},
"spec": {
  "resource": {
    "flavor_id": "modelarts.vm.cpu.8u",
    "flavor_name": "Computing CPU(8U) instance",
    "node_count": 1,
    "flavor_detail": {
      "flavor_type": "CPU",
      "billing": {
        "code": "modelarts.vm.cpu.8u",
        "unit_num": 1
      },
      "flavor_info": {
        "cpu": {
          "arch": "x86",
          "core_num": 8
        },
        "memory": {
          "size": 32,
          "unit": "GB"
        },
        "disk": {
          "size": 50,
          "unit": "GB"
        }
      }
    }
  }
}
```

```
    }  
  },  
  "log_export_path": {  
    "obs_url": "/cnnorth4-job-test-v2/pytorch/fast_example/log/"  
  },  
  "is_hosted_log": true  
}
```

- Record the **id** value (training job ID) in the **metadata** field for subsequent steps.
 - **phase** and **secondary_phase** under **Status** indicate the status and next status of the training job, respectively. In the example, **Creating** indicates that the training job is being created.
6. Call the API for [querying details about a training job](#) to query the job status using the job ID.

- a. Request body:

URI: GET `https://{ma_endpoint}/v2/{project_id}/training-jobs/{training_job_id}`

Request header: X-Auth-Token

→ *MIIZmgYJKoZIhvcNAQcCollZizCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...*

Set the following parameter based on site requirements:

Set **training_job_id** to the training job ID recorded in [5](#).

- b. Status code **200 OK** is returned. The response body is as follows:

```
{  
  "kind": "job",  
  "metadata": {  
    "id": "66ff6991-fd66-40b6-8101-0829a46d3731",  
    "name": "test-pytorch-cpu01",  
    "description": "test pytorch work cpu in mode gloo",  
    "create_time": 1641892642625,  
    "workspace_id": "0",  
    "ai_project": "default-ai-project",  
    "user_name": "hwstaff_z00424192",  
    "annotations": {  
      "job_template": "Template DL",  
      "key_task": "worker"  
    }  
  },  
  "status": {  
    "phase": "Running",  
    "secondary_phase": "Running",  
    "duration": 268000,  
    "start_time": 1641892655000,  
    "node_count_metrics": [  
      [  
        1641892645000,  
        0  
      ],  
      [  
        1641892654000,  
        0  
      ],  
      [  
        1641892655000,  
        1  
      ],  
      [  
        1641892922000,  
        1  
      ]  
    ]  
  }  
}
```

```
    ],
    [
        1641892923000,
        1
    ]
],
"tasks": [
    "worker-0"
]
},
"algorithm": {
    "id": "01c399ae-8593-4ef5-9e4d-085950aacde1",
    "name": "test-pytorch-cpu",
    "code_dir": "/cnnorth4-job-test-v2/pytorch/fast_example/code/cpu/",
    "boot_file": "/cnnorth4-job-test-v2/pytorch/fast_example/code/cpu/test-pytorch.py",
    "parameters": [
        {
            "name": "dist",
            "description": "",
            "i18n_description": null,
            "value": "False",
            "constraint": {
                "type": "Boolean",
                "editable": true,
                "required": false,
                "sensitive": false,
                "valid_type": "None",
                "valid_range": []
            }
        },
        {
            "name": "world_size",
            "description": "",
            "i18n_description": null,
            "value": "1",
            "constraint": {
                "type": "Integer",
                "editable": true,
                "required": false,
                "sensitive": false,
                "valid_type": "None",
                "valid_range": []
            }
        }
    ],
    "parameters_customization": true,
    "inputs": [
        {
            "name": "data_url",
            "description": "Data source 1",
            "local_dir": "/home/ma-user/modelarts/inputs/data_url_0",
            "remote": {
                "obs": {
                    "obs_url": "/cnnorth4-job-test-v2/pytorch/fast_example/data/"
                }
            }
        }
    ],
    "outputs": [
        {
            "name": "train_url",
            "description": "Output data 1",
            "local_dir": "/home/ma-user/modelarts/outputs/train_url_0",
            "remote": {
                "obs": {
                    "obs_url": "/cnnorth4-job-test-v2/pytorch/fast_example/outputs/"
                }
            }
        }
    ],
    "mode": "upload_periodically",
```

```
        "period": 30
      },
    ],
    "engine": {
      "engine_id": "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64",
      "engine_name": "PyTorch",
      "engine_version": "pytorch_1.8.0-cuda_10.2-py_3.7-ubuntu_18.04-x86_64",
      "usage": "training",
      "support_groups": "public",
      "tags": [
        {
          "key": "auto_search",
          "value": "True"
        }
      ],
      "v1_compatible": false,
      "run_user": "1102"
    },
  },
  "spec": {
    "resource": {
      "flavor_id": "modelarts.vm.cpu.8u",
      "flavor_name": "Computing CPU(8U) instance",
      "node_count": 1,
      "flavor_detail": {
        "flavor_type": "CPU",
        "billing": {
          "code": "modelarts.vm.cpu.8u",
          "unit_num": 1
        },
      },
      "flavor_info": {
        "cpu": {
          "arch": "x86",
          "core_num": 8
        },
        "memory": {
          "size": 32,
          "unit": "GB"
        },
        "disk": {
          "size": 50,
          "unit": "GB"
        }
      }
    },
    "log_export_path": {
      "obs_url": "/cnnorth4-job-test-v2/pytorch/fast_example/log/"
    },
    "is_hosted_log": true
  }
}
```

You can learn about the version details of the training job based on the response. The **status** value is **Running**, indicating that the training job is running.

7. Call the API for [querying the logs of a specified task in a training job \(OBS link\)](#) to obtain the OBS path of the training job logs.

- a. Request body:

URI format: GET `https://{ma_endpoint}/v2/{project_id}/training-jobs/{training_job_id}/tasks/{task_id}/logs/url`

Request header:

X-Auth-

Token → *MIIZmgYJKoZIhvcNAQcColIZizCCGYcCAQExDTALBglghkgBZQM
EAgEwgXXXXXX...*

Content-Type → **text/plain**

Set the following parameters based on site requirements:

- **task_id** indicates the name of the training job. Generally, set it to **work-0**.
- **Content-Type** can be set either to **text/plain** or **application/octet-stream**. **text/plain** indicates that a temporary OBS preview URL is returned. **application/octet-stream** indicates that a temporary OBS download URL is returned.

- b. Status code **200 OK** is returned. The response body is as follows:

```
{
  "obs_url": "https://modelarts-training-log-cn-north-4.obs.cn-
north-4.myhuaweicloud.com:443/66ff6991-fd66-40b6-8101-0829a46d3731/worker-0/modelarts-
job-66ff6991-fd66-40b6-8101-0829a46d3731-worker-0.log?
AWSAccessKeyId=GFGTBKOZENDD83QEMZMV&Expires=1641896599&Signature=BedFZHEU1oC
mqlI912UL9mXlhkg%3D"
}
```

The returned field indicates the OBS path of logs. You can copy the value to the browser to view the result.

8. Call the API for **querying the running metrics of a specified task in a training job** to view detailed metrics of the job.

- a. Request body:

URI format: GET https://{ma_endpoint}/v2/{project_id}/training-jobs/{training_job_id}/metrics/{task_id}

Request header: X-Auth-Token

→ **MIIZmgYJKoZlhvcNAQcCollZizCCGYcCAQExDTALBgIghkgBZQMEAgEwgXXXXXX...**

Set the bold parameters based on site requirements.

- b. Status code **200 OK** is returned. The response body is as follows:

```
{
  "metrics": [
    {
      "metric": "cpuUsage",
      "value": [
        -1,
        -1,
        28.622,
        35.053,
        39.988,
        40.069,
        40.082,
        40.094
      ]
    },
    {
      "metric": "memUsage",
      "value": [
        -1,
        -1,
        0.544,
        0.641,
        0.736,
        0.737,
        0.738,
        0.739
      ]
    }
  ],
  {
```

```
    "metric": "npuUtil",
    "value": [
      -1,
      -1,
      -1,
      -1,
      -1,
      -1,
      -1,
      -1,
      -1
    ]
  },
  {
    "metric": "npuMemUsage",
    "value": [
      -1,
      -1,
      -1,
      -1,
      -1,
      -1,
      -1,
      -1
    ]
  },
  {
    "metric": "gpuUtil",
    "value": [
      -1,
      -1,
      -1,
      -1,
      -1,
      -1,
      -1,
      -1
    ]
  },
  {
    "metric": "gpuMemUsage",
    "value": [
      -1,
      -1,
      -1,
      -1,
      -1,
      -1,
      -1,
      -1
    ]
  }
]
```

You can view the metrics such as the CPU usage.

9. Call the API for **deleting a training job** to delete the job if it is no longer needed.

- a. Request body:

URI: DELETE `https://{ma_endpoint}/v2/{project_id}/training-jobs/{training_job_id}`

Request header: X-Auth-Token

→ ***MIIZmgYJKoZIhvcNAQcColIZizCCGYcCAQExDTALBgIghkgBZQMEAgEwgXXXXXX...***

Set the bold parameters based on site requirements.

- b. Status code **202 No Content** is returned, indicating that the job is successfully deleted.

25.3 Managing ModelArts Authorization

This section describes how to manage agency authorization by calling ModelArts APIs.

Overview

The process of managing ModelArts authorization is as follows:

1. Call the API for [authentication](#) to obtain a user token, which will be added in a request header for authentication.
2. Call the API for [creating a ModelArts agency](#) to create an agency for ModelArts-dependent services, such as OBS and SWR.
3. Call the API for [configuring authorization](#) to configure ModelArts authorization. The administrator can use this API to set an agency for IAM users and set the access key of the current user.

NOTE

ModelArts functions, such as data management, training management, development environment, and real-time services, can be used only after being authorized.

4. Call the API for [obtaining the authorization list](#) to view the authorization.
5. Call the API for [deleting authorization](#) to delete the authorization of a specified user or all users.

Prerequisites

- You have obtained the [IAM endpoint](#) and ModelArts endpoint.
- The following information is available: region where ModelArts is deployed, [project name and ID](#), [account name and ID](#), and [username and ID](#).

Procedure

1. Call the API for [authentication](#) to obtain a user token.

- a. Request body:

URI: POST `https://{iam_endpoint}/v3/auth/tokens`

Request header: Content-Type → application/json

Request body:

```
{
  "auth": {
    "identity": {
      "methods": ["password"],
      "password": {
        "user": {
          "name": "user_name",
          "password": "user_password",
          "domain": {
            "name": "domain_name"
          }
        }
      }
    }
  }
}
```

```
{
  "scope": {
    "project": {
      "name": "ap-southeast-1"
    }
  }
}
```

Set the italic parameters based on site requirements.

- *iam_endpoint*: IAM endpoint
 - *user_name*: IAM username
 - *user_password*: Login password of the user
 - *domain_name*: Account to which the user belongs
 - *ap-southeast-1*: Project name, which is the region where ModelArts is deployed
- b. Status code **201 Created** is returned. The **X-Subject-Token** value in the response header is the token.
- ```
x-subject-token →
MIIZmgYJKoZIhvcNAQcCollIZiCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...
```
2. Call the API for [creating a ModelArts agency](#) to create an agency for ModelArts-dependent services, such as OBS, SWR, and IEF.
- a. Request body:
- URI: POST `https://{endpoint}/v2/{project_id}/agency`
- Request header:
- X-auth-Token  
→ *MIIZmgYJKoZIhvcNAQcCollIZiCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...*
  - Content-Type → application/json
- Request body:
- ```
{
  "agency_name_suffix" : "iam-user01"
}
```
- Set the italic parameters based on site requirements.
- *endpoint*: ModelArts endpoint
 - *project_id*: Your project ID
 - **X-auth-Token**: Token obtained in the previous step
 - **agency_name_suffix**: Customized suffix of the agency name
- b. Response body with status code **200 OK** returned (indicating that **ma_agency_iam-user01** has been created):
- ```
{
 "agency_name": "ma_agency_iam-user01"
}
```
3. Call the API for [configuring authorization](#) to configure ModelArts authorization. The administrator can use this API to set an agency for IAM users and set the access key of the current user.

## a. Request body:

URI: POST `https://{endpoint}/v2/{project_id}/authorizations`

Request header:

- X-auth-Token  
→ *MIIZmgYJKoZIhvcNAQcCollZizCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...*
- Content-Type → application/json

Request body:

```
{
 "user_id": "****af917080f5d21f55c018ba19****",
 "type": "agency",
 "content": "ma_agency_iam-user01"
}
```

Set the italic parameters based on site requirements. Set **user\_id** to the IAM user ID and **content** to the ModelArts agency created in the previous step.

b. Response body with status code **200 OK** returned (indicating that the authorization configuration is complete):

```
{
 "result": true
}
```

4. Call the API for **obtaining the authorization list** to view the authorization.

## a. Request body:

URI: GET `https://{endpoint}/v2/{project_id}/authorizations`

Request header: X-auth-Token

→ *MIIZmgYJKoZIhvcNAQcCollZizCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...*

Set the italic parameters based on site requirements.

b. Response body with status code **200 OK** returned:

```
{
 "auth": [
 {
 "create_time": 1622804433221,
 "user_id": "all-users",
 "user_name": "all-users",
 "type": "agency",
 "content": "modelarts_agency"
 },
 {
 "create_time": 1625457065365,
 "user_id": "****af917080f5d21f55c018ba19****",
 "user_name": null,
 "type": "agency",
 "content": "ma_agency_iam-user01"
 }
],
 "total_count": 2
}
```

Obtain the authorization information based on the response.

5. Call the API for **deleting authorization** to delete the authorization of a specified user or all users.

## a. Request body:

URI: DELETE `https://{endpoint}/v2/{project_id}/authorizations?``user_id=****d80fb058844ae8b82aa66d9fe****`

Request header: X-auth-Token

→ *MIIZmgYJKoZIhvcNAQcCollZizCCGYcCAQExDTALBglghkgBZQMEAgEwgXXXXXX...*

Set the italic parameters based on site requirements. Set

*\*\*\*d80fb058844ae8b82aa66d9fe\*\*\** to the IAM user ID of the specified user.

- b. Response body with status code **200 OK** returned (indicating that the authorization has been deleted):

```
{
 "result": true
}
```

- c. If **user\_id** is set to **all-users**, the authorization of all IAM users will be deleted. Response body with status code **200 OK** returned (indicating that the authorization has been deleted):

```
{
 "result": true,
 "success_message": "Delete all-users auth info successfully!"
}
```

# 26 Permissions Policies and Supported Actions

---

## 26.1 Introduction

This section describes fine-grained permissions management for ModelArts. If your Huawei Cloud account does not require individual IAM users, skip this section.

New IAM users do not have any permissions assigned by default. You need to first add them to one or more groups and attach policies or roles to these groups. The users then inherit permissions from the groups and can perform specified operations on cloud services based on the permissions they have been assigned.

You can grant users permissions by using [roles](#) and [policies](#). Roles are provided by IAM to define service-based permissions that match users' job responsibilities. Policies are more fine-grained, API-based permissions required to perform operations on specific cloud resources under certain conditions, meeting requirements for secure access control.

### NOTE

If you want to allow or deny the access to an API, use fine-grained policies.

An account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. The required permissions are determined by the actions supported by the API. Only users with the policies allowing for those actions can call the API successfully. For example, if an IAM user wants to create notebook instances using an API, the user must have been granted permissions that allow the **modelarts:notebook:create** action.

## Supported Actions

ModelArts provides system policies that can be directly used in IAM. You can also create custom policies and use them to supplement system policies, implementing more refined access control. The following are related concepts:

- **Permission:** A statement in a policy that allows or denies certain operations.
- **APIs:** REST APIs that can be called in a custom policy.

- **Actions:** specific operations that are allowed or denied.
- **Dependencies:** actions which a specific action depends on. When allowing an action for a user, you also need to allow its dependent actions for that user.
- **IAM or enterprise projects:** Type of projects for which an action will take effect. Policies that contain actions for both IAM and enterprise projects can be used and applied for both IAM and Enterprise Management. Policies that contain actions only for IAM projects can be used and applied to IAM only. For details about the differences between IAM and enterprise projects, see [Differences Between IAM and Enterprise Management](#).

 **NOTE**

√: supported; x: not supported

## 26.2 Data Management Permissions

**Table 26-1** Fine-grained permissions for dataset management

| Permission                       | API                                        | Action                   | Related Action                                                                                                                | IAM Project | Enterprise Project |
|----------------------------------|--------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| Querying the Dataset List        | GET /v2/{project_id}/datasets              | modelarts:dataset:list   | N/A                                                                                                                           | √           | √                  |
| Creating a Dataset               | POST /v2/{project_id}/datasets             | modelarts:dataset:create | obs:bucket:HeadBucket<br>obs:bucket:ListBucket<br>obs:object:PutObject<br>obs:object:PutObject<br>obs:bucket:ListAllMyBuckets | √           | √                  |
| Querying Details About a Dataset | GET /v2/{project_id}/datasets/{dataset_id} | modelarts:dataset:get    | N/A                                                                                                                           | √           | √                  |
| Modifying a Dataset              | PUT /v2/{project_id}/datasets/{dataset_id} | modelarts:dataset:update | N/A                                                                                                                           | √           | √                  |

| Permission                                                                     | API                                                                                                   | Action                             | Related Action                                                                  | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------|---------------------------------------------------------------------------------|----------------------------|-------------------------------------------|
| Deleting a Dataset                                                             | DELETE /v2/{project_id}/datasets/{dataset_id}                                                         | modelarts:dataset:delete           | obs:bucket:ListAllMyBuckets<br>obs:bucket:ListBucket<br>obs:object:DeleteObject | √                          | √                                         |
| Querying Dataset Statistics                                                    | GET /v2/{project_id}/datasets/{dataset_id}/data-annotations/stats                                     | modelarts:dataset:get              | N/A                                                                             | √                          | √                                         |
| Querying the Monitoring Data of a Dataset                                      | GET /v2/{project_id}/datasets/{dataset_id}/metrics                                                    | modelarts:dataset:get              | N/A                                                                             | √                          | √                                         |
| Querying Statistics for a Team Labeling Task                                   | GET /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/data-annotations/stats | modelarts:dataset:getWorkforceTask | N/A                                                                             | √                          | √                                         |
| Querying Statistics for the Member Labeling Progresses in a Team Labeling Task | GET /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/metrics                | modelarts:dataset:getWorkforceTask | N/A                                                                             | √                          | √                                         |

**Table 26-2** Fine-grained permissions for dataset version management

| Permission                               | API                                                                 | Action                           | Related Action                                                                  | IAM Project | Enterprise Project |
|------------------------------------------|---------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------|-------------|--------------------|
| Querying the Dataset Version List        | GET /v2/{project_id}/datasets/{dataset_id}/versions                 | modelarts:dataset:get            | N/A                                                                             | √           | √                  |
| Creating a Dataset Labeling Version      | POST /v2/{project_id}/datasets/{dataset_id}/versions                | modelarts:dataset:publishVersion | obs:object:PutObject                                                            | √           | √                  |
| Querying Details About a Dataset Version | GET /v2/{project_id}/datasets/{dataset_id}/versions/{version_id}    | modelarts:dataset:get            | N/A                                                                             | √           | √                  |
| Deleting a Dataset Labeling Version      | DELETE /v2/{project_id}/datasets/{dataset_id}/versions/{version_id} | modelarts:dataset:deleteVersion  | obs:bucket:ListAllMyBuckets<br>obs:bucket:ListBucket<br>obs:object:DeleteObject | √           | √                  |



**Table 26-3** Fine-grained permissions for sample management

| Permission                      | API                                                                             | Action                         | Related Action          | IAM Project | Enterprise Project |
|---------------------------------|---------------------------------------------------------------------------------|--------------------------------|-------------------------|-------------|--------------------|
| Querying the Sample List        | GET /v2/{project_id}/datasets/{dataset_id}/data-annotations/samples             | modelarts:sample:listSamples   | obs:object:GetObject    | √           | √                  |
| Adding Samples in Batches       | POST /v2/{project_id}/datasets/{dataset_id}/data-annotations/samples            | modelarts:sample:addSamples    | obs:object:PutObject    | √           | √                  |
| Deleting Samples in Batches     | POST /v2/{project_id}/datasets/{dataset_id}/data-annotations/samples/delete     | modelarts:sample:deleteSamples | obs:object:DeleteObject | √           | √                  |
| Querying Details About a Sample | GET /v2/{project_id}/datasets/{dataset_id}/data-annotations/samples/{sample_id} | modelarts:sample:getSample     | obs:object:GetObject    | √           | √                  |
| Querying Sample Search Criteria | GET /v2/{project_id}/datasets/{dataset_id}/data-annotations/search-condition    | modelarts:sample:listSamples   | N/A                     | √           | √                  |

| Permission                                               | API                                                                                                                 | Action                       | Related Action       | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------|----------------------------|-------------------------------------------|
| Querying the Sample List of a Team Labeling Task by Page | GET /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/data-annotations/samples             | modelarts:sample:listSamples | obs:object:GetObject | √                          | √                                         |
| Querying Details About a Team Labeling Sample            | GET /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/data-annotations/samples/{sample_id} | modelarts:sample:getSample   | obs:object:GetObject | √                          | √                                         |

**Table 26-4** Fine-grained permissions for label management

| Permission                      | API                                                                | Action                       | Related Action | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|---------------------------------|--------------------------------------------------------------------|------------------------------|----------------|----------------------------|-------------------------------------------|
| Querying the Dataset Label List | GET /v2/{project_id}/datasets/{dataset_id}/data-annotations/labels | modelarts:dataset:getDataset | N/A            | √                          | √                                         |

| Permission                                          | API                                                                                | Action                          | Related Action          | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|-----------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------|-------------------------|----------------------------|-------------------------------------------|
| Creating a Dataset Label                            | POST /v2/{project_id}/datasets/{dataset_id}/data-annotations/labels                | modelarts:dataset:updateDataset | N/A                     | √                          | √                                         |
| Modifying Labels in Batches                         | PUT /v2/{project_id}/datasets/{dataset_id}/data-annotations/labels                 | modelarts:dataset:updateDataset | N/A                     | √                          | √                                         |
| Deleting Labels in Batches                          | POST /v2/{project_id}/datasets/{dataset_id}/data-annotations/labels/delete         | modelarts:dataset:updateDataset | N/A                     | √                          | √                                         |
| Updating a Label by Label Name                      | PUT /v2/{project_id}/datasets/{dataset_id}/data-annotations/labels/{label_name}    | modelarts:dataset:updateDataset | N/A                     | √                          | √                                         |
| Deleting a Label and the Files with This Label Only | DELETE /v2/{project_id}/datasets/{dataset_id}/data-annotations/labels/{label_name} | modelarts:dataset:updateDataset | obs:object:DeleteObject | √                          | √                                         |

**Table 26-5** Fine-grained permissions for manual labeling

| Permission                        | API                                                                 | Action                          | Related Action       | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|-----------------------------------|---------------------------------------------------------------------|---------------------------------|----------------------|----------------------------|-------------------------------------------|
| Updating Sample Labels in Batches | PUT /v2/{project_id}/datasets/{dataset_id}/data-annotations/samples | modelarts:dataset:updateDataset | obs:object:GetObject | √                          | √                                         |

**Table 26-6** Fine-grained permissions for labeling task management

| Permission                                        | API                                                                            | Action                                | Related Action | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|---------------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------|----------------|----------------------------|-------------------------------------------|
| Querying the Team Labeling Task List of a Dataset | GET /v2/{project_id}/datasets/{dataset_id}/workforce-tasks                     | modelarts:dataset:listWorkforceTasks  | N/A            | √                          | √                                         |
| Creating a Team Labeling Task                     | POST /v2/{project_id}/datasets/{dataset_id}/workforce-tasks                    | modelarts:dataset:createWorkforceTask | N/A            | √                          | √                                         |
| Querying Details About a Team Labeling Task       | GET /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id} | modelarts:dataset:getWorkforceTask    | N/A            | √                          | √                                         |

| Permission                                             | API                                                                                              | Action                                | Related Action | IAM Project | Enterprise Project |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------|----------------|-------------|--------------------|
| Starting a Team Labeling Task                          | POST /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/acceptance       | modelarts:dataset:updateWorkforceTask | N/A            | √           | √                  |
| Updating a Team Labeling Task                          | PUT /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}                   | modelarts:dataset:updateWorkforceTask | N/A            | √           | √                  |
| Deleting a Team Labeling Task                          | DELETE /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}                | modelarts:dataset:deleteWorkforceTask | N/A            | √           | √                  |
| Creating a Team Labeling Acceptance Task               | POST /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/acceptance       | modelarts:dataset:updateWorkforceTask | N/A            | √           | √                  |
| Querying the Acceptance Report of a Team Labeling Task | GET /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/acceptance/report | modelarts:dataset:getWorkforceTask    | N/A            | √           | √                  |

| Permission                                             | API                                                                                              | Action                                | Related Action | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------|----------------|----------------------------|-------------------------------------------|
| Updating the Status of a Team Labeling Acceptance Task | PUT /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/acceptance/status | modelarts:dataset:updateWorkforceTask | N/A            | √                          | √                                         |

**Table 26-7** Fine-grained permissions for team labeling flow management

| Permission                                          | API                                                                                                      | Action                                | Related Action | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------|----------------|----------------------------|-------------------------------------------|
| Submitting Sample Review Comments for Acceptance    | POST /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/acceptance/batch-comment | modelarts:dataset:updateWorkforceTask | N/A            | √                          | √                                         |
| Updating Labels of Team Labeling Samples in Batches | PUT /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/data-annotations/samples  | modelarts:dataset:updateWorkforceTask | N/A            | √                          | √                                         |

**Table 26-8** Fine-grained permissions for labeling team management

| Permission                             | API                                                                   | Action                                | Related Action | IA<br>M<br>Pro<br>jec<br>t | Ent<br>er<br>p<br>ris<br>e<br>Pro<br>jec<br>t |
|----------------------------------------|-----------------------------------------------------------------------|---------------------------------------|----------------|----------------------------|-----------------------------------------------|
| Querying the Labeling Team List        | GET /v2/{project_id}/workforces                                       | modelarts:processTask:listWorkforce   | N/A            | √                          | √                                             |
| Creating a Labeling Team               | POST /v2/{project_id}/workforces                                      | modelarts:processTask:createWorkforce | N/A            | √                          | √                                             |
| Querying Details About a Labeling Team | GET /v2/{project_id}/workforces/{workforce_id}                        | modelarts:processTask:getWorkforce    | N/A            | √                          | √                                             |
| Updating a Labeling Team               | PUT /v2/{project_id}/workforces/{workforce_id}                        | modelarts:processTask:updateWorkforce | N/A            | √                          | √                                             |
| Deleting a Labeling Team               | DELETE /v2/{project_id}/workforces/{workforce_id}/workers/{worker_id} | modelarts:processTask:updateWorkforce | N/A            | √                          | √                                             |

**Table 26-9** Fine-grained permissions for labeling team member management

| Permission                                | API                                                                                    | Action                                | Related Action | IA<br>M<br>Pro<br>jec<br>t | Ent<br>er<br>p<br>ris<br>e<br>Pro<br>jec<br>t |
|-------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------|----------------|----------------------------|-----------------------------------------------|
| Sending an Email to Labeling Team Members | POST /v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/notify | modelarts:dataset:updateWorkforceTask | N/A            | √                          | √                                             |

| Permission                                    | API                                                                   | Action                                | Related Action | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|-----------------------------------------------|-----------------------------------------------------------------------|---------------------------------------|----------------|----------------------------|-------------------------------------------|
| Querying All Labeling Team Members            | GET /v2/{project_id}/workforces/workers                               | modelarts:processTask:getWorkforce    | N/A            | √                          | √                                         |
| Querying Members in a Labeling Team           | GET /v2/{project_id}/workforces/{workforce_id}/workers                | modelarts:processTask:getWorkforce    | N/A            | √                          | √                                         |
| Creating a Labeling Team Member               | POST /v2/{project_id}/workforces/{workforce_id}/workers               | modelarts:processTask:updateWorkforce | N/A            | √                          | √                                         |
| Deleting Labeling Team Members in Batches     | POST /v2/{project_id}/workforces/{workforce_id}/workers/batch-delete  | modelarts:processTask:updateWorkforce | N/A            | √                          | √                                         |
| Querying Details About a Labeling Team Member | GET /v2/{project_id}/workforces/{workforce_id}/workers/{worker_id}    | modelarts:processTask:getWorkforce    | N/A            | √                          | √                                         |
| Updating Labeling Team Members                | PUT /v2/{project_id}/workforces/{workforce_id}/workers/{worker_id}    | modelarts:processTask:updateWorkforce | N/A            | √                          | √                                         |
| Deleting a Labeling Team Member               | DELETE /v2/{project_id}/workforces/{workforce_id}/workers/{worker_id} | modelarts:processTask:updateWorkforce | N/A            | √                          | √                                         |



**Table 26-10** Fine-grained permissions for data import tasks

| Permission                                   | API                                                               | Action                             | Related Action | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|----------------------------------------------|-------------------------------------------------------------------|------------------------------------|----------------|----------------------------|-------------------------------------------|
| Querying the Dataset Import Task List        | GET /v2/{project_id}/datasets/{dataset_id}/import-tasks           | modelarts:dataset:getDataset       | N/A            | √                          | √                                         |
| Creating a Dataset Import Task               | POST /v2/{project_id}/datasets/{dataset_id}/import-tasks          | modelarts:dataset:createImportTask | N/A            | √                          | √                                         |
| Querying Details About a Dataset Import Task | GET /v2/{project_id}/datasets/{dataset_id}/import-tasks/{task_id} | modelarts:dataset:getDataset       | N/A            | √                          | √                                         |

**Table 26-11** Fine-grained permissions for data export tasks

| Permission                            | API                                                      | Action                             | Related Action | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|---------------------------------------|----------------------------------------------------------|------------------------------------|----------------|----------------------------|-------------------------------------------|
| Querying the Dataset Export Task List | GET /v2/{project_id}/datasets/{dataset_id}/export-tasks  | modelarts:dataset:getDataset       | N/A            | √                          | √                                         |
| Creating a Dataset Export Task        | POST /v2/{project_id}/datasets/{dataset_id}/export-tasks | modelarts:dataset:createExportTask | N/A            | √                          | √                                         |

| Permission                                   | API                                                                | Action                       | Related Action | IAM Project | Enterprise Project |
|----------------------------------------------|--------------------------------------------------------------------|------------------------------|----------------|-------------|--------------------|
| Querying the Status of a Dataset Export Task | GET /v2/{project_id}/datasets/{resource_id}/export-tasks/{task_id} | modelarts:dataset:getDataset | N/A            | √           | √                  |

**Table 26-12** Fine-grained permissions for data synchronization tasks

| Permission                                            | API                                                         | Action                          | Related Action                                       | IAM Project | Enterprise Project |
|-------------------------------------------------------|-------------------------------------------------------------|---------------------------------|------------------------------------------------------|-------------|--------------------|
| Synchronizing a Dataset                               | POST /v2/{project_id}/datasets/{dataset_id}/sync-data       | modelarts:dataset:updateDataset | obs:bucket:ListBucket<br>obs:bucket:ListAllMyBuckets | √           | √                  |
| Querying the Status of a Dataset Synchronization Task | GET /v2/{project_id}/datasets/{dataset_id}/sync-data/status | modelarts:dataset:getDataset    | N/A                                                  | √           | √                  |

**Table 26-13** Fine-grained permissions for auto labeling tasks

| Permission                                     | API                                                                             | Action                          | Related Action                                                                                                                                                                                                                        | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------------|
| Querying the Auto Labeling Sample List         | GET /v2/{project_id}/datasets/{dataset_id}/auto-annotations/samples             | modelarts:sample:listSamples    | obs:object:GetObject                                                                                                                                                                                                                  | √                          | √                                         |
| Querying Details About an Auto Labeling Sample | GET /v2/{project_id}/datasets/{dataset_id}/auto-annotations/samples/{sample_id} | modelarts:sample:getSample      | obs:object:GetObject                                                                                                                                                                                                                  | √                          | √                                         |
| Querying Auto Labeling Tasks by Page           | GET /v2/{project_id}/datasets/{dataset_id}/tasks                                | modelarts:dataset:getDataset    | N/A                                                                                                                                                                                                                                   | √                          | √                                         |
| Starting an Auto Labeling Task                 | POST /v2/{project_id}/datasets/{dataset_id}/tasks                               | modelarts:dataset:updateDataset | obs:bucket:PutBucketAcl<br>obs:bucket:GetBucketAcl<br>obs:bucket:GetBucketPolicy<br>obs:bucket:DeleteBucketPolicy<br>obs:bucket:ListBucket<br>obs:bucket:ListAllMyBuckets<br>obs:object:DeleteObject<br>obs:bucket:ListBucketVersions | √                          | √                                         |

| Permission                                   | API                                                              | Action                          | Related Action | IAM Project | Enterprise Project |
|----------------------------------------------|------------------------------------------------------------------|---------------------------------|----------------|-------------|--------------------|
| Querying Details About an Auto Labeling Task | GET /v2/{project_id}/datasets/{dataset_id}/tasks/{task_id}       | modelarts:dataset:getDataset    | N/A            | √           | √                  |
| Stopping an Auto Labeling Task               | POST /v2/{project_id}/datasets/{dataset_id}/tasks/{task_id}/stop | modelarts:dataset:updateDataset | N/A            | √           | √                  |

**Table 26-14** Fine-grained permissions for data processing tasks

| Permission                             | API                                  | Action                                 | Related Action | IAM Project | Enterprise Project |
|----------------------------------------|--------------------------------------|----------------------------------------|----------------|-------------|--------------------|
| Querying the Data Processing Task List | GET /v2/{project_id}/processor-tasks | modelarts:processTask:listProcessTasks | N/A            | √           | √                  |

| Permission                                         | API                                                                  | Action                                  | Related Action                                                                                                                                                                                                                                     | IAM Project | Enterprise Project |
|----------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| Creating a Data Processing Task                    | POST /v2/{project_id}/processor-tasks                                | modelarts:processTask:createProcessTask | obs:bucket:HeadBucket<br>obs:bucket:ListBucket<br>obs:object:PutObject<br>obs:object:PutObject<br>obs:bucket:ListAllMyBuckets<br>obs:bucket:PutBucketAcl<br>obs:bucket:GetBucketAcl<br>obs:bucket:GetBucketPolicy<br>obs:bucket:DeleteBucketPolicy | √           | √                  |
| Querying the Algorithms for a Data Processing Type | GET /v2/{project_id}/processor-tasks/items                           | modelarts:processTask:getProcessTask    | N/A                                                                                                                                                                                                                                                | √           | √                  |
| Querying Details About a Data Processing Task      | GET /v2/{project_id}/processor-tasks/{task_id}/versions/{version_id} | modelarts:processTask:getProcessTask    | N/A                                                                                                                                                                                                                                                | √           | √                  |
| Updating a Data Processing Task                    | PUT /v2/{project_id}/processor-tasks/{task_id}                       | modelarts:processTask:updateProcessTask | N/A                                                                                                                                                                                                                                                | √           | √                  |

| Permission                                      | API                                                      | Action                                  | Related Action                                                                                                                                                                                                                                     | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|-------------------------------------------------|----------------------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------------|
| Deleting a Data Processing Task                 | DELETE /v2/{project_id}/processor-tasks/{task_id}        | modelarts:processTask:deleteProcessTask | obs:bucket:PutBucketAcl<br>obs:bucket:GetBucketAcl<br>obs:bucket:GetBucketPolicy<br>obs:bucket:DeleteBucketPolicy<br>obs:bucket:ListBucket<br>obs:bucket:ListAllMyBuckets<br>obs:object:DeleteObject                                               | √                          | √                                         |
| Querying the Versions of a Data Processing Task | GET /v2/{project_id}/processor-tasks/{task_id}/versions  | modelarts:processTask:getProcessTask    | obs:bucket:HeadBucket<br>obs:bucket:ListBucket<br>obs:object:PutObject<br>obs:object:PutObject<br>obs:bucket:ListAllMyBuckets<br>obs:bucket:PutBucketAcl<br>obs:bucket:GetBucketAcl<br>obs:bucket:GetBucketPolicy<br>obs:bucket:DeleteBucketPolicy | √                          | √                                         |
| Creating a Data Processing Task Version         | POST /v2/{project_id}/processor-tasks/{task_id}/versions | modelarts:processTask:createProcessTask | N/A                                                                                                                                                                                                                                                | √                          | √                                         |

| Permission                                            | API                                                                          | Action                                  | Related Action                                                                                                                                                                                       | IAM Project | Enterprise Project |
|-------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| Querying Details About a Data Processing Task Version | GET /v2/{project_id}/processor-tasks/{task_id}/versions                      | modelarts:processTask:getProcessTask    | N/A                                                                                                                                                                                                  | √           | √                  |
| Deleting a Data Processing Task Version               | DELETE /v2/{project_id}/processor-tasks/{task_id}/versions/{version_id}      | modelarts:processTask:deleteProcessTask | obs:bucket:PutBucketAcl<br>obs:bucket:GetBucketAcl<br>obs:bucket:GetBucketPolicy<br>obs:bucket:DeleteBucketPolicy<br>obs:bucket:ListBucket<br>obs:bucket:ListAllMyBuckets<br>obs:object:DeleteObject | √           | √                  |
| Querying the Result of a Data Processing Task Version | GET /v2/{project_id}/processor-tasks/{task_id}/versions/{version_id}/results | modelarts:processTask:getProcessTask    | obs:object:GetObject                                                                                                                                                                                 | √           | √                  |
| Stopping a Data Processing Task Version               | POST /v2/{project_id}/processor-tasks/{task_id}/versions/{version_id}/stop   | modelarts:processTask:updateProcessTask | N/A                                                                                                                                                                                                  | √           | √                  |

## 26.3 DevEnviron Permissions

**Table 26-15** Fine-grained permissions for DevEnviron

| Permission                   | API                                        | Action                    | Related Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | IA<br>M<br>Pro<br>ject | En<br>ter<br>pri<br>se<br>Pr<br>oje<br>ct |
|------------------------------|--------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------|
| Creating a notebook instance | POST<br>/v1/<br>{project_id}/<br>notebooks | modelarts:notebook:create | swr:repo:listRepoTags<br>swr:repo:getRepo<br>swr:namespace:getNamespace<br>swr:repo:getRepoDomain<br>swr:repository:getTag<br>swr:instance:get<br>swr:instance:createTempCredential<br>kps:SSHKeyPair:get<br>vpc:vpcs:list<br>vpc:subnets:get<br>vpc:securityGroups:get<br>vpc:quotas:list<br>vpc:subnets:get<br>csms:secret:get<br>csms:secret:getVersion<br>sfsturbo:shares:getShare<br>obs:object:GetObject<br>obs:bucket:HeadBucket<br>obs:bucket:GetBucketPolicy<br>obs:bucket:PutBucketPolicy | √                      | √                                         |



| Permission                                                   | API                                               | Action                              | Related Action                                                                                                | IA<br>M<br>Pro<br>ject | En<br>ter<br>pri<br>se<br>Pr<br>oje<br>ct |
|--------------------------------------------------------------|---------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------|
|                                                              |                                                   |                                     | obs:bucket:GetBucketAcl<br>obs:bucket:PutBucketAcl                                                            |                        |                                           |
| Querying notebook instances                                  | GET /v1/{project_id}/notebooks                    | modelarts:notebook:list             | -                                                                                                             | √                      | √                                         |
| Querying all notebook instances                              | GET /v1/{project_id}/notebooks/all                | modelarts:notebook:listAllNotebooks | -                                                                                                             | √                      | ×                                         |
| Obtaining details about a notebook instance                  | GET /v1/{project_id}/notebooks/{id}               | modelarts:notebook:get              | -                                                                                                             | √                      | √                                         |
| Updating a notebook instance                                 | PUT /v1/{project_id}/notebooks/{id}               | modelarts:notebook:update           | csms:secret:get<br>csms:secret:getVersion<br>kps:SSHPKeyPair:get                                              | √                      | √                                         |
| Deleting a notebook instance                                 | DELETE /v1/{project_id}/notebooks/{id}            | modelarts:notebook:delete           | -                                                                                                             | √                      | √                                         |
| Saving a running instance as a container image               | POST /v1/{project_id}/notebooks/{id}/create-image | modelarts:image:create              | swr:namespace:getNamespace<br>swr:repo:listRepoTags<br>swr:repository:listNamespaces<br>swr:repository:getTag | √                      | √                                         |
| Obtaining available flavors supported by a notebook instance | GET /v1/{project_id}/notebooks/flavors            | -                                   | -                                                                                                             | √                      | √                                         |

| Permission                                                              | API                                         | Action                              | Related Action | IA<br>M<br>Pro<br>ject | En<br>ter<br>pri<br>se<br>Pr<br>oje<br>ct |
|-------------------------------------------------------------------------|---------------------------------------------|-------------------------------------|----------------|------------------------|-------------------------------------------|
| Querying the list of available flavors supported by a notebook instance | GET /v1/{project_id}/notebooks/{id}/flavors | -                                   | -              | √                      | √                                         |
| Obtaining the available duration of a running notebook instance         | GET /v1/{project_id}/notebooks/{id}/lease   | -                                   | -              | √                      | √                                         |
| Renewing the duration of a notebook instance                            | PATCH /v1/{project_id}/notebooks/{id}/lease | modelarts:notebook:updateStopPolicy | -              | √                      | √                                         |

| Permission                   | API                                        | Action                   | Related Action                                                                                                                                                                                                                                                                                                                                                                                                                                        | IA<br>M<br>Pro<br>ject | En<br>ter<br>pri<br>se<br>Pr<br>oje<br>ct |
|------------------------------|--------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------|
| Starting a notebook instance | POST /v1/{project_id}/notebooks/{id}/start | modelarts:notebook:start | swr:repo:listRepoTags<br>swr:repo:getRepo<br>swr:namespace:getNamespace<br>swr:repo:getRepoDomain<br>swr:repository:getTag<br>swr:instance:get<br>swr:instance:createTempCredential<br>kps:SSHKeyPair:get<br>csms:secret:get<br>csms:secret:getVersion<br>sfsturbo:shares:getShare<br>obs:object:GetObject<br>obs:bucket:HeadBucket<br>obs:bucket:GetBucketPolicy<br>obs:bucket:PutBucketPolicy<br>obs:bucket:GetBucketAcl<br>obs:bucket:PutBucketAcl | √                      | √                                         |
| Stopping a notebook instance | POST /v1/{project_id}/notebooks/{id}/stop  | modelarts:notebook:stop  | -                                                                                                                                                                                                                                                                                                                                                                                                                                                     | √                      | √                                         |

| Permission                                                  | API                                                                  | Action                                 | Related Action | IA<br>M<br>Pro<br>ject | En<br>ter<br>pri<br>se<br>Pr<br>oje<br>ct |
|-------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------|----------------|------------------------|-------------------------------------------|
| Obtaining the OBS instance information list                 | GET /v1/{project_id}/notebooks/{id}/storage                          | modelarts:notebook:listMountedStorages | -              | √                      | √                                         |
| Mounting OBS dynamically                                    | POST /v1/{project_id}/notebooks/{instance_id}/storage                | modelarts:notebook:mountStorage        | -              | √                      | √                                         |
| Obtaining the details of a dynamically mounted OBS instance | GET /v1/{project_id}/notebooks/{instance_id}/storage/{storage_id}    | modelarts:notebook:getMountedStorage   | -              | √                      | √                                         |
| Dynamically unmounting OBS                                  | DELETE /v1/{project_id}/notebooks/{instance_id}/storage/{storage_id} | modelarts:notebook:umountStorage       | -              | √                      | √                                         |
| Adding resource tags                                        | POST /v1/{project_id}/notebooks/{resource_id}/tags/create            | modelarts:notebook:update              | -              | √                      | √                                         |
| Deleting resource tags                                      | DELETE /v1/{project_id}/notebooks/{resource_id}/tags/delete          | modelarts:notebook:update              | -              | √                      | √                                         |
| Obtaining notebook instance tags                            | GET /v1/{project_id}/notebooks/tags                                  | modelarts:tag:list                     | -              | √                      | √                                         |
| Obtaining supported images                                  | GET /v1/{project_id}/images                                          | modelarts:image:list                   | -              | √                      | √                                         |

| Permission                    | API                                    | Action                    | Related Action                                                                                                             | IA<br>M<br>Pro<br>ject | En<br>ter<br>pri<br>se<br>Pr<br>oje<br>ct |
|-------------------------------|----------------------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------|
| Registering a custom image    | POST /v1/{project_id}/images           | modelarts:image:register  | swr:repo:listRepoTags<br>swr:repo:getRepo<br>swr:repo:getRepoDomain<br>swr:repo:createRepoDomain<br>swr:repository:getTag  | √                      | √                                         |
| Obtaining the user image list | GET /v1/{project_id}/images/group      | modelarts:image:listGroup | -                                                                                                                          | √                      | √                                         |
| Obtaining details of an image | GET /v1/{project_id}/images/{id}       | modelarts:image:get       | -                                                                                                                          | √                      | √                                         |
| Deleting a custom image       | DELETE /v1/{project_id}/images/{id}    | modelarts:image:delete    | swr:repo:listRepoTags<br>swr:repo:deleteRepoTag<br>swr:repository:getTag<br>swr:repository:deleteTag                       | √                      | √                                         |
| Synchronizing a custom image  | POST /v1/{project_id}/images/{id}/sync | -                         | swr:repo:listRepoTags<br>swr:repo:getRepo<br>swr:namespace:getNamespace<br>swr:repo:getRepoDomain<br>swr:repository:getTag | √                      | √                                         |

| Permission                                                      | API                                     | Action                  | Related Action                                                                                                                                                                      | IAM Project | Enterprise Project |
|-----------------------------------------------------------------|-----------------------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| Opening a serverless development environment instance (Codelab) | POST<br>/v1/{project_id}/notebooks/open | modelarts:notebook:open | swr:repo:listRepoTags<br>swr:repo:getRepo<br>swr:namespace:getNamespace<br>swr:repo:getRepoDomain<br>swr:repository:getTag<br>swr:instance:get<br>swr:instance:createTempCredential | √           | √                  |

## 26.4 Training Job Permissions

**Table 26-16** Fine-grained permissions for training jobs (new version)

| Permission               | API                                                  | Action                    | Related Action                                                                                                                                                                                                                                                                                                                                                             | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|--------------------------|------------------------------------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------------|
| Creating a training job  | POST /v2/{project_id}/training-jobs                  | modelarts:trainJob:create | swr:repository:listTags<br>swr:repository:getRepository<br>swr:repository:listRepositories<br>swr:system:createLoginSecret<br>swr:instance:createTempCredential<br>smn:topic:publish<br>smn:topic:list<br>obs:object:GetObjectAcl<br>obs:object:PutObjectAcl<br>obs:object:PutObject<br>obs:object:GetObject<br>obs:object:DeleteObject<br>obs:object:ModifyObjectMetadata | √                          | √                                         |
| Modifying a training job | PUT /v2/{project_id}/training-jobs/{training_job_id} | modelarts:trainJob:update | N/A                                                                                                                                                                                                                                                                                                                                                                        | √                          | √                                         |

| Permission                             | API                                                                               | Action                       | Related Action | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|----------------------------------------|-----------------------------------------------------------------------------------|------------------------------|----------------|----------------------------|-------------------------------------------|
| Deleting a training job                | DELETE /v2/{project_id}/training-jobs/{training_job_id}                           | modelarts:trainJob:delete    | N/A            | √                          | √                                         |
| Obtaining details about a training job | GET /v2/{project_id}/training-jobs/{training_job_id}                              | modelarts:trainJob:get       | N/A            | √                          | √                                         |
| Obtaining training jobs                | POST /v2/{project_id}/training-job-searches                                       | modelarts:trainJob:list      | N/A            | √                          | √                                         |
| Previewing training job logs           | GET /v2/{project_id}/training-jobs/{training_job_id}/tasks/{task_id}/logs/preview | N/A                          | N/A            | √                          | √                                         |
| Downloading training job logs          | GET /v2/{project_id}/training-jobs/{training_job_id}/tasks/{task_id}/logs/url     | modelarts:trainJob:logExport | N/A            | √                          | √                                         |
| Creating an algorithm                  | POST /v2/{project_id}/algorithms                                                  | modelarts:aiAlgorithm:create | N/A            | √                          | √                                         |
| Modifying an algorithm                 | PUT /v2/{project_id}/algorithms/{algorithm_id}                                    | modelarts:aiAlgorithm:update | N/A            | √                          | √                                         |
| Deleting an algorithm                  | DELETE /v2/{project_id}/algorithms/{algorithm_id}                                 | modelarts:aiAlgorithm:delete | N/A            | √                          | √                                         |



| Permission                           | API                                            | Action                     | Related Action | IAM Project | Enterprise Project |
|--------------------------------------|------------------------------------------------|----------------------------|----------------|-------------|--------------------|
| Obtaining algorithms                 | GET /v2/{project_id}/algorithms                | modelarts:aiAlgorithm:list | N/A            | √           | √                  |
| Obtaining details about an algorithm | GET /v2/{project_id}/algorithms/{algorithm_id} | modelarts:aiAlgorithm:get  | N/A            | √           | √                  |

## 26.5 Model Management Permissions

**Table 26-17** Fine-grained permissions for model management

| Permission                  | API                          | Action                 | Related Action                                                                                                                                           | IAM Project | Enterprise Project |
|-----------------------------|------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| Importing a Model           | POST /v1/{project_id}/models | modelarts:model:create | obs:bucket:ListAllMybuckets<br>obs:object:PutObjectAcl<br>obs:bucket:ListBucket<br>obs:bucket:HeadBucket<br>obs:object:GetObject<br>obs:object:PutObject | √           | √                  |
| Querying the List of Models | GET /v1/{project_id}/models  | modelarts:model:list   | N/A                                                                                                                                                      | √           | √                  |

| Permission                     | API                                       | Action                 | Related Action | IAM Project | Enterprise Project |
|--------------------------------|-------------------------------------------|------------------------|----------------|-------------|--------------------|
| Deleting a Model               | DELETE /v1/{project_id}/models/{model_id} | modelarts:model:delete | N/A            | √           | √                  |
| Querying Details About a Model | GET /v1/{project_id}/models/{model_id}    | modelarts:model:get    | N/A            | √           | √                  |

## 26.6 Service Management Permissions

**Table 26-18** Fine-grained permissions for service management

| Permission                              | API                                           | Action                   | Related Action | IAM Project | Enterprise Project |
|-----------------------------------------|-----------------------------------------------|--------------------------|----------------|-------------|--------------------|
| Deploying a model                       | POST /v1/{project_id}/services                | modelarts:service:create | N/A            | √           | √                  |
| Obtaining model services                | GET /v1/{project_id}/services                 | modelarts:service:list   | N/A            | √           | √                  |
| Obtaining details about a model service | GET /v1/{project_id}/services/{service_id}    | modelarts:service:get    | N/A            | √           | √                  |
| Updating a model service                | PUT /v1/{project_id}/services/{service_id}    | modelarts:service:update | N/A            | √           | √                  |
| Deleting a model service                | DELETE /v1/{project_id}/services/{service_id} | modelarts:service:delete | N/A            | √           | √                  |

| Permission                           | API                                                                            | Action                       | Related Action | IAM Project | Enterprise Project |
|--------------------------------------|--------------------------------------------------------------------------------|------------------------------|----------------|-------------|--------------------|
| Starting or stopping a model service | PUT /v1/{project_id}/services/{service_id} (with statuses in the request body) | modelarts:service:action     | N/A            | √           | √                  |
| Obtaining service monitoring         | GET /v1/{project_id}/services/{service_id}/monitor                             | modelarts:service:getMonitor | N/A            | √           | √                  |
| Obtaining service update logs        | GET /v1/{project_id}/services/{service_id}/logs                                | modelarts:service:getLogs    | N/A            | √           | √                  |
| Obtaining service event logs         | GET /v1/{project_id}/services/{service_id}/events                              | modelarts:service:getEvents  | N/A            | √           | √                  |

## 26.7 Granting Management Permissions

**Table 26-19** Fine-grained permissions for service management

| Permission                                 | API                                                                                                                                                                                                                                                                                                        | Action                                 | Dependency | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------|----------------------------|-------------------------------------------|
| Deleting fine-grained agency authorization | /v1/{project_id}/<br>atelier/<br>authorization<br><br>/v1/{project_id}/<br>authorizations<br><br>/v1/{project_id}/<br>atelier/<br>authorization<br><br>/v2/{project_id}/<br>authorizations<br><br>/atelier/v1/<br>{project_id}/<br>authorization                                                           | modelarts:aut<br>horization:del<br>ete | -          | √                          | ×                                         |
| Creating fine-grained agency authorization | /atelier/v1/<br>{project_id}/<br>authorizations<br><br>/v1/{project_id}/<br>atelier/<br>authorizations<br><br>/v1/{project_id}/<br>authorizations<br><br>/v2/{project_id}/<br>atelier/<br>authorizations<br><br>/v2/{project_id}/<br>authorizations<br><br>/v3/{project_id}/<br>atelier/<br>authorizations | modelarts:aut<br>horization:cre<br>ate | -          | √                          | ×                                         |

| Permission                                 | API                                                                                                                                                                                                | Action                       | Dependency                                                                                                                | IA<br>M<br>Pro<br>jec<br>t | Ent<br>erp<br>ris<br>e<br>Pro<br>jec<br>t |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------------|
| Querying fine-grained agency authorization | /atelier/v1/{project_id}/authorization<br>/v1/{project_id}/atelier/authorizations<br>/v1/{project_id}/authorizations<br>/v2/{project_id}/atelier/authorizations<br>/v2/{project_id}/authorizations | modelarts:authorization:list | -                                                                                                                         | √                          | ×                                         |
| Creating a ModelArts agency                | /v2/{project_id}/agency                                                                                                                                                                            | -                            | iam:quotas:listForProject<br>iam:agencies:create/<br>iam:agencyiam:createV5<br>iam:roles:create<br>iam:agencies:grantRole | √                          | ×                                         |

# 27 Appendix

## 27.1 Status Code

Table 27-1 describes the status codes.

Table 27-1 Status codes

| Status Code | Code                          | Status Code Description                                                                                                                                                               |
|-------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 100         | Continue                      | The client continues sending the request.<br><br>This provisional response informs the client that part of the request has been received and has not yet been rejected by the server. |
| 101         | Switching Protocols           | Switching protocols. The target protocol must be more advanced than the source protocol.<br><br>For example, the current HTTP protocol is switched to a later version of HTTP.        |
| 200         | OK                            | The request has been fulfilled.                                                                                                                                                       |
| 201         | Created                       | The request for creating a resource has been fulfilled.                                                                                                                               |
| 202         | Accepted                      | The request has been accepted, but the processing has not been completed.                                                                                                             |
| 203         | Non-Authoritative Information | Non-authoritative information. The request is successful.                                                                                                                             |

| Status Code | Code              | Status Code Description                                                                                                                                                                                                                  |
|-------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 204         | NoContent         | The request has been fulfilled, but the HTTP response does not contain a response body.<br>The status code is returned in response to an HTTP OPTIONS request.                                                                           |
| 205         | Reset Content     | The server has fulfilled the request, but the requester is required to reset the content.                                                                                                                                                |
| 206         | Partial Content   | The server has successfully processed a part of the GET request.                                                                                                                                                                         |
| 300         | Multiple Choices  | There are multiple options for the location of the requested resource. The response contains a list of resource characteristics and addresses from which the user or user agent (such as a browser) can choose the most appropriate one. |
| 301         | Moved Permanently | The requested resource has been assigned a new permanent URI, and the new URI is contained in the response.                                                                                                                              |
| 302         | Found             | The requested resource resides temporarily under a different URI.                                                                                                                                                                        |
| 303         | See Other         | The response to the request can be found under a different URI, and should be retrieved using a GET or POST method.                                                                                                                      |
| 304         | Not Modified      | The requested resource has not been modified. When the server returns this status code, it does not return any resources.                                                                                                                |
| 305         | Use Proxy         | The requested resource must be accessed through a proxy.                                                                                                                                                                                 |
| 306         | Unused            | The HTTP status code is no longer used.                                                                                                                                                                                                  |
| 400         | BadRequest        | The request is invalid.<br>Do not retry the request before modification.                                                                                                                                                                 |

| Status Code | Code                          | Status Code Description                                                                                                                                                                                                                           |
|-------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 401         | Unauthorized                  | The status code is returned after the client provides the authentication information, indicating that the authentication information is incorrect or invalid.                                                                                     |
| 402         | Payment Required              | This status code is reserved for future use.                                                                                                                                                                                                      |
| 403         | Forbidden                     | The request has been rejected.<br>The server has received and understood the request; yet it refused to respond, because the request is set to deny access. Do not retry the request before modification.                                         |
| 404         | NotFound                      | The requested resource cannot be found.<br>Do not retry the request before modification.                                                                                                                                                          |
| 405         | MethodNotAllowed              | The request contains one or more methods not supported for the resource.<br>Do not retry the request before modification.                                                                                                                         |
| 406         | Not Acceptable                | The server cannot fulfill the request according to the content characteristics of the request.                                                                                                                                                    |
| 407         | Proxy Authentication Required | This status code is similar to 401, but the client must first authenticate itself with the proxy.                                                                                                                                                 |
| 408         | Request Time-out              | The request timed out.<br>The client may repeat the request without modifications at any time later.                                                                                                                                              |
| 409         | Conflict                      | The request could not be processed due to a conflict with the current state of the resource.<br>This status code indicates that the resource that the client attempts to create already exists, or the requested update failed due to a conflict. |



| Status Code | Code                            | Status Code Description                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 410         | Gone                            | The requested resource is no longer available.<br>The status code indicates that the requested resource has been deleted permanently.                                                                                                                                                                                                                                                                        |
| 411         | Length Required                 | The server refuses to process the request without a defined <b>Content-Length</b> .                                                                                                                                                                                                                                                                                                                          |
| 412         | Precondition Failed             | The server does not meet one of the preconditions that the requester puts on the request.                                                                                                                                                                                                                                                                                                                    |
| 413         | Request Entity Too Large        | The request is larger than that a server is able to process. The server may close the connection to prevent the client from continuing the request. If the server cannot process the request temporarily, the response will contain a <b>Retry-After</b> header field.                                                                                                                                       |
| 414         | Request-URI Too Large           | The URI provided was too long for the server to process.                                                                                                                                                                                                                                                                                                                                                     |
| 415         | Unsupported Media Type          | The server is unable to process the media format in the request.                                                                                                                                                                                                                                                                                                                                             |
| 416         | Requested range not satisfiable | The requested range is invalid.                                                                                                                                                                                                                                                                                                                                                                              |
| 417         | Expectation Failed              | The server fails to meet the requirements of the <b>Expect</b> request-header field.                                                                                                                                                                                                                                                                                                                         |
| 422         | UnprocessableEntity             | The request is well-formed but is unable to be processed due to semantic errors.                                                                                                                                                                                                                                                                                                                             |
| 429         | TooManyRequests                 | The client has sent excessive number of requests to the server within a given time (exceeding the limit on the access frequency of the client), or the server has received an excessive number of requests within a given time (beyond its processing capability). In this case, the client should resend the request after the time specified in the <b>Retry-After</b> header of the response has elapsed. |

| Status Code | Code                       | Status Code Description                                                                                                                                             |
|-------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 500         | InternalServerError        | The server is able to receive but unable to understand the request.                                                                                                 |
| 501         | Not Implemented            | The server does not support the requested function.                                                                                                                 |
| 502         | Bad Gateway                | The server acting as a gateway or proxy has received an invalid request from a remote server.                                                                       |
| 503         | ServiceUnavailable         | The requested service is invalid.<br>Do not retry the request before modification.                                                                                  |
| 504         | ServerTimeout              | The request cannot be fulfilled within a given time. This status code is returned to the client only when the <b>Timeout</b> parameter is specified in the request. |
| 505         | HTTP Version not supported | The server does not support the HTTP protocol version used in the request.                                                                                          |

## 27.2 Error Codes

If an error code starting with APIGW is returned after you call an API, rectify the fault by referring to the instructions provided in [API Gateway Error Codes](#).

| Status Code | Error Codes    | Error Message                                                                | Description                                                                  | Solution                                         |
|-------------|----------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------|
| 100         | ModelArts.0116 | The expected {0} exceeds the quota limit.                                    | The expected {0} exceeds the quota limit.                                    | Contact the administrator to increase the quota. |
| 100         | ModelArts.6768 | SSH configuration is missing, target image {0} only support SSH dev service. | SSH configuration is missing, target image {0} only support SSH dev service. | Select a proper image.                           |
| 200         | ModelArts.4606 | The sample has been reviewed.                                                | The sample has been reviewed.                                                | Proceed with follow-up operations.               |

| Status Code | Error Codes    | Error Message                       | Description                                  | Solution                           |
|-------------|----------------|-------------------------------------|----------------------------------------------|------------------------------------|
| 200         | ModelArts.4900 | Training job prepared.              | The training job has been prepared.          | Proceed with follow-up operations. |
| 200         | ModelArts.4902 | Exporting labels.                   | Labels are being exported.                   | Wait until labels are exported.    |
| 200         | ModelArts.4904 | Labels exported.                    | Labels have been exported.                   | Proceed with follow-up operations. |
| 200         | ModelArts.4910 | Model import task submitted.        | The model import task has been submitted.    | Proceed with follow-up operations. |
| 200         | ModelArts.4912 | Model import task executed.         | The model import task has been executed.     | Proceed with follow-up operations. |
| 200         | ModelArts.4914 | Auto labeling task submitted.       | The auto labeling task has been submitted.   | Wait until the task is complete.   |
| 200         | ModelArts.4916 | Auto labeling task executed.        | The auto labeling task has been executed.    | Proceed with follow-up operations. |
| 200         | ModelArts.4918 | Import task submitted.              | The import task has been submitted.          | Wait until the task is complete.   |
| 200         | ModelArts.4920 | Import task executed.               | The import task has been executed.           | Proceed with follow-up operations. |
| 200         | ModelArts.4926 | Collecting hard examples submitted. | Collecting hard examples has been submitted. | Wait until the task is complete.   |
| 200         | ModelArts.4950 | Auto inference task submitted.      | The auto inference task has been submitted.  | Wait until the task is complete.   |

| Status Code | Error Codes    | Error Message                                               | Description                                                  | Solution                                      |
|-------------|----------------|-------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------|
| 200         | ModelArts.4952 | Auto inference task executed.                               | The auto inference task has been executed.                   | Proceed with follow-up operations.            |
| 200         | ModelArts.4960 | Auto grouping task submitted.                               | The auto grouping task has been submitted.                   | Wait until the task is complete.              |
| 200         | ModelArts.4962 | Auto grouping task executed.                                | The auto grouping task has been executed.                    | Proceed with follow-up operations.            |
| 200         | ModelArts.4964 | Auto grouping task is already running.                      | The auto grouping task is already running.                   | Please wait.                                  |
| 204         | ModelArts.2776 | NotReadyToFetchLog                                          | not ready for fetch log, wait for training to return data    | Please try again later.                       |
| 204         | ModelArts.2777 | NotReadyToFetchMetric                                       | not ready for fetch metric, wait for training to return data | Please try again later.                       |
| 400         | ModelArts.0101 | Invalid Argument.                                           | Invalid parameter.                                           | Enter the correct parameter as prompted.      |
| 400         | ModelArts.0102 | The workspace does not exist.                               | The workspace does not exist.                                | Check the current workspace.                  |
| 400         | ModelArts.0104 | Parameter error.                                            | Parameter error.                                             | Check the parameter settings.                 |
| 400         | ModelArts.0107 | The values of the request parameters ({0},{1}) are invalid. | Invalid parameter values ({0},{1}).                          | Check whether the parameter values are valid. |

| Status Code | Error Codes    | Error Message                                   | Description                                                        | Solution                                                                                                      |
|-------------|----------------|-------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.0113 | Create Notebook failed. Quota: {} is exhausted. | Failed to create the notebook instance due to the exhausted quota. | Contact the administrator for a higher quota.                                                                 |
| 400         | ModelArts.0118 | QuotaInsufficient                               | The expected %s exceeds the quota limit.                           | Release idle resources, or apply for more quotas                                                              |
| 400         | ModelArts.0204 | Token must contain projectId info.              | No project ID included in the token.                               | Ensure that the project token is used.                                                                        |
| 400         | ModelArts.0210 | Invalid project ID.                             | The project ID is invalid.                                         | Check the project ID.                                                                                         |
| 400         | ModelArts.0420 | Failed to query agency.                         | Failed to query agency.                                            | System error. Contact technical support.                                                                      |
| 400         | ModelArts.0421 | Failed to create agency.                        | Failed to create agency.                                           | System error. Contact technical support.                                                                      |
| 400         | ModelArts.0422 | Failed to query users.                          | Failed to query users.                                             | System error. Contact technical support.                                                                      |
| 400         | ModelArts.0423 | Disagree with service statement.                | Disagree with service statement.                                   | System error. Contact technical support.                                                                      |
| 400         | ModelArts.0424 | User authorization information already exists.  | User authorization information already exists.                     | Authorization already exists. To update the authorization, delete the original one and add new authorization. |
| 400         | ModelArts.0425 | Failed to add user authorization information.   | Failed to add user authorization information.                      | System error. Contact technical support.                                                                      |

| Status Code | Error Codes    | Error Message                                                                                                           | Description                                                                                                             | Solution                                                                                                          |
|-------------|----------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.0426 | Failed to delete user authorization information.                                                                        | Failed to delete user authorization information.                                                                        | System error. Contact technical support.                                                                          |
| 400         | ModelArts.0427 | Failed to get user authorization information.                                                                           | Failed to get user authorization information.                                                                           | System error. Contact technical support.                                                                          |
| 400         | ModelArts.0428 | Failed to update agency.                                                                                                | Failed to update agency.                                                                                                | System error. Contact technical support.                                                                          |
| 400         | ModelArts.0429 | The authorization does not exist. Check whether the user_id is correct.                                                 | The authorization does not exist. Check whether the user_id is correct.                                                 | Check whether the user_id is correct.                                                                             |
| 400         | ModelArts.0430 | Failed to query agency grants.                                                                                          | Failed to query agency grants.                                                                                          | System error. Contact technical support.                                                                          |
| 400         | ModelArts.0431 | Failed to query agency quotas.                                                                                          | Failed to query agency quotas.                                                                                          | System error. Contact technical support.                                                                          |
| 400         | ModelArts.1002 | OBS operation failed.                                                                                                   | OBS operation failed.                                                                                                   | Ensure that the OBS service is available.                                                                         |
| 400         | ModelArts.1003 | The user account is abnormal (expired or frozen) or the user does not have the permission to perform the OBS operation. | The user account is abnormal (expired or frozen) or the user does not have the permission to perform the OBS operation. | For details, see What Do I Do If a Message Indicating Insufficient Permissions Is Displayed When I Use ModelArts? |
| 400         | ModelArts.1120 | Parameter verification failed.                                                                                          | Parameter verification failed.                                                                                          | System error. Contact technical support.                                                                          |

| Status Code | Error Codes    | Error Message                      | Description                                                           | Solution                                                                                                            |
|-------------|----------------|------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.2750 | DuplicateEvaluationJobName         | Duplicate evaluation job (name %s).                                   | Change evaluation job name.                                                                                         |
| 400         | ModelArts.2751 | DuplicateTrainingJobName           | Duplicate training job (name %s).                                     | Change training job name.                                                                                           |
| 400         | ModelArts.2752 | DuplicateAiAlgorithmNameAndVersion | An algorithm with the same name and version already exists.           | Check the validity of the algorithm information in the request.                                                     |
| 400         | ModelArts.2753 | InputsOutputsMessageError          | The input and output channel information is invalid: %s.              | Please check the validity of the input and output channel information in the request according to the error prompt. |
| 400         | ModelArts.2754 | ModelArtsHostedNumError            | Only one output channel can be configured as ModelArts hosted output. | Check the validity of the output path information in the request.                                                   |
| 400         | ModelArts.2755 | AiAlgorithmNotFound                | algorithm not found.                                                  | Check whether the training project information in the request is valid.                                             |
| 400         | ModelArts.2756 | HasSameNameWithMarketAlgorithm     | Duplicate name with subscribed algorithm.                             | Check whether the training project information in the request is valid.                                             |
| 400         | ModelArts.2757 | CodeDirError                       | The code directory path is invalid: %s.                               | Please check the validity of the code directory path in the request according to the error prompt.                  |

| Status Code | Error Codes    | Error Message         | Description                                                                               | Solution                                                                                              |
|-------------|----------------|-----------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.2758 | BootFileDirError      | The code startup file path is invalid: %s.                                                | Please check the validity of the code startup file path in the request according to the error prompt. |
| 400         | ModelArts.2759 | TooManyCodeFiles      | There are too many code files. A maximum of %s files can be uploaded.                     | Please check the number of code files.                                                                |
| 400         | ModelArts.2760 | CodeFolderTooDeep     | Insufficient quota, too many levels of code directories, supporting up to %s directories  | Please check the code directory depth.                                                                |
| 400         | ModelArts.2761 | CodeFilesSizeTooLarge | Insufficient quota, the code file takes up too much storage space, supporting up to %s GB | Please check the code directory depth.                                                                |
| 400         | ModelArts.2762 | DuplicateFlavorCode   | Duplicate flavor code (%s).                                                               | Change flavor code message.                                                                           |
| 400         | ModelArts.2763 | DoNotHaveFlavor       | The selected flavor is invalid.                                                           | Check the validity of the flavor in the request.                                                      |
| 400         | ModelArts.2764 | QueryParamsError      | Invalid query parameter (%s).                                                             | Check the validity of the parameter in the request.                                                   |
| 400         | ModelArts.2765 | StringParameterError  | The character variable %s is not in the preset range %s.                                  | Please enter the variable value based on the preset range.                                            |



| Status Code | Error Codes    | Error Message                  | Description                                                                                                                          | Solution                                                                                 |
|-------------|----------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 400         | ModelArts.2766 | DoNotHaveDefaultValue          | Parameter %s is missing a default value.                                                                                             | Please enter the default value.                                                          |
| 400         | ModelArts.2767 | ParameterKeyRepeat             | Duplicate parameter %s name.                                                                                                         | Please rename the parameter name.                                                        |
| 400         | ModelArts.2768 | DefaultValueTypeError          | Parameter %s default value %s is inconsistent with parameter type %s.                                                                | Please check the validity of the parameter default values according to the error prompt. |
| 400         | ModelArts.2769 | DefaultValueIsNotInRange       | Parameter %s default value %s is not in the setting range %s.                                                                        | Please ensure that the default value is within the setting range.                        |
| 400         | ModelArts.2770 | RangeError                     | Parameter %s is out of range.                                                                                                        | Please re-enter the parameter range.                                                     |
| 400         | ModelArts.2771 | NotHavePermission              | No %s permission                                                                                                                     | Please check the user permissions according to the error prompt.                         |
| 400         | ModelArts.2772 | OriginalAlgorithmCodeInfoError | Current algorithm creation failed. To ensure the availability of the algorithm, please reselect the code directory and startup file. | Please reselect the code directory and startup file.                                     |
| 400         | ModelArts.2773 | GetObsObjectContentError       | Failed to retrieve file content for %s.                                                                                              | Please check the file permissions.                                                       |

| Status Code | Error Codes    | Error Message          | Description                                      | Solution                                                                                         |
|-------------|----------------|------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 400         | ModelArts.2774 | ParseParameterError    | parse parameter error.                           | Hyperparameters are parsed as beta. If the parsing result is improper, manually enter the value. |
| 400         | ModelArts.2775 | TrainingJobNotFound    | Training job (ID: %s) not found.                 | Check whether the training job information in the request is valid.                              |
| 400         | ModelArts.2778 | EvalJobNotFound        | Model evaluation job (ID: %s) not found.         | Check whether the job ID in the request is valid.                                                |
| 400         | ModelArts.2779 | EvalVerNotFound        | Model evaluation job version (ID: %s) not found. | Check whether the evaluation job version information in the request is valid.                    |
| 400         | ModelArts.2780 | EngineNotFound         | AI engine(id:%s) not found.                      | Check whether the engine informer in the request is valid.                                       |
| 400         | ModelArts.2781 | FlavorNotFound         | Flavor (%s) not found.                           | Check whether the flavor in the request is valid.                                                |
| 400         | ModelArts.2782 | DatasetVersionNotFound | Dataset version (ID: %s) not found.              | Check whether the dataset version ID in the request is valid.                                    |
| 400         | ModelArts.2783 | DatasetNotFound        | Dataset (ID: %s) not found.                      | Check whether the dataset ID in the request is valid.                                            |
| 400         | ModelArts.2787 | InvalidJsonBody        | Invalid JSON request body.                       | Check the request body.                                                                          |
| 400         | ModelArts.2788 | InvalidParameter       | Invalid parameter(%s).                           | Check the request parameter.                                                                     |

| Status Code | Error Codes    | Error Message                | Description                                                   | Solution                                                |
|-------------|----------------|------------------------------|---------------------------------------------------------------|---------------------------------------------------------|
| 400         | ModelArts.2789 | UnsupportedFilterBy          | The filter item %s is invalid: %s.                            | Please check the validity of the filter item.           |
| 400         | ModelArts.2790 | UnsupportedSortBy            | The sorting item %s is not in the supported range: %s.        | Please check the validity of the sorting item.          |
| 400         | ModelArts.2791 | InvalidObsPath               | Invalid obs path: %s, reason: %s.                             | Check the obs path.                                     |
| 400         | ModelArts.2792 | BootFileNotBelongToCodeDir   | The boot_file does not belong to the code_dir directory.      | Check whether boot_file and code_dir are set correctly. |
| 400         | ModelArts.2793 | FlavorOutOfRange             | The number of flavor instances (%d) exceeds the maximum (%d). | Check the flavor.                                       |
| 400         | ModelArts.2794 | InvalidModelURL              | Invalid model URL.                                            | Check the model URL.                                    |
| 400         | ModelArts.2795 | GetModel                     | Failed to obtain the model: %s                                | Check whether the model is valid.                       |
| 400         | ModelArts.2797 | EvaluationResultsNotPrepared | The evaluation results are not generated.                     | Wait for the evaluation results to be generated.        |
| 400         | ModelArts.2798 | UnsupportedModel             | Unsupported model id: %s                                      | Check whether the model id is valid.                    |
| 400         | ModelArts.2801 | FederationNotFound           | federation ID (%s) not found.                                 | Check whether the federation id is valid.               |
| 400         | ModelArts.2802 | InvalidCodeDir               | Invalid codeDir path: %s.                                     | Check the codeDir path.                                 |

| Status Code | Error Codes    | Error Message                     | Description                                                                                    | Solution                                                                           |
|-------------|----------------|-----------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| 400         | ModelArts.2804 | InsufficientPermissionToAuthorize | The current user does not have sufficient permission to authorize all sub-users of the tenant. | Please confirm user's iam permission                                               |
| 400         | ModelArts.2805 | FederationInviteUserError         | The participant to be invited contains the IAM user ID of the current account(%s).             | Ensure that the user list does not contain the IAM user ID of the current account. |
| 400         | ModelArts.2806 | MustHaveCmdAndImage               | Custom image jobs command and engine.url cannot be empty.                                      | Check whether the command and engine.url is valid.                                 |
| 400         | ModelArts.2807 | UnsupportedConditionKey           | Unsupported condition key (%s)                                                                 | Check whether the key of search is valid.                                          |
| 400         | ModelArts.2808 | UnsupportedConditionOperator      | Unsupported condition operator (%s)                                                            | Check whether the operator of search is valid.                                     |
| 400         | ModelArts.2809 | UnsupportedConditionValue         | Unsupported condition value (%s)                                                               | Check whether the value of search is valid.                                        |
| 400         | ModelArts.2810 | SWRQueryImageInfoError            | Custom image query failure                                                                     | Check whether the image_url is valid.                                              |
| 400         | ModelArts.2811 | SWRCreateShareError               | Custom image share-create failure                                                              | Check whether the image_url is valid.                                              |
| 400         | ModelArts.2812 | Unsupported ActionType            | Unsupported action type:%s                                                                     | Check whether the action type is valid.                                            |

| Status Code | Error Codes    | Error Message          | Description                                                                        | Solution                                                               |
|-------------|----------------|------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| 400         | ModelArts.2814 | AlgorithmNotMatch      | Job algorithm configuration(%s) does not match algorithm management configuration. | Please check the parameter is valid.                                   |
| 400         | ModelArts.2815 | ExceedQuotaLimit       | Exceed quota limit of resource(%s).                                                | Please release the resources in use or apply for an expanded quota.    |
| 400         | ModelArts.2816 | ParamRangeError        | The parameter(%s) exceeds the upper limit %s.                                      | Please enter another value range.                                      |
| 400         | ModelArts.2817 | AiAlgorithmShareError  | algorithm(%s) is not ready to share.                                               | Please wait for the algorithm to complete creation.                    |
| 400         | ModelArts.2818 | LogFileNotGenerated    | the log file is not generated                                                      | Please view the log after the log is generated.                        |
| 400         | ModelArts.2819 | LogFileHasCleared      | the log file has been cleared                                                      | Please select obs url to upload your logs when creating training jobs. |
| 400         | ModelArts.2820 | LogPathNotFound        | the log storage path cannot be found                                               | please use old API to view the log                                     |
| 400         | ModelArts.2821 | DuplicateAlgorithmName | Duplicate algorithm (name %s).                                                     | The algorithm name already exists, Please change algorithm name.       |
| 400         | ModelArts.2822 | LogExportPathNotSet    | The log export path is not set.                                                    | Please set the log export path.                                        |

| Status Code | Error Codes    | Error Message                      | Description                                                              | Solution                                                                         |
|-------------|----------------|------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| 400         | ModelArts.2823 | DomainIdNotMatched                 | Policy doesn't allow to be performed. domain id %s, config domain id %s. | Please check domain id in configfile and Request Header.                         |
| 400         | ModelArts.2824 | SearchIndicatorsError              | The search index %s has duplicates.                                      | Please check whether the search index is repeated according to the error prompt. |
| 400         | ModelArts.2825 | ParamTypeError                     | The parameter (%s) value type error.                                     | Ensure that the parameter value type is correct.                                 |
| 400         | ModelArts.2826 | SearchParamsError                  | The search parameters error.                                             | Please enter another search parameter.                                           |
| 400         | ModelArts.2827 | FailureAnalysesNotPossible         | Unable to perform failure analysis on jobs that did not fail.            | Please perform a failure analysis on the failed training job.                    |
| 400         | ModelArts.2828 | FailureAnalysesFailed              | Failed to get the reason for training job failure.                       | Unknown failure. Contact technical support.                                      |
| 400         | ModelArts.2829 | DuplicateEngineId                  | Duplicate training engine (name %s).                                     | Change training engine name.                                                     |
| 400         | ModelArts.2830 | MustHaveEngineId                   | Custom image jobs engine_id cannot be empty.                             | Check whether the engine_id is valid.                                            |
| 400         | ModelArts.2831 | FeedbackFailureAnalysisNotPossible | Failure to provide feedback on failure results.                          | Please give feedback on the failed job for which the reason has been analyzed.   |

| Status Code | Error Codes    | Error Message             | Description                                                                                                       | Solution                                                       |
|-------------|----------------|---------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| 400         | ModelArts.2832 | EngineNeedUpgrade         | The AI engine version has been discontinued.                                                                      | Please use the latest version of AI engine.                    |
| 400         | ModelArts.2833 | ExceedFreeFlavorQuota     | The job quantity exceeds the maximum number (%d) of jobs that can be created by a single user of the free flavor. | Please delete other free flavor job.                           |
| 400         | ModelArts.2834 | UnsupportedRemoteDataType | Does not support data type (%s).                                                                                  | Change to a supported data type.                               |
| 400         | ModelArts.2835 | GetSizeOfChannelTimeout   | Get size of input channel time out.                                                                               | Please get size of folder in local file system or obs service. |
| 400         | ModelArts.2837 | FrozenAccount             | The account has been restricted or frozen.                                                                        | Please check the account.                                      |
| 400         | ModelArts.2838 | WorkspacePolicyLimit      | Policy doesn't allow (%s) to be performed                                                                         | Check the configuration of the fine-grained policy in IAM      |
| 400         | ModelArts.2839 | InvalidMindSporeConfig    | Invalid MindSpore advanced configuration (%s).                                                                    | Check the validity of the information in the request.          |
| 400         | ModelArts.2840 | UnsupportedFlavor         | Engine or resource policy specified cannot be supported on this flavor.                                           | Please reselect flavor.                                        |

| Status Code | Error Codes    | Error Message                   | Description                                                                        | Solution                                                                   |
|-------------|----------------|---------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 400         | ModelArts.2841 | DuplicateTrainingExperimentName | Duplicate training experiment (name: %s).                                          | Change training experiment name.                                           |
| 400         | ModelArts.2842 | TrainingExperimentNotFound      | Training job (id: %s) not found.                                                   | Check whether the training experiment information in the request is valid. |
| 400         | ModelArts.2843 | QueryVPCEPFailed                | Query vpc endpoint failed for reason (%s).                                         | vpcep request failed, Contact technical support.                           |
| 400         | ModelArts.2844 | ChangeVPCEPPolicyFailed         | Change vpc endpoint policy failed for reason (%s).                                 | vpcep request failed, Contact technical support.                           |
| 400         | ModelArts.2845 | ImageSizeExceeded               | SWR image size exceeded (%dGB > %dGB).                                             | Please modify your swr image.                                              |
| 400         | ModelArts.2846 | TrainingExperimentTypeMismatch  | The type of training job (%s) does not match the type of training experiment (%s). | Please select a training experiment that matches the training job type.    |
| 400         | ModelArts.2847 | IEFNodeUnavailable              | The edge node (%s) current status is %s, cannot perform federated training.        | Please select an available edge node.                                      |
| 400         | ModelArts.2848 | IEFClientError                  | Please check whether the parameter edge_node_id(%s) is correct, error detail: %s.  | Please select an available edge node.                                      |



| Status Code | Error Codes    | Error Message                    | Description                                                                                    | Solution                                                           |
|-------------|----------------|----------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| 400         | ModelArts.2849 | FederationParticipantsReachLimit | Exceeded maximum federation participants limit.                                                | Please select other federations with participants below the limit. |
| 400         | ModelArts.2850 | FederationDuplicateActivityName  | Duplicate federation activity (name %s).                                                       | The federation activity name already exists, please change it.     |
| 400         | ModelArts.2851 | FederationDuplicateParticipant   | you have already joined this federation activity(id %s).                                       | Please select a federation activity that you have not yet joined.  |
| 400         | ModelArts.2853 | FederationOperationForbidden     | Prohibition of federation activity status transitions from %s to %s.                           | This operation is prohibited.                                      |
| 400         | ModelArts.2854 | UnsupportedRemoteType            | Unsupported input/output channel remote type.                                                  | Change to a supported channel remote type.                         |
| 400         | ModelArts.2855 | RunUserDeny                      | Prohibition of run_user < %d when the training job is not in the dedicated pool.               | This operation is prohibited.                                      |
| 400         | ModelArts.2856 | NotOwnImagePublishGalleryError   | Unable to publish this algorithm to gallery, because image of the algorithm is not own to you. | Please use the algorithm that image is own to you.                 |

| Status Code | Error Codes    | Error Message                  | Description                                                     | Solution                                                                  |
|-------------|----------------|--------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------|
| 400         | ModelArts.2857 | InvalidLocalCodeDir            | The local_code_dir parameter verification failed for reason(%s) | Check the validity of the information in the request.                     |
| 400         | ModelArts.2858 | Unsupported Operation          | Current operation not supported, (%s).                          | Please refer to hints.                                                    |
| 400         | ModelArts.2859 | InvalidWorkingDir              | The working_dir parameter verification failed for reason(%s)    | Check the validity of the information in the request.                     |
| 400         | ModelArts.2879 | JobRuntimeTypeNotDebug         | Job runtime_type is not debug                                   | Please adjust job runtime_type to debug                                   |
| 400         | ModelArts.2880 | ImageSaveJobExist              | ImageSaveJob is exist                                           | Please wait ImageSaveJob to be completed                                  |
| 400         | ModelArts.2883 | ImageSaveJobSecPhaseNotRunning | training job secondary_phase is not running                     | Please check training job secondary_phase                                 |
| 400         | ModelArts.2884 | ImageSwrAlreadyExist           | image tag and image name is exist                               | Please check the image tag and name is unique in namespace                |
| 400         | ModelArts.2885 | AccessImageSwrException        | the access of user swr is exception                             | Please check the image namespace is exist or user authorization is enough |
| 400         | ModelArts.2886 | NotTrainingPool                | Pool (%s) is not a training pool                                | Please check whether the pool supports the training job type              |
| 400         | ModelArts.2887 | PoolNotRunning                 | Pool (%s) is not running                                        | Please check the status of the pool                                       |

| Status Code | Error Codes    | Error Message                                                                                | Description                                                                                 | Solution                                                                                                                                                                           |
|-------------|----------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.2889 | GetOsPoolFailed                                                                              | Get pool (%s) failed.%s                                                                     | Please check the validity of the pool in the request                                                                                                                               |
| 400         | ModelArts.2891 | WorkspaceSetError                                                                            | workspace access error,error message is %s, error code is %s                                | Please try to solve by error message                                                                                                                                               |
| 400         | ModelArts.3015 | Config json file does not conform to the specification.                                      | The model configuration file does not comply with file specifications.                      | Check whether config.json or initial_config complies with the specifications.                                                                                                      |
| 400         | ModelArts.3016 | Failed to parse config json file because of unsupported fields, types, or formats({0}, {1}). | Failed to parse the configuration file because the field, type, or format is not supported. | Check whether the field is correct as prompted.                                                                                                                                    |
| 400         | ModelArts.3017 | Failed to publish model because source location noncompliance.                               | Failed to publish the model because the model source path does not meet specifications.     | Check whether the source_location value complies with the specifications.                                                                                                          |
| 400         | ModelArts.3023 | Invalid labels({0}) of model.                                                                | Invalid model label {0}.                                                                    | Ensure that a model label starts with a letter or a Chinese character and contains a maximum of 64 characters, including letters, digits, underscores (_), and Chinese characters. |

| Status Code | Error Codes    | Error Message                                                                                                         | Description                                                                                       | Solution                                                                                                                   |
|-------------|----------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.3024 | The templateInput s field is incorrectly configured, check if the input is consistent with the template requirements. | Incorrect configuration. Check whether the configuration complies with the template requirements. | The parameter configuration does not comply with the template requirements. Modify the configuration.                      |
| 400         | ModelArts.3025 | User ({0}) has only a single share permission and cannot be shared with all users.                                    | User {0} does not have permission to share data with all users.                                   | Only the administrator or accounts in the whitelist have permission to share data with all users.                          |
| 400         | ModelArts.3026 | Failed to delete infer format, infer format ({0}) already be used by template.                                        | Failed to delete input/output mode {0} because it is being used by a template.                    | Find the template that is using the input/output mode, disassociate the mode from the template, and delete the mode again. |
| 400         | ModelArts.3027 | The model used by the template ({0}) is private and belongs to other users and cannot be shared.                      | Input/Output mode {0} used by the template cannot be shared.                                      | Select another mode.                                                                                                       |
| 400         | ModelArts.3028 | Failed to publish model, please select input and output mode.                                                         | Failed to publish the model. Select an input/output mode.                                         | Select another input/output mode and publish the model again.                                                              |

| Status Code | Error Codes    | Error Message                                                                                          | Description                                                                                           | Solution                                                                              |
|-------------|----------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 400         | ModelArts.3029 | Model publishing failed because the Template model must provide the template ID used.                  | Failed to publish the model because the template ID is unavailable.                                   | Enter the template ID.                                                                |
| 400         | ModelArts.3030 | Model publishing failed, template ({0}) does not support modifying its built-in input and output mode. | Failed to publish the model because the built-in input/output mode of template {0} cannot be changed. | Do not change the input/output mode of a template when publishing the template model. |
| 400         | ModelArts.3031 | Cancel sharing failed, ({0}) has not been shared with other tenants.                                   | Failed to cancel the sharing because image {0} is not shared with other users.                        | Ensure that image {0} is not shared with other users.                                 |
| 400         | ModelArts.3032 | Image ({0}) cannot be shared to admin ({1}), please check the image permissions.                       | Failed to share image {0} with the administrator {0}. Check the image permission.                     | Perform operations according to the error message.                                    |
| 400         | ModelArts.3033 | Template publishing failed, please provide template label.                                             | Failed to publish the template model because its label is left blank.                                 | Set the model label.                                                                  |

| Status Code | Error Codes    | Error Message                                                                                 | Description                                                                    | Solution                                                    |
|-------------|----------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------|
| 400         | ModelArts.3034 | Template model failed to be published, template field is required.                            | Failed to publish the template model because the template field is left blank. | Set template.                                               |
| 400         | ModelArts.3035 | Profile preview failed, sourceLocation and previewConfig fields need to provide at least one. | Failed to preview the configuration file.                                      | Either source_location or preview_config must be specified. |
| 400         | ModelArts.3036 | Parameter verification failed, parameter ({0}) is required.                                   | Failed to check parameter {0} because it is left blank.                        | Set parameters according to the error message.              |
| 400         | ModelArts.3037 | Parameter ({0}:{1}) is invalid.                                                               | Invalid parameter {0}:{1}.                                                     | Modify passwords as prompted.                               |
| 400         | ModelArts.3038 | When isSpecific is true, domainId is required.                                                | Failed to perform the operation because domain_id is left blank.               | Set domain_id as prompted.                                  |
| 400         | ModelArts.3039 | Template input input_id cannot be repeated.                                                   | Failed to perform the operation because input_id is repetitive.                | Ensure that the input_id value is unique.                   |

| Status Code | Error Codes    | Error Message                                                                                                                                             | Description                                                                              | Solution                                                 |
|-------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 400         | ModelArts.3040 | When the installer installer is yum or apt-get, and the version packageVersion exists, the version constraint restraint can only be EXACT.                | Failed to perform the operation because restraint can only be EXACT.                     | Change the restraint value to EXACT.                     |
| 400         | ModelArts.3041 | When the installer installer is conda or pip, and the version packageVersion exists, the version constraint restraint can only be EXACT, ATLEAST, ATMOST. | Failed to perform the operation because restraint can only be EXACT, ATLEAST, or ATMOST. | Change the restraint value to EXACT, ATLEAST, or ATMOST. |
| 400         | ModelArts.3063 | Mode unshared failed, the template using this mode has been shared, you need to cancel the sharing of the template first.                                 | Failed to cancel mode sharing because the template using the mode is being shared.       | Perform operations according to the error message.       |

| Status Code | Error Codes    | Error Message                                                                 | Description                                                                              | Solution                                                                                                                                                                  |
|-------------|----------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.3070 | There is a model name that does not belong to this tenant: ({0}).             | The model does not belong to user {0}.                                                   | The domain ID of the subscribed model is different from the entered domain ID. Contact the model subscription service and check whether the entered domain ID is correct. |
| 400         | ModelArts.3072 | The domain id is the same and does not support subscribing to your own model. | You cannot subscribe to your own model.                                                  | Use another account to subscribe to the model.                                                                                                                            |
| 400         | ModelArts.3074 | Unable to delete subscribed model.                                            | Failed to delete the subscribed model.                                                   | Unsubscribe from the model and try again.                                                                                                                                 |
| 400         | ModelArts.3076 | Model does not support deploying edge services and cannot broadcast.          | Failed to perform the operation because the model cannot be deployed as an edge service. | The install_type of the model does not support edge service.                                                                                                              |
| 400         | ModelArts.3077 | Model is a subscription model that cannot be broadcast.                       | Failed to perform the operation because the model has been subscribed.                   | The model_source of the model has been set to subscribe.                                                                                                                  |
| 400         | ModelArts.3078 | The model status is not normal and cannot be broadcast.                       | Failed to perform the operation because the model status is abnormal.                    | Check the model status.                                                                                                                                                   |



| Status Code | Error Codes    | Error Message                                                                                               | Description                                                                               | Solution                                                                         |
|-------------|----------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| 400         | ModelArts.3079 | Purchased license, can't cancel subscription.                                                               | Failed to unsubscribe from the model because a license has been configured for the model. | Delete the license and unsubscribe from the model.                               |
| 400         | ModelArts.3514 | Field [input_params] must be set for the model that is used to deploy the batch service.                    | The input_params parameter for the batch service model is left blank.                     | Set input_params.                                                                |
| 400         | ModelArts.3515 | The model {id} cannot be used for deploying services because it is still being published.                   | Failed to deploy the service because model {ID} is not ready.                             | Try again after the model is ready.                                              |
| 400         | ModelArts.3516 | Failed to deploy services because the version of the model that is used for deploying services is the same. | Failed to deploy the service due to duplicate model versions.                             | Correct the model version list to ensure that no duplicate model versions exist. |
| 400         | ModelArts.3518 | The {service_type} service has not been enabled or authorized.                                              | Service {type} has not been enabled or authorized.                                        | Enable or authorize the service.                                                 |

| Status Code | Error Codes    | Error Message                                                                              | Description                                                                                                | Solution                                                                                                              |
|-------------|----------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.3519 | Services only in one of states in [deploying, running, stopping, deleting] can be updated. | Services in the deploying, running, stopping, or deleting state cannot be updated.                         | Do not update services in the deploying, running, stopping, or deleting state.                                        |
| 400         | ModelArts.3520 | A maximum of {number} {service_type} services are allowed.                                 | The total number of {type} services has reached the maximum allowed limit {quantity}.                      | Delete the services that are no longer used or contact service O&M personnel to increase the quantity quota.          |
| 400         | ModelArts.3521 | A maximum of {number} {service_type} services in running status are allowed.               | The total number of {type} services in the running state has reached the maximum allowed limit {quantity}. | Delete the services that are no longer used or contact service O&M personnel to increase the quantity quota.          |
| 400         | ModelArts.3522 | A maximum of {number} {service_type} service instances are allowed.                        | The total number of {type} service instances has reached the maximum allowed limit {quantity}.             | Delete the service instances that are no longer used or contact service O&M personnel to increase the quantity quota. |
| 400         | ModelArts.3523 | Service {name} has been subscribed.                                                        | Service {name} has been subscribed.                                                                        | Directly use the subscribed service.                                                                                  |
| 400         | ModelArts.3524 | Failed to subscribe to the service because {reason}.                                       | Failed to subscribe to the service because {Reason}.                                                       | Locate the fault based on the failure cause.                                                                          |

| Status Code | Error Codes    | Error Message                                                                  | Description                                                         | Solution                                                                                                               |
|-------------|----------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.3525 | Forbidden to update service {name} because it is a shared service.             | Failed to update service {name} because it is a shared service.     | Do not update a shared service.                                                                                        |
| 400         | ModelArts.3527 | Forbidden to subscribe to service {id} because it is a {service_type} service. | Failed to subscribe to service {ID} because it is a {type} service. | The service of this type cannot be subscribed to.                                                                      |
| 400         | ModelArts.3528 | Forbidden to subscribe to service {id} because it is released by yourself.     | Failed to subscribe to service {ID} because it is your service.     | You cannot subscribe to services published by yourself.                                                                |
| 400         | ModelArts.3529 | Model {id} under service {id} does not exist.                                  | Model {ID} of service {ID} does not exist.                          | Ensure that the model ID is correctly set and that the model belongs to the target service.                            |
| 400         | ModelArts.3531 | Service {id} has created the QR code.                                          | A QR code has been created for service {ID}.                        | The QR code has been created for the service and does not need to be created again.                                    |
| 400         | ModelArts.3532 | No QR code found for service {id}.                                             | A QR code has not been created for service {ID}.                    | Create a QR code for the service and try again.                                                                        |
| 400         | ModelArts.3533 | The selected edge node does not support {GPU/NPU}.                             | The selected edge node flavor does not support {GPU/NPU}.           | Add the target hardware support to the selected edge node, or use another edge node that supports the target hardware. |

| Status Code | Error Codes    | Error Message                                                                                                                   | Description                                                                                                                                                   | Solution                                                                                                            |
|-------------|----------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.3534 | The security group must contain at least one inbound rule to allow the TCP request from source address 0.0.0.0/0 and port 8080. | The security group must contain at least one inbound rule to permit the requests whose protocol is TCP, source address is 0.0.0.0/0, and port number is 8080. | Add the inbound rule to the security group.                                                                         |
| 400         | ModelArts.3535 | Subservice {name} of service {name} does not exist.                                                                             | Subservice {name} of service {name} does not exist.                                                                                                           | Ensure that the subservice name is correctly set and that the subservice belongs to the target service.             |
| 400         | ModelArts.3536 | Subservice {name} of service {name} has been subscribed.                                                                        | You have subscribed to subservice {name} of service {name}.                                                                                                   | Directly use the subscribed subservice.                                                                             |
| 400         | ModelArts.3538 | The requirement notification of service {name} should not exceed one.                                                           | At most one requirement notification is allowed for service {name}.                                                                                           | Check the configuration and ensure that no more than one requirement notification is configured for service {name}. |
| 400         | ModelArts.3540 | Operation failed because you are not the owner of service {name}.                                                               | You are not the owner of service {name}.                                                                                                                      | This operation can be performed only by the service owner.                                                          |

| Status Code | Error Codes    | Error Message                                                | Description                                               | Solution                                                                                           |
|-------------|----------------|--------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 400         | ModelArts.3541 | Error code {error_code} of service {name} does not exist.    | Error code {error code} of service {name} does not exist. | Ensure that the error code is correctly set and that the error code belongs to the target service. |
| 400         | ModelArts.3542 | Error code {error_code} of service {name} already exists.    | Error code {error code} of service {name} already exists. | Change the error code and try again.                                                               |
| 400         | ModelArts.3544 | URL domain CNAME resolution failed.                          | Failed to parse the CNAME domain.                         | Check whether the URL is correct.                                                                  |
| 400         | ModelArts.3545 | Invalid certificate or private key.                          | Invalid certificate or private key.                       | Check whether the certificate or private key is correctly configured.                              |
| 400         | ModelArts.3547 | Cluster {id} does not exist.                                 | Cluster {ID} does not exist.                              | Check whether the cluster ID is correct.                                                           |
| 400         | ModelArts.3548 | Path {path} is not a valid regex.                            | Path {path} is not a valid regular expression.            | Check whether the path is correct.                                                                 |
| 400         | ModelArts.3549 | Error code {code} is duplicated.                             | Duplicate error code {error code} in the request body.    | Modify the error code to ensure that the error code is unique.                                     |
| 400         | ModelArts.3550 | Domain {name} has been used.                                 | Domain {noun} has been used.                              | Change the domain name and try again.                                                              |
| 400         | ModelArts.3551 | OBS path {path} does not exist.                              | OBS path {path} does not exist.                           | Check whether the OBS path is correct.                                                             |
| 400         | ModelArts.3552 | The length of [resource_id] must be in the range of [0, 64]. | The resource_id value is not in the range from 0 to 64.   | Check whether RESOURCE_SPEC_CODE is too long.                                                      |

| Status Code | Error Codes    | Error Message                                                        | Description                                                      | Solution                                                                                              |
|-------------|----------------|----------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.3553 | Service {name} not subscribed yet.                                   | Service {name} has not been subscribed to.                       | Subscribe to the service and try again.                                                               |
| 400         | ModelArts.3554 | Cluster name {name} has been used.                                   | Cluster name {name} has been used.                               | Change the cluster name and try again.                                                                |
| 400         | ModelArts.3556 | Forbidden to share ai-service {id} because ai-service is unsharable. | AI service {ID} cannot be shared.                                | AI services cannot be shared.                                                                         |
| 400         | ModelArts.3559 | Source error code {error_code} of service {name} already exists.     | Source error code {error_code} of service {name} already exists. | Change the source error code and try again.                                                           |
| 400         | ModelArts.3560 | Project {project_id} has not subscribed to subservice {id}.          | Subservice {ID} has not been subscribed for project {ID}.        | Subscribe to the subservice and try again.                                                            |
| 400         | ModelArts.3561 | Insufficient node quota.                                             | Insufficient node quota.                                         | Contact service O&M personnel to increase the quota or delete unnecessary nodes to release resources. |
| 400         | ModelArts.3562 | The value of field {due_time} must be a future time.                 | The due_time value must be later than the current time.          | Set the due_time parameter to a time later than the current time.                                     |
| 400         | ModelArts.3564 | The sample collection task has been created for service {id}.        | Sample collection for service {ID} has been created.             | Do not create the task again.                                                                         |

| Status Code | Error Codes    | Error Message                                                                    | Description                                              | Solution                                                                        |
|-------------|----------------|----------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------|
| 400         | ModelArts.3565 | No sample collection task is created for service {id}.                           | Sample collection for service {ID} has not been created. | Create a service sample collection task and try again.                          |
| 400         | ModelArts.3566 | Forbidden to modify the default workspace.                                       | The default workspace cannot be modified.                | Do not modify the default workspace.                                            |
| 400         | ModelArts.3567 | OBS error occurs because {reason}.                                               | OBS error because {cause}.                               | Locate the fault based on the failure cause.                                    |
| 400         | ModelArts.3568 | OBS client error occurs.                                                         | The OBS client is abnormal.                              | Contact service O&M personnel.                                                  |
| 400         | ModelArts.3572 | Invalid OBS URL {url}.                                                           | Invalid OBS path {path}.                                 | Check whether the OBS path is correct.                                          |
| 400         | ModelArts.3573 | Failed to obtain the bucket name from OBS URL {url}.                             | Failed to obtain the bucket name from OBS path {path}.   | Check whether the OBS path is correct.                                          |
| 400         | ModelArts.3574 | Failed to validate the correctness of OBS URL {url}.                             | Failed to check OBS path {path}.                         | Check whether the OBS path is correct.                                          |
| 400         | ModelArts.3576 | Failed to query the model quota.                                                 | Failed to obtain the model quota.                        | Contact service O&M personnel.                                                  |
| 400         | ModelArts.3577 | Failed to update the model quota.                                                | Failed to update the model quota.                        | Contact service O&M personnel.                                                  |
| 400         | ModelArts.3578 | Insufficient model quota. Increase the quota or delete any unnecessary services. | Insufficient model quota.                                | Increase the quota or delete the models that are no longer used, and try again. |

| Status Code | Error Codes    | Error Message                                               | Description                                                         | Solution                                           |
|-------------|----------------|-------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------|
| 400         | ModelArts.3580 | Model not purchased.                                        | The model has not been purchased.                                   | Purchase the model and try again.                  |
| 400         | ModelArts.3582 | Failed to create edge configurations .                      | Failed to create edge configurations .                              | Contact service O&M personnel.                     |
| 400         | ModelArts.3583 | Failed to create the edge application due to IEF error.     | Failed to create the edge application due to an IEF platform error. | Contact service O&M personnel.                     |
| 400         | ModelArts.3584 | Failed to update the edge application.                      | Failed to update the edge application.                              | Contact service O&M personnel.                     |
| 400         | ModelArts.3585 | The host port has been used by another edge application.    | The host port has been used by another edge application.            | Use another port or contact service O&M personnel. |
| 400         | ModelArts.3586 | Failed to create the edge application.                      | Failed to create the edge application.                              | Contact service O&M personnel.                     |
| 400         | ModelArts.3587 | Failed to delete the edge application.                      | Failed to delete the edge application.                              | Contact service O&M personnel.                     |
| 400         | ModelArts.3588 | Failed to create edge volumes and environments.             | Failed to create edge volumes and environments.                     | Contact service O&M personnel.                     |
| 400         | ModelArts.3589 | Model {id} cannot be used to deploy {service_type} service. | Model {ID} cannot be used to deploy the {type} service.             | Select another deployment type.                    |



| Status Code | Error Codes    | Error Message                                                                                                   | Description                                                                                                            | Solution                                                                                                              |
|-------------|----------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.3590 | Invalid expression rule. Create a rule using Spring Expression Language and the desired result type is Boolean. | Invalid expression rule.                                                                                               | Ensure that the rule complies with the Spring expression language syntax, and the expected result is of Boolean type. |
| 400         | ModelArts.3591 | There are duplicate rules in the extend-configs.                                                                | Duplicate rules in extend-configs.                                                                                     | Modify the expression specifications to prevent duplicate expressions.                                                |
| 400         | ModelArts.3592 | Incorrect model health configuration.                                                                           | Incorrect model health check parameters.                                                                               | Check whether the health check parameters of the model are correct.                                                   |
| 400         | ModelArts.3593 | The model has been expired.                                                                                     | The model has expired.                                                                                                 | Purchase or subscribe to the model again.                                                                             |
| 400         | ModelArts.3594 | Failed to query IEF instances.                                                                                  | Failed to obtain the edge instance.                                                                                    | Contact service O&M personnel.                                                                                        |
| 400         | ModelArts.3595 | Failed to create the IEF application mesh.                                                                      | Failed to create the application mesh.                                                                                 | Contact service O&M personnel.                                                                                        |
| 400         | ModelArts.3596 | Failed to update the IEF application mesh.                                                                      | Failed to update the application mesh.                                                                                 | Contact service O&M personnel.                                                                                        |
| 400         | ModelArts.3597 | Please authorize the development environment to use and store your AK and SK.                                   | Failed to use the service because the development environment has not been authorized to store and use your AK and SK. | Authorize the development environment to store and use your AK and SK.                                                |

| Status Code | Error Codes    | Error Message                                                                                                                                           | Description                                                                                                             | Solution                                    |
|-------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| 400         | ModelArts.3598 | Only nodes in the [Running] state can be selected.                                                                                                      | Only running nodes can be selected.                                                                                     | Select a running node and try again.        |
| 400         | ModelArts.3610 | Parameter {name} cannot be empty.                                                                                                                       | Parameter {name} cannot be left blank.                                                                                  | Set the parameter and try again.            |
| 400         | ModelArts.3611 | Failed to query the batch task run log.                                                                                                                 | Failed to obtain batch processing task logs.                                                                            | Contact service O&M personnel.              |
| 400         | ModelArts.3612 | Failed to {create/update} the service payload due to error code {code}. Please try later or submit a service ticket for professional technical support. | Failed to {create/update} service workload. The error code is {error code}. Try again later or submit a service ticket. | Try again or contact service O&M personnel. |
| 400         | ModelArts.3613 | Failed to register the API. Please try later or submit a service ticket for professional technical support.                                             | Failed to register the service API. Try again later or submit a service ticket.                                         | Try again or contact service O&M personnel. |
| 400         | ModelArts.3620 | Failed to get the number of associated services.                                                                                                        | Failed to obtain the number of associated services.                                                                     | Contact service O&M personnel.              |

| Status Code | Error Codes    | Error Message                                                            | Description                                                    | Solution                                     |
|-------------|----------------|--------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------|
| 400         | ModelArts.3811 | Failed to query the agency because {reason}.                             | Failed to obtain the agency because {Reason}.                  | Locate the fault based on the failure cause. |
| 400         | ModelArts.3812 | Failed to create AI resource specification code {code} because {reason}. | Failed to create resource flavor code {code} because {Reason}. | Locate the fault based on the failure cause. |
| 400         | ModelArts.3813 | Failed to update AI resource specification code {code} because {reason}. | Failed to update resource flavor code {code} because {Reason}. | Locate the fault based on the failure cause. |
| 400         | ModelArts.3814 | Failed to delete AI resource specification code {code} because {reason}. | Failed to delete resource flavor code {code} because {Reason}. | Locate the fault based on the failure cause. |
| 400         | ModelArts.3815 | Failed to delete AI subservice {id} because {reason}.                    | Failed to delete subservice {ID} because {Reason}.             | Locate the fault based on the failure cause. |
| 400         | ModelArts.3816 | Failed to create the AI proxy mapping because {reason}.                  | Failed to create the proxy mapping because {reason}.           | Locate the fault based on the failure cause. |
| 400         | ModelArts.3817 | Failed to update the AI proxy mapping because {reason}.                  | Failed to update the proxy mapping path because {reason}.      | Locate the fault based on the failure cause. |

| Status Code | Error Codes    | Error Message                                                                    | Description                                                              | Solution                                     |
|-------------|----------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------|
| 400         | ModelArts.3818 | The agency of service {name} has been defined.                                   | The agency of service {name} has been configured.                        | Do not repeat the operation.                 |
| 400         | ModelArts.3822 | The batch service task does not exist.                                           | The batch service does not exist.                                        | Enter the correct batch service ID.          |
| 400         | ModelArts.3825 | Failed to generate the SDR data because {reason}.                                | Failed to generate CDR data because {Reason}.                            | Locate the fault based on the failure cause. |
| 400         | ModelArts.3826 | Failed to create the API because {reason}.                                       | Failed to create the API because {Reason}.                               | Locate the fault based on the failure cause. |
| 400         | ModelArts.3827 | Failed to subscribe to the API because {reason}.                                 | Failed to subscribe to the API because {Reason}.                         | Locate the fault based on the failure cause. |
| 400         | ModelArts.3828 | Failed to unsubscribe from the API because {reason}.                             | Failed to unsubscribe from the API because {Reason}.                     | Locate the fault based on the failure cause. |
| 400         | ModelArts.3829 | Failed to modify the API subscription status because {reason}.                   | Failed to update the API subscription because {Reason}.                  | Locate the fault based on the failure cause. |
| 400         | ModelArts.3830 | Operation not allowed. Change the charging mode from postpaid to prepaid in CBC. | You are not allowed to change the billing mode from postpaid to prepaid. | Change the billing mode in CBC.              |

| Status Code | Error Codes    | Error Message                                                                                 | Description                                                                              | Solution                                                                                               |
|-------------|----------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.3831 | Operation not allowed. Change the charging mode from prepaid to postpaid in CBC.              | You are not allowed to change the billing mode from prepaid to postpaid.                 | Change the billing mode in CBC.                                                                        |
| 400         | ModelArts.3832 | The subscription configuration is not modified and does not need to be updated. Please check. | Failed to perform the operation because the subscription configuration has not modified. | Change the subscription configuration and try again.                                                   |
| 400         | ModelArts.3833 | Failed to delete the API because {reason}.                                                    | Failed to delete the API because {Reason}.                                               | Locate the fault based on the failure cause.                                                           |
| 400         | ModelArts.3834 | Failed to update metedata in CBC because {reason}.                                            | Failed to update the CBC metadata because {Reason}.                                      | Locate the fault based on the failure cause.                                                           |
| 400         | ModelArts.3835 | Resource specification code {code} of service {name} does not exist.                          | Resource flavor code {code} of service {name} does not exist.                            | Ensure that the resource flavor code is correctly set and that the code belongs to the target service. |
| 400         | ModelArts.3836 | Resource specification code {code} of project {id} does not exist.                            | Resource flavor code {code} of project {1} does not exist.                               | Ensure that the resource flavor code is correctly set and that the code belongs to the target project. |
| 400         | ModelArts.3837 | Resource ID {id} of project {id} does not exist.                                              | Resource {ID} of project {1} does not exist.                                             | Ensure that the resource ID is correctly set and that the resource belongs to the target project.      |

| Status Code | Error Codes    | Error Message                                                                                  | Description                                                                       | Solution                                                                 |
|-------------|----------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| 400         | ModelArts.3838 | The hard-select has not been enabled for service {id}.                                         | Hard example filtering of service {0} has not been enabled.                       | Enable hard example filtering for the service and try again.             |
| 400         | ModelArts.3839 | The hard-select has been enabled for service {id}.                                             | Hard example filtering of service {0} has been enabled.                           | You do not need to enable it again.                                      |
| 400         | ModelArts.3840 | Only one algorithm can be set for the service model.                                           | Service {0} has more than one labeling type.                                      | Modify the configuration to ensure that there is only one labeling type. |
| 400         | ModelArts.3841 | The value of [dataset_type] must be one of values in [image_classification, object_detection]. | The labeling type is not object detection or image classification.                | Change the labeling type to object detection or image classification.    |
| 400         | ModelArts.3842 | The labeling type of service algorithm {name} does not match that of label task {type}.        | The labeling type of service algorithm {0} does not match that of label task {1}. | Modify the labeling type or contact service O&M personnel.               |
| 400         | ModelArts.3843 | Failed to query the information about dataset {id}.                                            | Failed to obtain database {0}.                                                    | Contact service O&M personnel.                                           |
| 400         | ModelArts.3844 | Failed to import samples to dataset {id}.                                                      | Failed to import the sample to dataset {0}.                                       | Contact service O&M personnel.                                           |

| Status Code | Error Codes    | Error Message                                                                             | Description                                                                                    | Solution                                                                                               |
|-------------|----------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.3845 | No sample is available for import under the OBS path {path} of service {id}.              | No sample is available to be imported to OBS path {path} of service {ID}.                      | Try again or contact service O&M personnel.                                                            |
| 400         | ModelArts.3846 | Failed to add the OBS bucket lifecycle rule for service {id}.                             | Failed to add the lifecycle rule for the OBS bucket of service {ID}.                           | Contact service O&M personnel.                                                                         |
| 400         | ModelArts.3847 | Failed to delete the OBS bucket lifecycle rule for service {id}.                          | Failed to delete the lifecycle rule for the OBS bucket of service {ID}.                        | Contact service O&M personnel.                                                                         |
| 400         | ModelArts.3848 | Service {id} in the information of dataset {import_type} already exists.                  | The service {ID} of the {import type} dataset already exists.                                  | Check the request and select the correct service ID.                                                   |
| 400         | ModelArts.3849 | Service {id} in the information of dataset {import_type} does not exist.                  | The service {ID} of the {import type} dataset does not exist.                                  | Check whether the service ID is correct.                                                               |
| 400         | ModelArts.3850 | The hard-sample-select task {id} of service {id} does not exist.                          | Hard example task {ID} of service {ID} does not exist.                                         | Ensure that the hard example task ID is correctly set and that the task belongs to the target service. |
| 400         | ModelArts.3851 | The status of hard-sample-select task {name} cannot be changed from {status} to {status}. | The status {status value} of the hard example task {name} cannot be updated to {status value}. | Try again or contact service O&M personnel.                                                            |

| Status Code | Error Codes    | Error Message                                                                             | Description                                                                     | Solution                                               |
|-------------|----------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------|
| 400         | ModelArts.3852 | Failed to start hard-sample-select task {id} because related OBS files have been deleted. | Failed to start hard example task {ID} because key OBS files have been deleted. | Try again or contact service O&M personnel.            |
| 400         | ModelArts.3853 | The hard-sample-select quota of project {id} does not exist.                              | The quota for selecting hard samples for project {ID} does not exist.           | Create the quota and try again.                        |
| 400         | ModelArts.3854 | The hard-sample-select quota of project {id} already exists.                              | The quota for selecting hard samples for project {ID} already exists.           | You do not need to create it again.                    |
| 400         | ModelArts.3856 | A maximum of {number} free services are allowed.                                          | The number of free services has reached the maximum allowed limit {Number}.     | Delete unnecessary free services to release resources. |
| 400         | ModelArts.3857 | A maximum of {number} free service instances are allowed.                                 | The number of free services has reached the maximum allowed limit {Number}.     | Delete unnecessary free services to release resources. |
| 400         | ModelArts.3862 | Subservice {id} has been added to whitelist URL {url}.                                    | The URL {URL} has been added to the whitelist of the sub-service {ID}.          | Do not repeat the operation.                           |



| Status Code | Error Codes    | Error Message                                                                                     | Description                                                                                       | Solution                                                                                                  |
|-------------|----------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.3863 | Whitelist URL {id} of service {name} does not exist.                                              | The whitelist URL {ID} of the service {name} does not exist.                                      | Ensure that the URL ID in the whitelist is correct and that the URL belongs to the corresponding service. |
| 400         | ModelArts.3864 | Subservice {id} of service {name} does not exist.                                                 | The sub-service {ID} of service {name} does not exist.                                            | Ensure that the sub-service ID is correct and that the sub-service belongs to the corresponding service.  |
| 400         | ModelArts.3865 | The size of the download whitelist of service {name} exceeds the maximum number {number} allowed. | The number of the whitelist records downloaded by service {name} exceeds the upper limit {value}. | Contact service O&M personnel.                                                                            |
| 400         | ModelArts.3866 | Domain ID {id} and user ID {id} already exist.                                                    | The domain ID {ID} and user ID {ID} already exist.                                                | Do not repeat the operation.                                                                              |
| 400         | ModelArts.3867 | Domain ID {id} does not exist.                                                                    | The domain ID {ID} does not exist.                                                                | Check the request and enter the correct domain ID.                                                        |
| 400         | ModelArts.3868 | Domain ID {id} and user ID {id} do not exist.                                                     | The domain ID {ID} and user ID {ID} do not exist.                                                 | Check the request and enter the correct domain ID and user ID.                                            |
| 400         | ModelArts.3869 | Failed to delete the task type because {reason}.                                                  | Failed to delete the task type. Fault cause: {fault cause}.                                       | Locate the fault based on the failure cause.                                                              |
| 400         | ModelArts.3870 | Failed to subscribe to the API because {reason}.                                                  | Failed to subscribe to the API. Fault cause: {fault cause}.                                       | Contact service O&M personnel.                                                                            |

| Status Code | Error Codes    | Error Message                                                                         | Description                                                                                             | Solution                                                      |
|-------------|----------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| 400         | ModelArts.3871 | Forbidden to subscribe to postpaid QPS for the task type.                             | You are not allowed to subscribe to postpaid QPS for the task type.                                     | Check the request parameter or contact service O&M personnel. |
| 400         | ModelArts.3872 | Forbidden to change the charging mode for the task type from prepaid to postpaid QPS. | You are not allowed to change the billing mode of the task type from prepaid mode to postpaid QPS mode. | Check the request parameter or contact service O&M personnel. |
| 400         | ModelArts.3873 | No corresponding subservice is found in cluster {name}.                               | The cluster {0} does not have the corresponding sub-service.                                            | Check the request parameter or contact service O&M personnel. |
| 400         | ModelArts.3880 | Failed to create the AS policy because {reason}.                                      | Failed to create the AS policy. Fault cause: {fault cause}.                                             | Locate the fault based on the failure cause.                  |
| 400         | ModelArts.3890 | The total number of AS policies exceeds the maximum number {number} allowed.          | The number of AS policies exceeds the upper limit {0}.                                                  | Delete unnecessary AS policies.                               |
| 400         | ModelArts.3892 | Calling failed due to invalid CBS request.                                            | Failed to call the API due to the invalid CBS request.                                                  | Try again or contact service O&M personnel.                   |

| Status Code | Error Codes    | Error Message                                                                             | Description                                                                      | Solution                                                                 |
|-------------|----------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| 400         | ModelArts.3894 | The specification configuration information of runtime environment {name} does not exist. | The specification configurations of the running environment {0} does not exist.  | Set the flavor configurations for the running environment and try again. |
| 400         | ModelArts.3895 | The specification configuration information of runtime environment {name} already exists. | The specification configurations of the running environment {0} already exist.   | Do not repeat the operation.                                             |
| 400         | ModelArts.3896 | Resource specification code {0} for user {1} already exists.                              | The records of the resource specification code {0} in project {1} already exist. | Do not repeat the operation.                                             |
| 400         | ModelArts.3897 | Failed to {create/obtain/remove} the AS policy due to error code {code}.                  | Failed to request {create/obtain/delete} the AS. Error code: {0}.                | Try again or contact service O&M personnel.                              |
| 400         | ModelArts.3950 | Failed to obtain the AI service list.                                                     | Failed to obtain the AI service list.                                            | Contact service O&M personnel.                                           |
| 400         | ModelArts.3951 | Failed to parse file {name}.                                                              | Failed to parse the file {name}.                                                 | Ensure that the file name is correct.                                    |
| 400         | ModelArts.3952 | Insufficient resources. Please try later.                                                 | Insufficient resources.                                                          | Try again later or contact service O&M personnel.                        |

| Status Code | Error Codes    | Error Message                                                                                                                     | Description                                                                                    | Solution                                                                                                      |
|-------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.3953 | Failed to delete online service {id} because it has been associated with AI service {name}. Please disassociate it and try again. | Failed to delete real-time service {ID} because it has been associated with AI service {name}. | Cancel the association between the real-time service and all AI services and try again.                       |
| 400         | ModelArts.3954 | AI resource specification {id} does not exist.                                                                                    | The cloud resource specification {ID} does not exist.                                          | Ensure that the cloud resource specification ID is correct.                                                   |
| 400         | ModelArts.3955 | Field [resource_id_components] of AI resource specification {id} cannot be empty.                                                 | The ID components in the cloud resource specification {ID} cannot be left blank.               | Set the resource_id_components parameter and try again.                                                       |
| 400         | ModelArts.3976 | No resources are available for the selected specification.                                                                        | No resources are available for the selected specification.                                     | Increase the number of nodes in the resource pool or purchase a resource pool of the required specifications. |
| 400         | ModelArts.4105 | Incorrect JSON format of the input data.                                                                                          | The JSON format of the request body is incorrect.                                              | Use a request body in correct JSON format.                                                                    |
| 400         | ModelArts.4106 | Invalid authorization request. Your account is restricted.                                                                        | Your account has been suspended.                                                               | Ensure your account balance is sufficient.                                                                    |
| 400         | ModelArts.4111 | Invalid Region header.                                                                                                            | Invalid Region header.                                                                         | Ensure the region header is correct.                                                                          |
| 400         | ModelArts.4122 | Incorrect username or password.                                                                                                   | The username or password is incorrect.                                                         | Check the username and password.                                                                              |

| Status Code | Error Codes    | Error Message                                                         | Description                                                           | Solution                                                              |
|-------------|----------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------|
| 400         | ModelArts.4126 | Account locked.                                                       | The account has been locked.                                          | Wait until the account is unlocked and try again.                     |
| 400         | ModelArts.4128 | Weak password is forbidden.                                           | Do not use a weak password.                                           | Configure a secure password.                                          |
| 400         | ModelArts.4129 | System error.                                                         | An error occurred. The taskEntity of a recovery task cannot be null.  | Check taskEntity and ensure it is not null.                           |
| 400         | ModelArts.4200 | Invalid request.                                                      | The values of the request parameters are invalid.                     | Check whether the request parameters are correct.                     |
| 400         | ModelArts.4201 | Invalid request URL because no service ID or request URI included.    | The request URL does not contain a service ID.                        | Use a correct request URL.                                            |
| 400         | ModelArts.4202 | Empty request.                                                        | The request is empty.                                                 | Ensure the request body is not empty.                                 |
| 400         | ModelArts.4203 | Invalid request because requested service %s is unavailable.          | The requested service has not been started.                           | Ensure the service is started.                                        |
| 400         | ModelArts.4204 | Request API error. %s                                                 | You do not have the API OBT permission.                               | Obtain the API OBT permission.                                        |
| 400         | ModelArts.4205 | A subdirectory must be specified as the dataset input or output path. | A subdirectory must be specified as the dataset input or output path. | A subdirectory must be specified as the dataset input or output path. |

| Status Code | Error Codes    | Error Message                    | Description                                                                       | Solution                                                                                                                                             |
|-------------|----------------|----------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.4301 | The labeling job does not exist. | The labeling job does not exist, and the task has been stopped.                   | Check the labeling job.                                                                                                                              |
| 400         | ModelArts.4311 | OBS bucket does not exist        | The OBS bucket does not exist.                                                    | Ensure that the bucket name is correct and that the bucket name exists in OBS.                                                                       |
| 400         | ModelArts.4312 | OBS path does not exist          | Incorrect or invalid bucket name.                                                 | Ensure that the bucket name is correct and that the bucket name exists in OBS.                                                                       |
| 400         | ModelArts.4313 | OBS path is invalid              | Invalid characters in the OBS path.                                               | Ensure that the OBS path consists of valid characters, including digits, letters, hyphens (-), underscores (_), slashes (/), and Chinese characters. |
| 400         | ModelArts.4314 | Obs error                        | OBS access error.                                                                 | Ensure that you have the permission to access OBS and that the OBS path is valid.                                                                    |
| 400         | ModelArts.4315 | Invalid OBS path.                | The OBS path is invalid.                                                          | Ensure the data URL does not contain //.                                                                                                             |
| 400         | ModelArts.4316 | OBS buckets are not supported.   | OBS buckets are not supported.                                                    | Select a PFS bucket for the parallel file system.                                                                                                    |
| 400         | ModelArts.4337 | OperationCenter error.           | An error occurred in OperationCenter, leading to a failure to send alarms to IES. | Check the alarms.                                                                                                                                    |

| Status Code | Error Codes    | Error Message                                          | Description                                                                                                | Solution                                                                              |
|-------------|----------------|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 400         | ModelArts.4338 | The resource not exists                                | The dataset ID or labeling task ID does not exist.                                                         | Ensure that the input dataset ID or labeling task ID is correct.                      |
| 400         | ModelArts.4340 | Import path does not contain valid file                | No valid file exists in the import path.                                                                   | Ensure that the file in the OBS path is valid.                                        |
| 400         | ModelArts.4342 | Dataset publish with splitting annotated samples error | Incorrect splitting for labeled samples.                                                                   | Ensure that the labeled samples and labels meet splitting criteria.                   |
| 400         | ModelArts.4343 | Dataset is publishing, the operation is forbidden      | Do not switch, import, synchronize, or publish a dataset version because there is an ongoing publish task. | Perform the operations after the ongoing publish task is complete.                    |
| 400         | ModelArts.4344 | Dataset is being deleted, annotation is forbidden      | No labeling task is allowed because the dataset is being deleted.                                          | Ensure that the dataset ID is correct.                                                |
| 400         | ModelArts.4345 | File not found                                         | The HDFS file does not exist.                                                                              | Ensure that the OBS path is correct and that the file is available in the OBS path.   |
| 400         | ModelArts.4346 | Failed to obtain clusters.                             | Obtaining MRS clusters failed.                                                                             | Check the MRS clusters.                                                               |
| 400         | ModelArts.4347 | List files failed                                      | Failed to obtain HDFS files.                                                                               | Ensure that the OBS path is correct and that the files are available in the OBS path. |

| Status Code | Error Codes    | Error Message                                            | Description                                                                                                          | Solution                                                                        |
|-------------|----------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 400         | ModelArts.4349 | Dataset is switching version, the operation is forbidden | Do not switch, import, synchronize, or publish a dataset version because there is an ongoing version switching task. | Perform the operations after the ongoing version switching task is complete.    |
| 400         | ModelArts.4350 | The work_path is too long, please select shorter folder  | The value of work_path exceeded the limit.                                                                           | Change the value of work_path to a valid one.                                   |
| 400         | ModelArts.4351 | Dataset already exists                                   | A dataset whose name is the value of dataset_name already exists.                                                    | Change the value of dataset_name.                                               |
| 400         | ModelArts.4352 | Dataset does not exist                                   | The dataset ID does not exist.                                                                                       | Ensure that the imported dataset ID is correct.                                 |
| 400         | ModelArts.4353 | Dataset version does not exist                           | The dataset version ID does not exist.                                                                               | Check dataset version parameters.                                               |
| 400         | ModelArts.4355 | Sync data source task exist                              | A data synchronization task is being executed for the dataset.                                                       | Perform the operations after the ongoing data synchronization task is complete. |
| 400         | ModelArts.4356 | Dataset already has running import task                  | A data import task is being executed for the dataset.                                                                | Perform the operations after the ongoing data import task is complete.          |
| 400         | ModelArts.4357 | Parse AI annotation result file name error               | Failed to parse the labeling file name.                                                                              | Ensure that the file name in the OBS auto labeling result path is correct.      |



| Status Code | Error Codes    | Error Message                                                           | Description                                                         | Solution                                                                                                       |
|-------------|----------------|-------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.4358 | Invalid export path                                                     | Invalid OBS export path.                                            | Ensure that the export path is correct.                                                                        |
| 400         | ModelArts.4359 | Export task does not exist                                              | The export task ID does not exist.                                  | Ensure that the export task ID is correct.                                                                     |
| 400         | ModelArts.4361 | Import AI annotation error                                              | Failed to synchronize the auto labeling task result.                | Ensure that the auto labeling task result is correct.                                                          |
| 400         | ModelArts.4362 | Import data error                                                       | Failed to import data.                                              | Ensure that the authentication information and the request parameters for creating an import task are correct. |
| 400         | ModelArts.4364 | Dataset workPath subdir already exists                                  | The work_path subdirectory already exists in the dataset directory. | Ensure that the subdirectory in the dataset directory is correct.                                              |
| 400         | ModelArts.4365 | Dataset labels not set                                                  | The label set of the dataset is empty.                              | Create labels for the dataset.                                                                                 |
| 400         | ModelArts.4368 | Parse pc bin file error                                                 | Failed to parse the point cloud binary file.                        | Ensure that the point cloud binary file is not damaged.                                                        |
| 400         | ModelArts.4369 | Parse pc prelabel json file error                                       | Failed to parse the point cloud pre-labeling file.                  | Ensure that the point cloud pre-labeling file is correct.                                                      |
| 400         | ModelArts.4370 | One dataset version can be released in a minute, please try again later | Frequent dataset version creation.                                  | Do not frequently create dataset versions.                                                                     |

| Status Code | Error Codes    | Error Message                      | Description                                                   | Solution                                                                            |
|-------------|----------------|------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 400         | ModelArts.4371 | Dataset version already exists     | The value of version_name is the same as an existing version. | Change the value of version_name.                                                   |
| 400         | ModelArts.4372 | Valid image not found              | No point cloud data image found.                              | Ensure that the point cloud data image is correct.                                  |
| 400         | ModelArts.4374 | Invalid path                       | Invalid OBS path.                                             | Ensure that the OBS path is correct and that the file is available in the OBS path. |
| 400         | ModelArts.4375 | Parse pc obs image error           | Failed to parse the point cloud data image in OBS.            | Ensure that the point cloud data image is correct.                                  |
| 400         | ModelArts.4376 | Unsupported pc pcd format error    | The PCD attribute is not supported.                           | Check the point cloud data in PCD format.                                           |
| 400         | ModelArts.4377 | Pc pcd format error                | Failed to parse the point cloud data in PCD format.           | Ensure that the PCD file is valid.                                                  |
| 400         | ModelArts.4378 | Parse pc pcd file error            | Failed to parse the point cloud data in PCD format.           | Ensure that the PCD file is correct.                                                |
| 400         | ModelArts.4379 | Unsupported pc file format error   | The point cloud data format is not supported.                 | Ensure that the imported point cloud data is in BIN or PCD format.                  |
| 400         | ModelArts.4380 | Parse kitti calibration file error | Failed to parse the Kitti data.                               | Ensure that the data is correct.                                                    |

| Status Code | Error Codes    | Error Message                                  | Description                                                                             | Solution                                                     |
|-------------|----------------|------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------|
| 400         | ModelArts.4381 | Dataset is publishing, annotation is forbidden | Sample labeling is not allowed because a publish task is being executed in the dataset. | Wait until the publish task is complete.                     |
| 400         | ModelArts.4382 | Generate 2d image error                        | Failed to generate a 2D image.                                                          | Ensure that the point cloud data is correct.                 |
| 400         | ModelArts.4384 | Invalid export parameter                       | Invalid parameter.                                                                      | Ensure that all mandatory parameters are included and valid. |
| 400         | ModelArts.4391 | Task name is invalid                           | An auto deploy task whose name is the task_name value already exists in the dataset.    | Ensure that the task name is correct.                        |
| 400         | ModelArts.4392 | Task failed                                    | Failed to create or run the dataset.                                                    | Ensure that the parameters and task resources are correct.   |
| 400         | ModelArts.4393 | Task stopped                                   | The dataset task has been stopped.                                                      | Check the status of the dataset task with the specified ID.  |
| 400         | ModelArts.4396 | Parameter is invalid                           | Invalid parameter.                                                                      | Ensure that the import task parameters are correct.          |
| 400         | ModelArts.4398 | Invalid system language.                       | The system language is invalid.                                                         | Check whether the system language is supported.              |

| Status Code | Error Codes    | Error Message                                                                       | Description                                                                 | Solution                                                  |
|-------------|----------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------|
| 400         | ModelArts.4399 | Type match error                                                                    | The dataset type does not match the algorithm model.                        | Ensure that the algorithm model is correct.               |
| 400         | ModelArts.4400 | Can not get table schema                                                            | Failed to obtain the schema information from the OBS directory.             | Ensure that the CSV file in the OBS directory is correct. |
| 400         | ModelArts.4401 | Failed to export data.                                                              | Exporting data failed. The dataset file cannot be copied to the repository. | Take other measures to export data.                       |
| 400         | ModelArts.4404 | Can not get table schema from DLI                                                   | Failed to obtain the schema information from DLI.                           | Ensure that the request parameters are correct.           |
| 400         | ModelArts.4405 | Dataset must contains labels to start automation labeling                           | Labeled samples must be available for enabling auto labeling.               | Add new labeled samples to the dataset.                   |
| 400         | ModelArts.4406 | Dataset must contains labels with at least five images to start automation labeling | The number of samples to be labeled for each label cannot be less than 5.   | Ensure that each label has at least five samples.         |
| 400         | ModelArts.4407 | Dataset must contains unlabeled files                                               | The dataset must contain samples that have not been labeled.                | Ensure that there are unlabeled samples in the dataset.   |
| 400         | ModelArts.4408 | Dataset contains labels shape not bndbox                                            | The label shape cannot be bounding box.                                     | Ensure that the shape attribute is correct.               |

| Status Code | Error Codes    | Error Message                                                       | Description                                                                                       | Solution                                                             |
|-------------|----------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| 400         | ModelArts.4409 | Running tasks has exceed the max threshold                          | The number of tasks that are being executed in the dataset has reached the maximum allowed limit. | Try again later.                                                     |
| 400         | ModelArts.4410 | Label not found                                                     | The label does not exist.                                                                         | Ensure that the label name is correct.                               |
| 400         | ModelArts.4411 | Label already exists                                                | The new label list contains existing label names.                                                 | Ensure that the label names are correct.                             |
| 400         | ModelArts.4412 | Label shortcut already exists                                       | The label shortcut already exists.                                                                | Change the label shortcut.                                           |
| 400         | ModelArts.4413 | Label is incompatible with annotation rules                         | The label attribute does not comply with specifications.                                          | Ensure that the label attribute complies with specifications.        |
| 400         | ModelArts.4414 | Triplet label's from_entity or to_entity does not exist             | The entity label does not exist in the triplet label.                                             | Ensure that the entity label in the triplet label is available.      |
| 400         | ModelArts.4415 | Entity label can not be deleted because it is used by triplet label | Failed to delete the entity label because it is being used in the triplet label.                  | Wait until the label is not used in the triplet label and try again. |
| 400         | ModelArts.4416 | Sync tags error                                                     | Failed to synchronize labels in the team labeling task.                                           | Ensure that the synchronization task parameters are correct.         |

| Status Code | Error Codes    | Error Message                                                     | Description                                                             | Solution                                                   |
|-------------|----------------|-------------------------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------|
| 400         | ModelArts.4417 | Update sample labels failed when upload sample and labels         | Failed to update the sample labels.                                     | Ensure that the labels are correct.                        |
| 400         | ModelArts.4418 | Label property mask_gray_value already exists                     | Duplicate tag mask_gray_value.                                          | Ensure that the tag mask_gray_value is correct.            |
| 400         | ModelArts.4420 | Sample not found                                                  | The sample with the specified ID does not exist.                        | Ensure that the sample ID is correct.                      |
| 400         | ModelArts.4421 | Upload sample failed                                              | Failed to upload the sample to the dataset.                             | Ensure that the uploaded sample type and data are correct. |
| 400         | ModelArts.4422 | Sample already exists                                             | The sample that is being imported already exists.                       | Enter that the imported sample is correct.                 |
| 400         | ModelArts.4423 | Get sample size failed, please input size manually                | Incorrect size of the image obtained from the object detection dataset. | Manually set the image size.                               |
| 400         | ModelArts.4425 | Label property mask_gray_value is incompatible with defined value | The mask_gray_value value cannot be changed.                            | Ensure that the mask_gray_value value is not changed.      |
| 400         | ModelArts.4426 | Dataset must contains tags to start auto deploy                   | The label set of the dataset cannot be empty.                           | Create labels for the dataset.                             |

| Status Code | Error Codes     | Error Message                                                                       | Description                                                               | Solution                                                   |
|-------------|-----------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------|
| 400         | ModelArts.44 27 | Dataset must contains tags with at least five images to start auto deploy           | The number of samples to be labeled for each label cannot be less than 5. | Ensure that each label has at least five samples.          |
| 400         | ModelArts.44 28 | The label attribute name already exists.                                            | The label attribute name already exists.                                  | Configure another attribute name.                          |
| 400         | ModelArts.44 29 | The label attribute value already exists.                                           | The label attribute value already exists.                                 | Configure another attribute value.                         |
| 400         | ModelArts.44 30 | The label attribute or value does not exist.                                        | The label attribute or value does not exist.                              | Check the label attribute and value.                       |
| 400         | ModelArts.45 02 | The IAM agency name already exists, please delete the agency in IAM first and retry | The default IAM agency already exists.                                    | Delete the IAM agency and create a new one.                |
| 400         | ModelArts.45 03 | Failed to create the DLI agency.                                                    | Creating the DLI agency failed.                                           | Check the DLI agency.                                      |
| 400         | ModelArts.45 06 | The sub-service was not found.                                                      | The sub-service does not exist.                                           | Check whether the sub-service to be accessed is available. |
| 400         | ModelArts.45 07 | The specification code was not found.                                               | The flavor code does not exist.                                           | Internal error. Contact technical support.                 |
| 400         | ModelArts.45 50 | Workspace clearing error.                                                           | An error occurred in clearing the workspace.                              | Handle carbon reader exceptions.                           |

| Status Code | Error Codes    | Error Message                                      | Description                                                    | Solution                                                                              |
|-------------|----------------|----------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 400         | ModelArts.4551 | You are not allowed to delete workspace resources. | You do not have permission to delete workspace resources.      | Check your permissions.                                                               |
| 400         | ModelArts.4552 | ModelArts workspace error.                         | An error occurred in the ModelArts workspace.                  | Check identity authentication in the workspace.                                       |
| 400         | ModelArts.4601 | The workforce does not exist                       | The team ID does not exist.                                    | Ensure that the team ID is correct.                                                   |
| 400         | ModelArts.4602 | The workforce already exists                       | A team whose name is the workforce_name value already exists.  | Ensure that the workforce_name value is correct.                                      |
| 400         | ModelArts.4603 | Update workforce state failed                      | Failed to delete the team.                                     | Check whether the team has been deleted.                                              |
| 400         | ModelArts.4604 | The worker does not exist                          | The team member specified by work_id does not exist.           | Ensure that the workforce_id and work_id values are correct.                          |
| 400         | ModelArts.4605 | The worker already exists                          | The team member whose value is the email value already exists. | Ensure that the email value is correct.                                               |
| 400         | ModelArts.4607 | Failed to reset the password.                      | Requesting to reset the password failed.                       | The username is incorrect, or the password reset email cannot be sent to the account. |
| 400         | ModelArts.4609 | Change password failed                             | Failed to change the account password.                         | Ensure that the new password complies with specifications.                            |



| Status Code | Error Codes    | Error Message                           | Description                                                                           | Solution                                                     |
|-------------|----------------|-----------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------|
| 400         | ModelArts.4612 | Task not found                          | The task ID does not exist.                                                           | Ensure that the task ID is correct.                          |
| 400         | ModelArts.4615 | Workforce task is unfinished            | The version cannot be switched because the team labeling task has not been completed. | Wait until the team labeling task is complete and try again. |
| 400         | ModelArts.4616 | Too many unfinished tasks.              | There are too many unfinished tasks.                                                  | Finish tasks.                                                |
| 400         | ModelArts.4617 | The number of manager should be one     | The team manager already exists.                                                      | Ensure that the roles of the team members are correct.       |
| 400         | ModelArts.4618 | Can not delete yourself                 | You cannot delete yourself from the team.                                             | Ensure that the request parameters are correct.              |
| 400         | ModelArts.4619 | Workforce task does not exist           | No team labeling task whose ID is the workforce_task_id value is allowed.             | Ensure that the workforce_task_id value is correct.          |
| 400         | ModelArts.4620 | The workforce task already exists       | A team labeling task whose name is the task_name value already exists.                | Ensure that the task_name value is correct.                  |
| 400         | ModelArts.4621 | Failed to start the team labeling task. | The team labeling task cannot be started.                                             | Check the task.                                              |

| Status Code | Error Codes    | Error Message                                                    | Description                                                                         | Solution                                                                     |
|-------------|----------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| 400         | ModelArts.4622 | Invalid n_clusters, should less than the total number of samples | The number of groups has reached the maximum allowed limit.                         | Check whether the number of groups is less than the total number of samples. |
| 400         | ModelArts.4623 | Workforce task is checking                                       | Only one review task is allowed at a time.                                          | Wait until all existing review tasks are complete and try again.             |
| 400         | ModelArts.4624 | The member task is not checked.                                  | The member task is not checked.                                                     | Check the task.                                                              |
| 400         | ModelArts.4625 | There are no unchecked samples.                                  | There are no unchecked samples.                                                     | Obtain unchecked samples.                                                    |
| 400         | ModelArts.4627 | Request notify too frequently                                    | Frequent notification request submission.                                           | Try again later.                                                             |
| 400         | ModelArts.4628 | Can not delete worker who has task                               | The team member cannot be deleted because the labeling task has not been completed. | Notify the member to complete the task.                                      |
| 400         | ModelArts.4631 | The task does not exist.                                         | The task does not exist.                                                            | Check the task.                                                              |
| 400         | ModelArts.4633 | The IAM user has been associated.                                | The IAM user has been associated.                                                   | Ensure the IAM user has not been associated.                                 |
| 400         | ModelArts.4634 | Failed to frequently reset the password.                         | Frequently resetting the password failed.                                           | Request to reset the password up to once within 300s.                        |
| 400         | ModelArts.4635 | The IAM account has been associated.                             | The IAM account has been associated.                                                | Ensure the IAM account has not been associated.                              |

| Status Code | Error Codes    | Error Message                                    | Description                                           | Solution                                                                                                                                                                                                                             |
|-------------|----------------|--------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.4636 | The task does not exist.                         | The task does not exist.                              | Ensure the task is available.                                                                                                                                                                                                        |
| 400         | ModelArts.4637 | Deleting the default labeling task is forbidden. | Do not delete the default labeling task of a dataset. | When you create a dataset of the old version, the system automatically creates a labeling task for the dataset. If you delete the default labeling task, the dataset may become unavailable. To delete the task, delete the dataset. |
| 400         | ModelArts.4650 | Interactive operations not found                 | Incorrect interactive_operations value.               | Ensure that the interactive_operations value is correct.                                                                                                                                                                             |
| 400         | ModelArts.4651 | Get obs sample error                             | Failed to read the sample from OBS.                   | Ensure that the sample in OBS is correct.                                                                                                                                                                                            |
| 400         | ModelArts.4654 | Inference execution error.                       | An error occurred during inference execution.         | Check inference logs.                                                                                                                                                                                                                |
| 400         | ModelArts.4656 | Sample oversized.                                | The sample is oversized.                              | Ensure the size of a sample is not larger than 12,582,912 bytes.                                                                                                                                                                     |
| 400         | ModelArts.4700 | Task does not exist                              | The task ID does not exist.                           | Ensure that the task ID is correct.                                                                                                                                                                                                  |

| Status Code | Error Codes    | Error Message                                                                                                          | Description                                                                              | Solution                                                    |
|-------------|----------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| 400         | ModelArts.4701 | Can not start data analysis task, dataset version annotation type must be 'Image Classification' or 'Object Detection' | The dataset type does not support feature analysis.                                      | Ensure that the dataset type is correct.                    |
| 400         | ModelArts.4702 | Can not start data analysis task, dataset version must be 'Default' format                                             | The dataset format does not support feature analysis.                                    | Use the default dataset format.                             |
| 400         | ModelArts.4703 | Can not start data analysis task, dataset version must contains annotated samples                                      | Feature analysis cannot be performed because there is no labeled sample in the dataset.  | Ensure that there are labeled samples in the dataset.       |
| 400         | ModelArts.4704 | Currently unable to start data analysis task, Please try again later                                                   | Feature analysis cannot be performed because a dataset version is being published.       | Try again later.                                            |
| 400         | ModelArts.4705 | Oversized file to be downloaded.                                                                                       | The OBS file is oversized.                                                               | Use an image whose size is less than 12 MB.                 |
| 400         | ModelArts.4706 | Can not start data analysis task, dataset version status must be normal                                                | Feature analysis cannot be performed because the dataset version is not in normal state. | Ensure that the current dataset version is in normal state. |

| Status Code | Error Codes    | Error Message                                                                            | Description                                                                             | Solution                                                                                                    |
|-------------|----------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.4707 | Failed to obtain file %s from OBS %s.                                                    | Obtaining the temporary OBS download URL failed.                                        | Ensure the OBS URL is correct.                                                                              |
| 400         | ModelArts.4709 | Data preprocessing task already exists                                                   | A training task whose name is the name value already exists.                            | Ensure that the name value is correct in the request for creating in the task.                              |
| 400         | ModelArts.4710 | Dataset export file error                                                                | Failed to publish or export the dataset.                                                | Ensure that the task export or publish parameters are correct.                                              |
| 400         | ModelArts.4711 | Publishing requires splitting but annotated samples do not satisfied for splitting rules | Failed to publish because the dataset label samples do not meet splitting requirements. | Ensure that the number of dataset labels and the number of labeled samples meet the splitting requirements. |
| 400         | ModelArts.4712 | Dataset publish version failed                                                           | Failed to publish the dataset version.                                                  | Ensure that the task export or publish parameters are correct.                                              |
| 400         | ModelArts.4714 | The number of dataset versions has reached the quota limit.                              | The number of dataset versions has reached the quota limit.                             | Ensure the number of dataset versions does not exceed the quota limit.                                      |
| 400         | ModelArts.4715 | Incorrect data analysis result.                                                          | The data analysis result is incorrect.                                                  | Check the result of data analysis for handling OBS errors.                                                  |
| 400         | ModelArts.4716 | Abnormal AI Gallery.                                                                     | AI Gallery is not running properly. Calling the AI Gallery API getVersionDetail failed. | Rectify the fault.                                                                                          |

| Status Code | Error Codes    | Error Message                                         | Description                                                       | Solution                                         |
|-------------|----------------|-------------------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------|
| 400         | ModelArts.4717 | Failed to execute the fulfillment task by AI Gallery. | AI Gallery failed to execute the fulfillment task.                | Obtain details about the fulfillment task.       |
| 400         | ModelArts.4760 | Failed to encrypt data.                               | Encrypting data failed.                                           | Check the input.                                 |
| 400         | ModelArts.4800 | The label task already exists                         | A labeling task whose name is the task_name value already exists. | Ensure that the task_name value is correct.      |
| 400         | ModelArts.4801 | The label task not exists                             | The labeling task specified by the ID does not exist.             | Ensure that the imported task ID is correct.     |
| 400         | ModelArts.4820 | Unsupported operation, label task type is %s          | The labeling task type does not support the operation.            | Ensure that the labeling task type is correct.   |
| 400         | ModelArts.4822 | The number of labelers must exceed 1                  | At least two annotators are available in the team.                | Check the number of annotators in the team.      |
| 400         | ModelArts.4823 | Import to dataset version error                       | No data can be imported to a table dataset version.               | Ensure that the dataset type is correct.         |
| 400         | ModelArts.4824 | Dataset version status must be normal                 | Abnormal dataset version state.                                   | Check the version publish state of the dataset.  |
| 400         | ModelArts.4825 | Dataset version is empty                              | No sample is available in the dataset version.                    | Check the version publish result of the dataset. |

| Status Code | Error Codes    | Error Message                                 | Description                                                                                         | Solution                                                                            |
|-------------|----------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 400         | ModelArts.4827 | Dataset version delete failed                 | Failed to delete the dataset version because there is a labeling task based on the dataset version. | Check whether there is any labeling task that is created using the dataset version. |
| 400         | ModelArts.4828 | Failed to delete the version.                 | The version in the current state cannot be deleted.                                                 | Change the version state.                                                           |
| 400         | ModelArts.4851 | Task version not found                        | The version specified by version_id does not exist.                                                 | Ensure that the version_id value is correct.                                        |
| 400         | ModelArts.4852 | Error in downloading task version logs.       | An error occurred in downloading task version logs.                                                 | Check the training log URL.                                                         |
| 400         | ModelArts.4853 | Insufficient quota for data feature tasks.    | The quota for data feature tasks is insufficient.                                                   | Delete unnecessary tasks.                                                           |
| 400         | ModelArts.4854 | Insufficient quota for data feature versions. | The quota for data feature versions is insufficient.                                                | Delete unnecessary versions.                                                        |
| 400         | ModelArts.4860 | Insufficient quota for real-time services.    | The quota for real-time services is insufficient.                                                   | Check the remaining quota for real-time services.                                   |
| 400         | ModelArts.4861 | Insufficient quota for batch services.        | The quota for batch services is insufficient.                                                       | Check the remaining quota for batch services.                                       |
| 400         | ModelArts.4870 | HBase error.                                  | An error occurred in HBase.                                                                         | Rectify the fault in batch deletion.                                                |

| Status Code | Error Codes    | Error Message                                                                        | Description                                                              | Solution                                                  |
|-------------|----------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------|
| 400         | ModelArts.4902 | Access prohibited because the app-auth API was not associated with APIG app %s.      | The target app is not authorized.                                        | Ensure AppCode is allowed to access the target service.   |
| 400         | ModelArts.4903 | Access prohibited because the app-auth API was not associated with a signature key.  | The app authentication API is not associated with a signature key.       | Internal error. Contact technical support.                |
| 400         | ModelArts.4904 | Access prohibited because the app-auth API was not associated with signature key %s. | The app authentication API is not associated with the signature key.     | Internal error. Contact technical support.                |
| 400         | ModelArts.4905 | Failed to check the authorization request header.                                    | Checking the authorization request header failed.                        | Use the correct AppCode URL or contact technical support. |
| 400         | ModelArts.4907 | Failed to submit the training job.                                                   | Submitting the training job failed.                                      | Check whether the algorithm is available.                 |
| 400         | ModelArts.4909 | Failed to execute the training job.                                                  | Executing the training job failed.                                       | Check training logs to identify the failure cause.        |
| 400         | ModelArts.4911 | Failed to create the model import task.                                              | Creating the model import task failed because the task ID is left blank. | Specify the task ID.                                      |



| Status Code | Error Codes    | Error Message                              | Description                                                                  | Solution                                     |
|-------------|----------------|--------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------|
| 400         | ModelArts.4913 | Failed to execute the model import task.   | Executing the model import task failed due to task timeout.                  | Identify the failure cause of task timeout.  |
| 400         | ModelArts.4915 | Failed to create the auto labeling task.   | Creating the auto labeling task failed.                                      | Identify the failure cause of task creation. |
| 400         | ModelArts.4917 | Failed to execute the auto labeling task.  | Executing the auto labeling task failed due to task timeout.                 | Identify the failure cause of task timeout.  |
| 400         | ModelArts.4921 | Failed to execute the import task.         | Executing the import task failed.                                            | Identify the failure cause.                  |
| 400         | ModelArts.4927 | Failed to submit hard example collection.  | Submitting hard example collection failed because the task ID is left blank. | Specify the task ID.                         |
| 400         | ModelArts.4929 | Failed to collect hard examples.           | Collecting hard examples failed due to task timeout.                         | Identify the failure cause of task timeout.  |
| 400         | ModelArts.4934 | Invalid model.                             | The model is invalid.                                                        | Use a valid model.                           |
| 400         | ModelArts.4935 | Failed to create the medical task.         | Creating the medical task failed.                                            | Identify the failure cause of task creation. |
| 400         | ModelArts.4951 | Failed to create the auto inference task.  | Creating the auto inference task failed.                                     | Identify the failure cause of task creation. |
| 400         | ModelArts.4953 | Failed to execute the auto inference task. | Executing the auto inference task failed due to task timeout.                | Identify the failure cause of task timeout.  |

| Status Code | Error Codes    | Error Message                                                | Description                                                         | Solution                                                              |
|-------------|----------------|--------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------|
| 400         | ModelArts.4963 | Failed to execute the auto grouping task.                    | Executing the auto grouping task failed due to task timeout.        | Identify the failure cause of task timeout.                           |
| 400         | ModelArts.4991 | Failed to obtain the job status.                             | The specifications have exceeded the quota for free specifications. | Switch to billed specifications or wait until resources are released. |
| 400         | ModelArts.4992 | Resources sold out.                                          | The resources have been sold out.                                   | Use available resources.                                              |
| 400         | ModelArts.4999 | System error.                                                | An error occurred in the system.                                    | Wait until the UI adapts to the new mechanism.                        |
| 400         | ModelArts.5011 | Invalid parameter                                            | Invalid parameter.                                                  | Modify the parameter.                                                 |
| 400         | ModelArts.5012 | Invalid product attribute                                    | Invalid product attribute.                                          | Modify the product attribute.                                         |
| 400         | ModelArts.5016 | The original model ({0}) does not exist during model release | The product source model does not exist.                            | Select another source model.                                          |
| 400         | ModelArts.5022 | Unsupported model type                                       | The model type is not supported.                                    | Select another source model.                                          |
| 400         | ModelArts.5025 | Incorrect verification code                                  | Incorrect verification code.                                        | Enter the correct verification code.                                  |
| 400         | ModelArts.5026 | Verification code expired                                    | Verification code expired.                                          | Obtain a new verification code.                                       |
| 400         | ModelArts.5027 | The verification code does not match the email address.      | The email address and verification code do not match.               | Obtain a new verification code.                                       |

| Status Code | Error Codes    | Error Message                                                                    | Description                                                                    | Solution                                                              |
|-------------|----------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| 400         | ModelArts.5038 | You must first get a verification code                                           | You have not obtained the verification code.                                   | Specify your email address and obtain the verification code by email. |
| 400         | ModelArts.5041 | Duplicate version. Refresh the page and try again                                | Duplicate version.                                                             | Refresh the page and try again.                                       |
| 400         | ModelArts.5042 | The order has been paid.                                                         | The order has been paid.                                                       | The order has been paid. Do not pay again.                            |
| 400         | ModelArts.5047 | Hilens product name duplicated.                                                  | Duplicate HiLens name.                                                         | Enter another product name.                                           |
| 400         | ModelArts.5048 | Hilens skill version duplicated.                                                 | Duplicate HiLens version.                                                      | Select another version.                                               |
| 400         | ModelArts.5049 | Incorrect Hilens skill. Select the skill corresponding to the offering.          | Incorrect HiLens skill.                                                        | Select the correct HiLens skill.                                      |
| 400         | ModelArts.5051 | The HiLens skill type is not supported. Release the skill type in HiLens Studio. | The HiLens skill is currently unavailable. Publish the skill in HiLens Studio. | Select the correct HiLens skill.                                      |
| 400         | ModelArts.5052 | The user does not have the agency permission                                     | You do not have the agency permission.                                         | Set an agency and try again.                                          |
| 400         | ModelArts.5061 | The size of the image is too large.                                              | The size of the image is too large.                                            | Please upload an image smaller than 7 MB.                             |

| Status Code | Error Codes    | Error Message                                                  | Description                                                    | Solution                                                         |
|-------------|----------------|----------------------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------|
| 400         | ModelArts.5062 | The number of the images uploaded today has reached the limit. | The number of the images uploaded today has reached the limit. | Please upload the image the next day.                            |
| 400         | ModelArts.5063 | Illegal image or image name.                                   | Illegal image or image name.                                   | Please Upload a correct image file.                              |
| 400         | ModelArts.5064 | Maximum upload size exceeded of HTTP request.                  | Maximum upload size exceeded of HTTP request.                  | Please reduce the file size and upload it again.                 |
| 400         | ModelArts.5070 | The activity is in progress.                                   | The activity is in progress.                                   | Activity is in progress, can't delete.                           |
| 400         | ModelArts.5071 | The activity is not start.                                     | The activity is not start.                                     | Activity that have not started cannot be registered.             |
| 400         | ModelArts.5072 | The activity has end.                                          | The activity has end.                                          | Activity that have ended cannot be registered.                   |
| 400         | ModelArts.5073 | The activity has registred.                                    | The activity has registred.                                    | The activity has already been registered. Do not register again. |
| 400         | ModelArts.5075 | The license is already expired.                                | The license is already expired.                                | Please purchase quotas again.                                    |
| 400         | ModelArts.5076 | The license remaining is insufficient.                         | The license remaining is insufficient.                         | Please purchase quotas in time.                                  |
| 400         | ModelArts.5077 | The consumption is expired or expire soon.                     | The consumption is expired or expire soon.                     | Please purchase quotas in time.                                  |
| 400         | ModelArts.5303 | The obs source data is empty                                   | Empty source data.                                             | Select other source data.                                        |

| Status Code | Error Codes    | Error Message                                                   | Description                                                | Solution                                            |
|-------------|----------------|-----------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------|
| 400         | ModelArts.5304 | The maximum number of files has been exceeded                   | The number of files has reached the maximum allowed limit. | Select other source data or reduce the data volume. |
| 400         | ModelArts.5305 | The maximum size of files has been exceeded                     | The file size has reached the maximum allowed limit.       | Select other source data or reduce the data volume. |
| 400         | ModelArts.5306 | The maximum depth of files has been exceeded                    | The file depth has reached the maximum allowed limit.      | Select other source data or reduce the data depth.  |
| 400         | ModelArts.5309 | Only allow edge service published to AIHub.                     | Only edge VAS can be published.                            | Select the edge VAS.                                |
| 400         | ModelArts.5312 | Only allow market category service published to AIHub.          | Only market VAS can be published.                          | Select the market VAS.                              |
| 400         | ModelArts.5313 | Only allow released service published to AIHub.                 | Only published VAS is allowed.                             | Select the published VAS.                           |
| 400         | ModelArts.5314 | Only allow 'closed Beta Test' stage service published to AIHub. | Only Closed Beta Test VAS can be published.                | Select the Closed Beta Test VAS.                    |
| 400         | ModelArts.5315 | Request is repeated submit.                                     | This request is repeated submit.                           | Do not submit the request again.                    |
| 400         | ModelArts.6301 | The instance already exists.                                    | The instance already exists.                               | Enter another instance name.                        |

| Status Code | Error Codes    | Error Message                                                 | Description                                                                 | Solution                                                |
|-------------|----------------|---------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------|
| 400         | ModelArts.6302 | The instance count already reaches the maximum value.         | The maximum number of instances has been reached.                           | Delete unnecessary instances.                           |
| 400         | ModelArts.6303 | The field does not support sorting.                           | This field does not support sorting.                                        | Delete the field from the sorting parameters.           |
| 400         | ModelArts.6304 | Please stop the instance before deleting.                     | Failed to delete the instance in the running state.                         | Refresh the page. Stop the instance and then delete it. |
| 400         | ModelArts.6305 | The instance is already running.                              | The instance is in the running state.                                       | Do not start it again.                                  |
| 400         | ModelArts.6306 | The instance is starting.                                     | Other operations cannot be performed because the instance is being started. | Perform other operations later.                         |
| 400         | ModelArts.6307 | The instance has already been stopped.                        | The instance has been stopped.                                              | Refresh the page and view the instance state.           |
| 400         | ModelArts.6308 | The instance is stopping.                                     | The instance is being stopped.                                              | Refresh the page and view the instance state.           |
| 400         | ModelArts.6309 | The instance does not exist.                                  | The instance does not exist.                                                | Ensure that the instance has been deleted.              |
| 400         | ModelArts.6316 | The param 'storage' is needed for creating notebook instance. | Incorrect parameters during instance creation.                              | Add the storage parameter.                              |

| Status Code | Error Codes    | Error Message                                                                        | Description                                                             | Solution                                                           |
|-------------|----------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------|
| 400         | ModelArts.6317 | The 'path' parameter is required when the storage type is OBS.                       | Incorrect parameters during instance creation.                          | Add the path parameter.                                            |
| 400         | ModelArts.6318 | The param 'path' needs to end with /.                                                | Incorrect parameters during instance creation.                          | Ensure that the value of the path parameter ends with a slash (/). |
| 400         | ModelArts.6319 | There is no ak/sk in the global settings. Please add it by access ModelArts console. | The AK/SK have not been configured in the global settings of ModelArts. | Configure the AK/SK in the global settings of ModelArts.           |
| 400         | ModelArts.6320 | Access obs error. Reason is {}.                                                      | OBS access error.                                                       | Ensure that the OBS path is correct.                               |
| 400         | ModelArts.6323 | The flavor is not supported, please check it.                                        | The flavor is not supported.                                            | Ensure that the flavor is correctly configured.                    |
| 400         | ModelArts.6324 | This location type is not supported. Please check it.                                | The storage type is not supported.                                      | Ensure that the storage type is correctly configured.              |
| 400         | ModelArts.6326 | The instance is frozen. Check whether your account is in arrears in Billing Center.  | The instance has been frozen.                                           | Check the account balance and top up the account.                  |
| 400         | ModelArts.6327 | The instance is not in running. Please refresh the page and start it.                | The instance is not in the running state.                               | Refresh the page and try again.                                    |

| Status Code | Error Codes    | Error Message                                                                                                                | Description                                   | Solution                                               |
|-------------|----------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------|
| 400         | ModelArts.6328 | Sorry, you currently do not have permission for this flavor. Please apply it firstly.                                        | You do not have permission to use the flavor. | Contact technical support.                             |
| 400         | ModelArts.6329 | Sorry, this flavor specification is sold out. Please try others.                                                             | The flavor is sold out.                       | Use another flavor or try again later.                 |
| 400         | ModelArts.6330 | The flavor type of profile does not match the type of flavor. Please check it.                                               | The types are not matched.                    | Ensure that the flavor type matches the profile type.  |
| 400         | ModelArts.6331 | The evs volume size ranges from {} GB to {} GB.                                                                              | The EVS disk size exceeds the upper limit.    | Check the EVS disk size.                               |
| 400         | ModelArts.6332 | Incorrect parameter type. The '{}' parameter must be of the '{}' type.                                                       | Parameter type error.                         | Ensure that the parameter type meets the requirements. |
| 400         | ModelArts.6333 | The notebook is being restored. Refresh the page and wait for several minutes. The fault may be caused by instance overload. | Notebook instance fault.                      | The instance is recovering. Try again later.           |



| Status Code | Error Codes    | Error Message                                                                       | Description                                            | Solution                                                                                                 |
|-------------|----------------|-------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.6334 | Invalid value for name or description. The character `{}` is not allowed.           | The description parameter is incorrect.                | Enter a valid description value.                                                                         |
| 400         | ModelArts.6335 | `{}` is a required property.                                                        | Parameter missing.                                     | Ensure that the corresponding parameter is available.                                                    |
| 400         | ModelArts.6336 | `{}` property value is incorrect.                                                   | Incorrect parameter value.                             | Ensure that the corresponding parameter is correct.                                                      |
| 400         | ModelArts.6341 | The repository does not exist or has been deleted.                                  | The Git repository does not exist or has been deleted. | Check the corresponding parameter.                                                                       |
| 400         | ModelArts.6343 | The repository name already exists.                                                 | The Git repository already exists.                     | Check the corresponding parameter.                                                                       |
| 400         | ModelArts.6344 | Delete failed. Please delete the associated development environment instance first. | Failed to delete the repository.                       | Delete the corresponding notebook instance first.                                                        |
| 400         | ModelArts.6345 | Currently the OBS type instance does not support git capability.                    | The Git repository cannot be used for OBS instances.   | Use notebook instances of the EVS type.                                                                  |
| 400         | ModelArts.6346 | The timestamp of auto stop must be later than the current timestamp.                | This parameter cannot be modified.                     | Check the corresponding parameter and ensure that the automatic end time is later than the current time. |

| Status Code | Error Codes    | Error Message                                                                   | Description                                                     | Solution                                                                    |
|-------------|----------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------------|
| 400         | ModelArts.6347 | When the instance is in the '{}' status, the '{}' parameter cannot be modified. | Failed to modify the parameter.                                 | Check the corresponding parameter.                                          |
| 400         | ModelArts.6348 | The 'duration' parameter is mandatory for enabling auto stop.                   | The description parameter is missing.                           | Configure the duration parameter.                                           |
| 400         | ModelArts.6349 | The 'duration' parameter is incorrect. The value ranges from {} to {}.          | The value of duration parameter exceeds the threshold.          | Configure the duration parameter.                                           |
| 400         | ModelArts.6350 | Failed to access OBS because of incorrect AK/SK or insufficient permissions.    | Access to OBS is rejected.                                      | Ensure that the AK/SK is correct and you have the permission to access OBS. |
| 400         | ModelArts.6353 | Failed to verify the AK/SK. Please check and try again.                         | Incorrect AK/SK.                                                | Ensure that the AK/SK in the global settings of ModelArts is correct.       |
| 400         | ModelArts.6354 | The AK/SK do not belong to the user. Please check and enter the correct ones.   | Incorrect AK/SK.                                                | Ensure that the AK/SK in the global settings of ModelArts is correct.       |
| 400         | ModelArts.6355 | The resource is initializing. Please wait one minute and try again.             | Resources in the dedicated resource pool are being initialized. | Try again later.                                                            |

| Status Code | Error Codes    | Error Message                                                                                                                          | Description                                                                             | Solution                                      |
|-------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------|
| 400         | ModelArts.6357 | The operation is not allowed because another operation is being performed on the instance or the instance is in the target state.      | The operation is not allowed.                                                           | Try again later.                              |
| 400         | ModelArts.6358 | The path parameter is incorrect. It cannot be the root directory of an OBS bucket, but must be a specific directory in the OBS bucket. | The OBS path parameter is incorrect.                                                    | Ensure that the path parameter is correct.    |
| 400         | ModelArts.6360 | Failed to start the notebook due to insufficient background resources. Try again later.                                                | Failed to start the notebook due to insufficient background resources. Try again later. | Try again later or contact technical support. |
| 400         | ModelArts.6361 | ModelArts internal service or configuration error. Submit a service ticket to get professional technical support.                      | Internal error.                                                                         | System error. Contact technical support.      |

| Status Code | Error Codes    | Error Message                                                                                                       | Description                                           | Solution                                                |
|-------------|----------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------|
| 400         | ModelArts.6371 | Currently, notebooks support only OBS buckets whose Storage Class is Standard. Change the OBS bucket and try again. | Notebook instances support only standard OBS buckets. | Use standard OBS buckets.                               |
| 400         | ModelArts.6374 | The credential can be added only when type is set to AK/SK or agency.                                               | The authentication type can only be AK/SK or agency.  | Ensure that the authentication type is AK/SK or agency. |
| 400         | ModelArts.6376 | Please make sure agency exists.                                                                                     | The IAM agency does not exist.                        | Ensure that the agency exists on IAM.                   |
| 400         | ModelArts.6377 | The user id cannot be left blank.                                                                                   | The user ID cannot be left blank.                     | Ensure that the user ID parameter is available.         |
| 400         | ModelArts.6378 | The agency name cannot be left blank.                                                                               | The agency name cannot be left blank.                 | Ensure that the agency name parameter is available.     |
| 400         | ModelArts.6379 | No IAM agency created in Settings. Create an IAM agency on the ModelArts management console.                        | No agency is created in the global settings.          | Create an agency in the global settings.                |
| 400         | ModelArts.6400 | Invalid request payload {0}, please check.                                                                          | Invalid request payload {0}, please check.            | Check the request body.                                 |
| 400         | ModelArts.6528 | No EVS available. Please try again later.                                                                           | The EVS disk has been sold out.                       | Try again later or contact technical support.           |

| Status Code | Error Codes    | Error Message                                                      | Description                                                        | Solution                                                                                                            |
|-------------|----------------|--------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| 400         | ModelArts.6600 | Check whether the parameter is valid.                              | Failed to verify the parameters.                                   | Ensure that the parameter is valid.                                                                                 |
| 400         | ModelArts.6651 | Unsupport entity.                                                  | Unsupported project objects.                                       | Ensure that the project object is supported.                                                                        |
| 400         | ModelArts.6652 | Please delete resources from the project first.                    | Failed to delete the project resources.                            | Delete the datasets and notebook instances under the project and ensure that all training jobs have been completed. |
| 400         | ModelArts.6690 | The image size cannot exceed 8 MB.                                 | The image size exceeds 8 MB.                                       | Ensure that the image size does not exceed 8 MB.                                                                    |
| 400         | ModelArts.6716 | The specified flavor {0} is already sold out.                      | The specified flavor {0} is already sold out.                      | Select another flavor or contact technical support.                                                                 |
| 400         | ModelArts.6737 | Conflict tag {0} for image {1}, tag cannot be duplicated.          | Conflict tag {0} for image {1}, tag cannot be duplicated.          | Enter a proper image tag.                                                                                           |
| 400         | ModelArts.6763 | Cannot manage the pool, The cluster version is earlier than v1.15. | Cannot manage the pool, The cluster version is earlier than v1.15. | Please upgrade the cluster version.                                                                                 |

| Status Code | Error Codes    | Error Message                                                                                                                                                                                                           | Description                                                                                                                                                                                                             | Solution                                                      |
|-------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| 400         | ModelArts.6771 | Cannot register the image since the size of the registered image {0}/{1}: {2} is {3} bytes, which has reached the maximum of {4} bytes. If the size of the image is too large, the image will fail to be decompressed . | Cannot register the image since the size of the registered image {0}/{1}: {2} is {3} bytes, which has reached the maximum of {4} bytes. If the size of the image is too large, the image will fail to be decompressed . | Check the image size.                                         |
| 400         | ModelArts.6782 | Mounting OBS bucket or folder does not support in current authentication mode, add AK/SK in ModelArts global settings to enabled it.                                                                                    | Mounting OBS bucket or folder does not support in current authentication mode, add AK/SK in ModelArts global settings to enabled it.                                                                                    | Please add AK/SK to ModelArts Global Settings.                |
| 400         | ModelArts.6789 | The current user does not have the permission to use the SSH key pair {0}, please update the key pair of the instance and try again.                                                                                    | The current user does not have the permission to use the SSH key pair {0}, please update the key pair of the instance and try again.                                                                                    | Update the key pair of the instance and restart the instance. |

| Status Code | Error Codes    | Error Message                                                                          | Description                                                                                                                  | Solution                                                                              |
|-------------|----------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 400         | ModelArts.6792 | Instance {0} does not support to update flavor to {1}, please try another flavor.      | Instance {0} does not support to update flavor to {1}, please try another flavor.                                            | Select another flavor.                                                                |
| 400         | ModelArts.6797 | Specified image {0} cannot be found.                                                   | Specified image {0} cannot be found.                                                                                         | Check the image access permission.                                                    |
| 400         | ModelArts.6870 | Specified flavor {0} does not support current instance feature {1}.                    | Specified flavor {0} does not support current instance feature {1}.                                                          | Select a proper flavor.                                                               |
| 400         | ModelArts.7002 | Not gray user, please contact the administrator                                        | Workspace authentication error.                                                                                              | Contact the administrator to check whether the user has permissions on the workspace. |
| 400         | ModelArts.7003 | no permission to get iam user list, please check permission                            | IAM permissions are incorrect.                                                                                               | Add the IAM permissions based on the error message.                                   |
| 400         | ModelArts.7004 | the status of workspace: {workspaceID} is abnormal, can not execute [action: {action}] | You are not allowed to create resources when a workspace is in the normal state, for example, a deleted or failed workspace. | Create resources in a normal workspace.                                               |
| 400         | ModelArts.7005 | workspace: {workspace} not existed                                                     | The workspace does not exist.                                                                                                | Ensure that the transferred workspace ID exists.                                      |

| Status Code | Error Codes    | Error Message                                       | Description                                                 | Solution                                                  |
|-------------|----------------|-----------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------|
| 400         | ModelArts.7006 | workspace number over limit, limit: {limit}         | The number of workspaces exceeds the upper limit.           | Delete unnecessary workspaces.                            |
| 401         | ModelArts.0112 | Failed to execute the policy.                       | The user role is not allowed to execute the policy.         | Check user role permissions.                              |
| 401         | ModelArts.0201 | Token doesn't exist.                                | The token is empty.                                         | Add a correct token in the request header.                |
| 401         | ModelArts.0202 | Invalid token header because the token has expired. | The token has expired.                                      | Use a valid token.                                        |
| 401         | ModelArts.0203 | Invalid token.                                      | The token cannot be parsed.                                 | Use a valid token.                                        |
| 401         | ModelArts.0204 | Failed to parse the token.                          | Parsing the token failed.                                   | Use a valid token.                                        |
| 401         | ModelArts.0205 | No authorization request header.                    | The authorization request header is missing.                | Use the correct AppCode URL or contact technical support. |
| 401         | ModelArts.0206 | Incorrect authorization request header format.      | The authorization request header is in an incorrect format. | Use the correct AppCode URL or contact technical support. |
| 401         | ModelArts.0207 | Token must contain project info of current region.  | Add project information to the token.                       | Add project information to the token.                     |
| 401         | ModelArts.0208 | Failed to check the authorization request header.   | Checking the authorization request header failed.           | Use the correct AppCode URL or contact technical support. |



| Status Code | Error Codes    | Error Message                                                      | Description                                         | Solution                                                  |
|-------------|----------------|--------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------|
| 401         | ModelArts.0209 | No key appld in header.                                            | The appld request header is missing.                | Use the correct APIG URL.                                 |
| 401         | ModelArts.0210 | No key apild in header.                                            | The apild request header is missing.                | Use the correct APIG URL.                                 |
| 401         | ModelArts.0212 | Invalid token header because the token does not contain a project. | The token does not contain any project information. | Use a project-level token.                                |
| 401         | ModelArts.0428 | The user authorization does not exist.                             | The user authorization does not exist.              | Check whether the user agency is authorized.              |
| 401         | ModelArts.3801 | User credential (AK and SK) does not exist.                        | The user certificate does not exist.                | Add the AK/SK again.                                      |
| 401         | ModelArts.4117 | User is unverified.                                                | User is unverified.                                 | Please check the user has been authorized by IAM.         |
| 401         | ModelArts.4119 | Invalid RBAC.                                                      | The project ID in the token is left blank.          | Add the correct project ID in the token.                  |
| 401         | ModelArts.4127 | Token authentication expired.                                      | The token authentication has expired.               | Obtain the user token again.                              |
| 401         | ModelArts.4201 | Invalid token.                                                     | The token is invalid.                               | Check the token of the account to which the user belongs. |
| 401         | ModelArts.4203 | Invalid request because %s.                                        | You do not have the access permission.              | Ensure you have the access permission.                    |

| Status Code | Error Codes    | Error Message                                 | Description                                                                                        | Solution                                                       |
|-------------|----------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| 401         | ModelArts.4504 | Iam error                                     | IAM error.                                                                                         | Ensure that the AK/SK or token is correct.                     |
| 401         | ModelArts.4505 | The operation on the IAM user is not allowed. | No operation is allowed on the IAM user list.                                                      | Do not perform operations on the IAM user list.                |
| 401         | ModelArts.4506 | Failed to check the IAM service ticket.       | Checking the IAM service ticket failed.                                                            | Check the IAM service ticket.                                  |
| 401         | ModelArts.4626 | Failed to update the team or team manager.    | Updating the team or team manager failed.                                                          | Identify the failure cause.                                    |
| 401         | ModelArts.4629 | Failed to delete the member.                  | Deleting a member failed.                                                                          | Identify the failure cause.                                    |
| 401         | ModelArts.4630 | No permission.                                | The user does not have permission to perform the operation.                                        | Ensure the user has permission to perform the operation.       |
| 401         | ModelArts.4632 | Unregistered member.                          | The member has not been registered.                                                                | Ensure the member is registered.                               |
| 401         | ModelArts.4713 | Forbidden operation.                          | This operation is not allowed because there are uncompleted asynchronous tasks of dataset hashing. | Ensure all asynchronous tasks of dataset hashing are complete. |
| 401         | ModelArts.4750 | Error in reading files from OBS.              | An error occurred in reading files from OBS.                                                       | Identify the failure cause.                                    |
| 401         | ModelArts.4804 | Failed to create a label task by the member.  | The team member failed to create a label task.                                                     | Do not create a label task as a team member.                   |

| Status Code | Error Codes    | Error Message                                                    | Description                                   | Solution                                                              |
|-------------|----------------|------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------|
| 401         | ModelArts.4826 | OBS KMS encryption buckets are not supported.                    | OBS KMS encryption buckets are not supported. | Do not use OBS KMS encryption buckets.                                |
| 401         | ModelArts.4901 | Failed to prepare a training job.                                | Preparing a training job failed.              | Authorizing onObs failed. Check the IAM proxy or OBS.                 |
| 401         | ModelArts.4961 | Failed to submit an auto grouping job.                           | Submitting an auto grouping job failed.       | Authorizing onObs failed. Check the IAM proxy or OBS.                 |
| 401         | ModelArts.5001 | Token is blank                                                   | The token does not exist.                     | Add the token and try again.                                          |
| 401         | ModelArts.5002 | Token is invalid                                                 | Invalid token.                                | Obtain a token and try again.                                         |
| 401         | ModelArts.5056 | You do not have the permission to access the requested resource. | You have not subscribed to HiLens.            | Log in to the HiLens management console and subscribe to the service. |
| 401         | ModelArts.5402 | Enterprise certification is required first.                      | Enterprise certification is required first.   | Please perform enterprise authentication first.                       |
| 401         | ModelArts.6201 | The user's account has been suspended.                           | The user account is frozen.                   | Check the account balance and top up the account.                     |
| 401         | ModelArts.6203 | The user's account has been restricted.                          | The user account is restricted.               | Check the account balance and top up the account.                     |
| 401         | ModelArts.6608 | Please refresh user info.                                        | Failed to obtain the user information.        | Refresh the user information.                                         |

| Status Code | Error Codes    | Error Message                                               | Description                                                         | Solution                                                               |
|-------------|----------------|-------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------|
| 401         | ModelArts.6620 | Please refresh the user token.                              | Invalid user token.                                                 | Refresh the user token.                                                |
| 403         | ModelArts.0108 | You are not authorized to perform the ({0}) operation.      | You do not have permission to perform {0}.                          | Check whether you are authorized to perform operations on OBS or APIs. |
| 403         | ModelArts.0112 | Policy doesn't allow {} {} to be performed.                 | The permission on the workspace is restricted.                      | Ensure that you have the permission on the workspace.                  |
| 403         | ModelArts.0203 | Invalid token.                                              | Invalid token.                                                      | Obtain a new token and try again.                                      |
| 403         | ModelArts.0206 | Invalid AK/SK.                                              | Invalid AK/SK.                                                      | Check whether the token is valid.                                      |
| 403         | ModelArts.0210 | The project id in the request URL does not match the token. | The project ID in the request URL and the token do not match.       | Use the correct project ID to generate a token.                        |
| 403         | ModelArts.2784 | InvalidToken                                                | Invalid token.                                                      | Check the request token.                                               |
| 403         | ModelArts.2785 | Authorization NotFound                                      | You cannot use ModelArts because you have not authorized ModelArts. | Please go to the Settings page to authorize ModelArts.                 |
| 403         | ModelArts.2852 | FederationOperationDeny                                     | Federation participant does not have permission to do this.         | Contact the federation owner to do this.                               |

| Status Code | Error Codes    | Error Message                                                                                | Description                                                                                | Solution                                                      |
|-------------|----------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| 403         | ModelArts.3010 | Failed to copy model, you don't have permission to copy the model ({0}).                     | You do not have the permission to copy model {0}.                                          | Check whether the entered token or model ID is correct.       |
| 403         | ModelArts.3075 | Model ({0}) is a subscription model and cannot create a new version.                         | Failed to create a new version because model {0} has been subscribed.                      | No new version can be created for a subscribed model.         |
| 403         | ModelArts.3555 | Forbidden to access ECS.                                                                     | You do not have the permission to access the ECS.                                          | Authorize access to the ECS and try again.                    |
| 403         | ModelArts.3936 | The app-auth API {id} does not belong to service {id}.                                       | The API {ID} that supports application authentication does not belong to the service {ID}. | Check the request parameter or contact service O&M personnel. |
| 403         | ModelArts.4102 | Token parsing error because role te_agency is not configured for the Ai-service admin token. | The cloud service proxy token does not contain the te_agency role.                         | Internal error. Contact technical support.                    |
| 403         | ModelArts.4116 | User has been owed, please check the account status and balance.                             | User has been owed, please check the account status and balance.                           | Please check account balance.                                 |
| 403         | ModelArts.4118 | User has been suspended, please check the account balance.                                   | User has been suspended, please check the account balance.                                 | Please check the account balance.                             |

| Status Code | Error Codes    | Error Message                                                     | Description                                                                                   | Solution                                                               |
|-------------|----------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| 403         | ModelArts.4310 | OBS action is forbidden, please check iam agency or OBS and so on | You do not have permission to access OBS.                                                     | Grant the permission to access OBS.                                    |
| 403         | ModelArts.4335 | Iam agency is invalid                                             | Invalid IAM agency.                                                                           | Check the IAM permission.                                              |
| 403         | ModelArts.4336 | The user hasn't permission                                        | Restricted user permission.                                                                   | Check the user permission.                                             |
| 403         | ModelArts.4348 | Check dli agency failed                                           | Failed to create the agency for checking DLI.                                                 | Check the agency permission for checking DLI.                          |
| 403         | ModelArts.4419 | File is too large                                                 | The size of the file imported from OBS or to be parsed has reached the maximum allowed limit. | Ensure that the file is correct.                                       |
| 403         | ModelArts.4500 | The number of iam agencies has reached the maximum                | The number of IAM agencies exceeded the upper limit.                                          | Delete unused IAM agencies.                                            |
| 403         | ModelArts.4501 | The iam agency create action is forbidden                         | Failed to create the IAM agency.                                                              | Ensure that you have permission to create an IAM agency.               |
| 403         | ModelArts.4600 | The worker action is forbidden                                    | The team member cannot perform the operation.                                                 | Check whether the team member has permission to perform the operation. |
| 403         | ModelArts.4613 | Task not finish                                                   | Failed to obtain the task result because the task execution has not been completed.           | Try again later.                                                       |

| Status Code | Error Codes    | Error Message                                                                           | Description                                                                            | Solution                                                    |
|-------------|----------------|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------|
| 403         | ModelArts.4803 | Dataset has unfinished label tasks, the operation is forbidden                          | Failed to delete data because the labeling task in the dataset has not been completed. | Ensure that all labeling tasks in the dataset are complete. |
| 403         | ModelArts.4821 | Task is publishing, the operation is forbidden                                          | The auto labeling task cannot be started because a labeling task is being published.   | Try again after the labeling task is published.             |
| 403         | ModelArts.4850 | Process task is initializing, the operation is forbidden                                | Failed to delete the task because the processor task is being initialized.             | Check the task status.                                      |
| 403         | ModelArts.5013 | The user is not registered. Please release a product first to complete the registration | You have not registered with AI Gallery.                                               | Publish a product in AI Gallery for registration.           |
| 403         | ModelArts.5014 | Permission deny                                                                         | You do not have permission to access the resource.                                     | Access other resources.                                     |
| 403         | ModelArts.5017 | Account suspended.                                                                      | Suspended account.                                                                     | Ensure that the account is not restricted and try again.    |
| 403         | ModelArts.5040 | Your usage has exceeded the maximum quota                                               | The resource usage has reached the maximum allowed limit.                              | Wait until the system is idle and try again.                |

| Status Code | Error Codes    | Error Message                                   | Description                                                          | Solution                                                          |
|-------------|----------------|-------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------|
| 403         | ModelArts.5043 | Challenge applications submit failed            | Failed to submit the contest.                                        | System error. Contact technical support.                          |
| 403         | ModelArts.5045 | Send verify code failed,please try again later. | Send verify code failed.                                             | Please click to send the verification code again later.           |
| 403         | ModelArts.5053 | Product has been recycled.                      | The product has been reclaimed.                                      | Select another product.                                           |
| 403         | ModelArts.5054 | At least one available version must exist.      | At least one available version is required for the product.          | Perform other operations.                                         |
| 403         | ModelArts.5055 | The subscription has expired.                   | The subscription has expired.                                        | Initiate a new subscription.                                      |
| 403         | ModelArts.5057 | The free package is sold out.                   | The free package has been sold out.                                  | Select another package.                                           |
| 403         | ModelArts.6653 | Contact the project owner.                      | You are not authorized to operate the project.                       | Contact the project owner to obtain the authorization.            |
| 404         | ModelArts.2786 | TokenProjectIDNotMatch                          | The project ID (%s) in the request does not match that in the token. | Change the request token or change the project ID in the request. |
| 404         | ModelArts.2836 | PathNotFound                                    | Path not found.                                                      | Please confirm that the PATH is correct                           |
| 404         | ModelArts.2881 | ImageSaveJobNotExist                            | ImageSaveJob is not exist                                            | Please check task_id                                              |
| 404         | ModelArts.2890 | PoolNotFound                                    | Pool (%s) does not exist                                             | Please check whether the pool exists                              |



| Status Code | Error Codes    | Error Message                                | Description                                                           | Solution                                       |
|-------------|----------------|----------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------|
| 404         | ModelArts.3001 | Model ({0}) does not exist.                  | Model {0} does not exist.                                             | Check whether the entered model ID is correct. |
| 404         | ModelArts.3003 | Failed to get model names list.              | Failed to obtain the model name list.                                 | Check whether the account is correct.          |
| 404         | ModelArts.3019 | Infer format ({0}) does not exist.           | Input/Output mode {0} does not exist.                                 | Change the input/output mode.                  |
| 404         | ModelArts.3021 | Template ({0}) does not exist.               | Template {0} does not exist.                                          | Select another template.                       |
| 404         | ModelArts.3071 | The subscription ({0}) does not exist.       | Subscription {0} does not exist.                                      | Subscribe to the model and try again.          |
| 404         | ModelArts.3080 | Model optimization job ({0}) does not exist. | Model optimization task {0} does not exist.                           | The task is unavailable.                       |
| 404         | ModelArts.3502 | Service {name} does not exist.               | The service {name} does not exist.                                    | Ensure that the service name is correct.       |
| 404         | ModelArts.3507 | Model {name} does not exist.                 | The model {ID} does not exist.                                        | Ensure that the model ID is correct.           |
| 404         | ModelArts.3923 | Application {id} does not exist.             | The application {ID} does not exist.                                  | Ensure that the application ID is correct.     |
| 404         | ModelArts.3935 | The app-auth API {id} does not exist.        | The API {ID} that supports application authentication does not exist. | Ensure that the interface ID is correct.       |
| 404         | ModelArts.4204 | API %s does not exist.                       | The API does not exist.                                               | Use an available API.                          |

| Status Code | Error Codes    | Error Message                                | Description                                    | Solution                                        |
|-------------|----------------|----------------------------------------------|------------------------------------------------|-------------------------------------------------|
| 404         | ModelArts.4901 | The app-auth API does not exist.             | The app authentication API does not exist.     | Ensure the app URL is correct.                  |
| 404         | ModelArts.5058 | Object ({0}) does not exist.                 | The object does not exist.                     | Select another object.                          |
| 404         | ModelArts.6623 | Ensure that the dataset already exists.      | Failed to find the corresponding dataset.      | Ensure that the dataset already exists.         |
| 404         | ModelArts.6624 | Ensure that the storage path already exists. | Failed to find the corresponding storage path. | Ensure that the storage path already exists.    |
| 404         | ModelArts.6650 | Ensure that the project already exists.      | Failed to find the corresponding project.      | Ensure that the project already exists.         |
| 405         | ModelArts.2803 | MethodNotAllowed                             | Method not allowed.                            | Please confirm that the HTTP Method is correct  |
| 408         | ModelArts.4205 | Connection timed out.                        | Accessing the backend server timed out.        | Try again later.                                |
| 408         | ModelArts.6100 | The request timed out. Please try again.     | Timeout.                                       | System error. Contact technical support.        |
| 409         | ModelArts.2796 | NotAllowedToTerminate                        | The job cannot be terminated.                  | Check whether the job status is valid.          |
| 409         | ModelArts.2813 | NotAllowedToRestart                          | The job cannot be restarted.                   | Check whether the action type is valid.         |
| 409         | ModelArts.2878 | JobStatusChanged                             | Job status changed                             | Please try again later.                         |
| 409         | ModelArts.3002 | Model ({0}, {1}) already exists.             | Model ({0}, {1}) already exists.               | Change the model name or version and try again. |

| Status Code | Error Codes    | Error Message                                                           | Description                                                   | Solution                                              |
|-------------|----------------|-------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------|
| 409         | ModelArts.3020 | Infer format ({0}) already exists.                                      | Input/Output mode {0} already exists.                         | Change the input/output mode.                         |
| 409         | ModelArts.3022 | Template ({0}) already exists.                                          | Template {0} already exists.                                  | Select another template.                              |
| 409         | ModelArts.3073 | model ({0}) already exists, no subscription required.                   | Model {0} already exists.                                     | Do not subscribe to another model with the same name. |
| 409         | ModelArts.3503 | Service {name} already exists.                                          | The service {name} already exists.                            | Change the service name and try again.                |
| 409         | ModelArts.3929 | Failed to create the application because {reason}.                      | Failed to create the application. Fault cause: {fault cause}. | Locate the fault based on the failure cause.          |
| 409         | ModelArts.5015 | The product is being reviewed                                           | The product is being reviewed.                                | Perform operations after the review is complete.      |
| 409         | ModelArts.5044 | Operations conflict, please try again later                             | Failed to perform the operation.                              | Try again later.                                      |
| 413         | ModelArts.4104 | Invalid request body because the size exceeds the maximum size allowed. | The size of the request body is invalid.                      | Use a request body smaller than 12 MB.                |
| 417         | ModelArts.6654 | Project with the same name already exists.                              | A project with the same name already exists.                  | Use another project name.                             |
| 429         | ModelArts.2799 | TooManyRequests                                                         | services too many requests                                    | Please try again later                                |

| Status Code | Error Codes    | Error Message                                   | Description                                                | Solution                                                                                   |
|-------------|----------------|-------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| 429         | ModelArts.4206 | Excessive number of requests to %s.             | The maximum number of requests has been reached.           | Try again later.                                                                           |
| 429         | ModelArts.4395 | Too many dataset requests                       | Frequent dataset or labeling task creation in a unit time. | Try again later.                                                                           |
| 429         | ModelArts.6101 | The system is busy now. Please try again later. | The system is busy.                                        | The system is busy. Please try again. If the retry still fails, contact technical support. |
| 500         | ModelArts.0010 | Internal error.                                 | Internal error.                                            | Contact R&D and O&M personnel.                                                             |
| 500         | ModelArts.0109 | Unauthorized account.                           | Unauthorized account.                                      | Only the administrator can call alarm APIs.                                                |
| 500         | ModelArts.2950 | Unknown                                         | Unknown error.                                             | System error. Contact technical support.                                                   |
| 500         | ModelArts.2951 | DatasetService                                  | Dataset service error.                                     | System error. Contact technical support.                                                   |
| 500         | ModelArts.2952 | ExtServiceDB                                    | Database service error.                                    | System error. Contact technical support.                                                   |
| 500         | ModelArts.2953 | ExtServiceIAM                                   | IAM service error.                                         | System error. Contact technical support.                                                   |
| 500         | ModelArts.2954 | ExtServiceWorkspace                             | Workspace service error.                                   | System error. Contact technical support.                                                   |
| 500         | ModelArts.2955 | ExtServiceAOM                                   | AOM service abnormal                                       | System error. Contact technical support.                                                   |
| 500         | ModelArts.2956 | ExtServiceAIG                                   | AIG service abnormal                                       | System error. Contact technical support.                                                   |

| Status Code | Error Codes    | Error Message                                                  | Description                                                           | Solution                                                                               |
|-------------|----------------|----------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 500         | ModelArts.2957 | ExtServiceSMN                                                  | SMN service abnormal                                                  | System error. Contact technical support.                                               |
| 500         | ModelArts.2958 | ExtServiceOBS                                                  | OBS service abnormal                                                  | System error. Contact technical support.                                               |
| 500         | ModelArts.2959 | ExtServiceMAOS                                                 | MAOS service abnormal                                                 | System error. Contact technical support.                                               |
| 500         | ModelArts.3006 | Failed to publish model.                                       | Failed to publish the model.                                          | The model metadata failed to be stored to the database. Contact R&D and O&M personnel. |
| 500         | ModelArts.3009 | Failed to delete model, model ({0}) already deploy service.    | Failed to delete model {0} because it has been deployed as a service. | Delete the deployed service and try again.                                             |
| 500         | ModelArts.3043 | User ({0}) does not have obs: object: PutObjectAcl permission. | User {0} does not have the obs:object:PutObjectAcl permission.        | Add the permission and try again.                                                      |
| 500         | ModelArts.3044 | Model file ({0}) is larger than 20G and cannot be imported.    | Failed to import model file {0}.                                      | Ensure that the file is at most 20 GB in size.                                         |
| 500         | ModelArts.3045 | Parameter ({0}) is null.                                       | Parameter {0} is left blank.                                          | Check the parameter setting as prompted.                                               |
| 500         | ModelArts.3047 | ExeML model({0}) cannot be converted.                          | Failed to convert model {0}.                                          | ExeML models cannot be converted.                                                      |

| Status Code | Error Codes    | Error Message                                         | Description                                                       | Solution                                                                                                                                                                              |
|-------------|----------------|-------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 500         | ModelArts.3048 | Model({0}) is being imported and cannot be converted. | Failed to convert model {0} because the model status is abnormal. | Convert the model after the model status changes to normal.                                                                                                                           |
| 500         | ModelArts.3049 | Cannot convert models belonging to other users.       | Models of other users cannot be converted.                        | You can only convert your models.                                                                                                                                                     |
| 500         | ModelArts.3050 | Get user temporary credential failed.                 | Failed to obtain the temporary user certificate.                  | Check whether the token is valid.                                                                                                                                                     |
| 500         | ModelArts.3052 | Chip Type ({0}) not support.                          | Chip type {0} is not supported.                                   | Check whether the chip is of Ascend, GPU, Arm, or general type.                                                                                                                       |
| 500         | ModelArts.3053 | Model Type ({0}) not support.                         | Model type {0} is not supported.                                  | This type of model is not supported.                                                                                                                                                  |
| 500         | ModelArts.3054 | Task ({0}) does not exists.                           | Task {0} does not exist.                                          | The task is unavailable.                                                                                                                                                              |
| 500         | ModelArts.3055 | Task ({0}) is running cannot be deleted.              | Failed to delete task {0} because it is running.                  | Delete the task after it is complete.                                                                                                                                                 |
| 500         | ModelArts.3056 | Task name ({0}) not meeting the specification.        | Task name {0} does not comply with specifications.                | Ensure that a task name starts with a lowercase letter, ends with a lowercase letter or digit, and contains 2 to 24 characters, including lowercase letters, digits, and hyphens (-). |

| Status Code | Error Codes    | Error Message                                                           | Description                                                        | Solution                                                                                                                                             |
|-------------|----------------|-------------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 500         | ModelArts.3057 | Task description ({0}) not meeting the specification.                   | Task description {0} does not comply with specifications.          | Ensure that task description contains 1 to 100 characters and cannot contain the following characters: &,"'<>=.                                      |
| 500         | ModelArts.3058 | Task input ({0}) not meeting the specification.                         | Task input {0} does not comply with specifications.                | Perform operations according to the error message.                                                                                                   |
| 500         | ModelArts.3059 | Task output ({0}) not meeting the specification.                        | Task output {0} does not comply with specifications.               | Ensure that the task output is a valid HTTP or HTTPS address.                                                                                        |
| 500         | ModelArts.3060 | Task spec ({0}) not meeting the specification.                          | Advanced task option {0} does not comply with specifications.      | Ensure that the advanced option does not contain Chinese characters or the following characters: ()&\$? <>. Ensure that the value is less than 4000. |
| 500         | ModelArts.3061 | get Task ({0}) log parameter not meeting the specification.             | Log parameters of task {0} do not comply with specifications.      | Ensure that the offset or lines value is greater than or equal to 0.                                                                                 |
| 500         | ModelArts.3062 | Task ({0}) exists.                                                      | Task {0} already exists.                                           | Change the name and try again.                                                                                                                       |
| 500         | ModelArts.3064 | DL Framework Type ({0}) not support.                                    | Deep learning framework {0} is not supported.                      | This type of framework is not supported.                                                                                                             |
| 500         | ModelArts.3065 | The image of the model is being built so the runtime cannot be updated. | Failed to update runtime because the model image is being created. | Wait until the image is created.                                                                                                                     |

| Status Code | Error Codes    | Error Message                                       | Description                                          | Solution                                                                |
|-------------|----------------|-----------------------------------------------------|------------------------------------------------------|-------------------------------------------------------------------------|
| 500         | ModelArts.3301 | Failed to build image.                              | Failed to create the image.                          | Check the image, or contact R&D and O&M personnel to rectify the fault. |
| 500         | ModelArts.3501 | Failed to deploy the service.                       | Failed to deploy the service.                        | Contact service O&M personnel.                                          |
| 500         | ModelArts.3504 | Failed to delete the service.                       | Failed to delete the service.                        | Contact service O&M personnel.                                          |
| 500         | ModelArts.3505 | Failed to update the service.                       | Failed to query the service.                         | Contact service O&M personnel.                                          |
| 500         | ModelArts.3506 | Model {id} does not exist.                          | Failed to update the service.                        | Contact service O&M personnel.                                          |
| 500         | ModelArts.3508 | Failed to query the service monitoring information. | Failed to obtain the service monitoring information. | Contact service O&M personnel.                                          |
| 500         | ModelArts.3509 | Failed to query edge nodes.                         | Failed to query the node.                            | Contact service O&M personnel.                                          |
| 500         | ModelArts.3511 | Failed to query edge tags.                          | Failed to query the edge label.                      | Contact service O&M personnel.                                          |
| 500         | ModelArts.3537 | Failed to handle the CBC request.                   | Failed to process the CBC request.                   | Contact service O&M personnel.                                          |
| 500         | ModelArts.3539 | Failed to initialize service URL {url}.             | Failed to initialize the service URL {URL}.          | Ensure that the service URL is correct.                                 |
| 500         | ModelArts.3543 | Invalid CBC request.                                | The CBC request is invalid.                          | Try again or contact service O&M personnel.                             |
| 500         | ModelArts.3546 | Failed to create the cluster.                       | Failed to create the dedicated resource pool.        | Contact service O&M personnel.                                          |



| Status Code | Error Codes    | Error Message                                        | Description                                                         | Solution                                     |
|-------------|----------------|------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------|
| 500         | ModelArts.3579 | Failed to query the model information.               | Failed to query the model information.                              | Contact service O&M personnel.               |
| 500         | ModelArts.3581 | Failed to create edge certificates.                  | Failed to create the edge certificate.                              | Contact service O&M personnel.               |
| 500         | ModelArts.3801 | invalid token, can not get template ak/sk.           | Failed to obtain the template AK/SK due to an invalid token.        | Obtain a new token and try again.            |
| 500         | ModelArts.3802 | Failed to create API group {name} because {reason}.  | Failed to create the API group {name}. Fault cause: {fault cause}.  | Locate the fault based on the failure cause. |
| 500         | ModelArts.3803 | Failed to register API {name} because {reason}.      | Failed to register the API {name}. Fault cause: {fault cause}.      | Locate the fault based on the failure cause. |
| 500         | ModelArts.3804 | upload file to obs failed.                           | Failed to upload the file to OBS.                                   | Contact R&D and O&M personnel.               |
| 500         | ModelArts.3805 | Failed to create AI service {name} because {reason}. | Failed to create the AI service {name}. Fault cause: {fault cause}. | Locate the fault based on the failure cause. |
| 500         | ModelArts.3806 | Failed to update AI service {name} because {reason}. | Failed to update the AI service {name}. Fault cause: {fault cause}. | Locate the fault based on the failure cause. |

| Status Code | Error Codes    | Error Message                                              | Description                                                               | Solution                                     |
|-------------|----------------|------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------|
| 500         | ModelArts.3807 | Failed to delete AI service {name} because {reason}.       | Failed to delete the AI service {name}. Fault cause: {fault cause}.       | Locate the fault based on the failure cause. |
| 500         | ModelArts.3808 | Failed to create AI subservice {name} because {reason}.    | Failed to create the sub-service {name}. Fault cause: {fault cause}.      | Locate the fault based on the failure cause. |
| 500         | ModelArts.3809 | Failed to update AI subservice {name} because {reason}.    | Failed to update the sub-service {name}. Fault cause: {fault cause}.      | Locate the fault based on the failure cause. |
| 500         | ModelArts.3810 | Failed to create the agency because {reason}.              | Failed to create the agency. Fault cause: {fault cause}.                  | Locate the fault based on the failure cause. |
| 500         | ModelArts.3819 | Failed to delete the agency definition.                    | Failed to delete the service agency definition.                           | Contact service O&M personnel.               |
| 500         | ModelArts.3858 | Failed to bind task type to API {id} because {reason}.     | Failed to bind task type to API {ID}. Fault cause: {fault cause}.         | Locate the fault based on the failure cause. |
| 500         | ModelArts.3859 | Failed to unbind task type from API {id} because {reason}. | Failed to unbind the task type from API {ID}. Fault cause: {fault cause}. | Locate the fault based on the failure cause. |
| 500         | ModelArts.3860 | Failed to create the task type because {reason}.           | Failed to create the task type. Fault cause: {fault cause}.               | Locate the fault based on the failure cause. |

| Status Code | Error Codes    | Error Message                                              | Description                                                           | Solution                                     |
|-------------|----------------|------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------|
| 500         | ModelArts.3861 | Failed to update the task type because {reason}.           | Failed to update the task. Fault cause: {fault cause}.                | Locate the fault based on the failure cause. |
| 500         | ModelArts.3891 | Failed to operate the serverless cluster because {reason}. | Failed to operate the serverless cluster. Fault cause: {fault cause}. | Locate the fault based on the failure cause. |
| 500         | ModelArts.3893 | Failed to forward the CBC request to the cloud service.    | Failed to forward the CBC request to the cloud service.               | Contact service O&M personnel.               |
| 500         | ModelArts.3901 | license id ({0}) is not exist.                             | License ID {0} does not exist.                                        | Check whether the license ID is valid.       |
| 500         | ModelArts.3902 | Failed to get license info because ({0}).                  | Failed to obtain the license because {Reason}.                        | Locate the fault based on the failure cause. |
| 500         | ModelArts.3903 | Renew license failed because ({0}).                        | Failed to renew the license because {Reason}.                         | Locate the fault based on the failure cause. |
| 500         | ModelArts.3904 | Upload data failed because ({0}).                          | Failed to report the used quota because {Reason}.                     | Locate the fault based on the failure cause. |
| 500         | ModelArts.3905 | Failed to get app key.                                     | Failed to obtain the app key.                                         | Contact R&D and O&M personnel.               |
| 500         | ModelArts.3906 | Failed to create license because ({0}).                    | Failed to create the license because {Reason}.                        | Locate the fault based on the failure cause. |

| Status Code | Error Codes    | Error Message                                                                | Description                                                                                      | Solution                                                                                                                                                                                       |
|-------------|----------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 500         | ModelArts.3907 | Failed to delete license because ({0}).                                      | Failed to delete the license because {Reason}.                                                   | Locate the fault based on the failure cause.                                                                                                                                                   |
| 500         | ModelArts.3908 | Failed to get CBC resources.                                                 | Failed to obtain CBC resources.                                                                  | Check the license ID or the associated license configuration.                                                                                                                                  |
| 500         | ModelArts.3909 | access CBC failed.                                                           | Failed to access CBC.                                                                            | Contact R&D and O&M personnel.                                                                                                                                                                 |
| 500         | ModelArts.3910 | Check CBC auth failed because ({0}).                                         | Failed to authorize CBC operations because {Reason}.                                             | Locate the fault based on the failure cause. Renewal authentication fails because cloudservicetype is not provided. Unsubscription authentication fails because an instance is being deployed. |
| 500         | ModelArts.3921 | Failed to create the app-auth API because {reason}.                          | Failed to register the API that supports application authentication. Fault cause: {fault cause}. | Locate the fault based on the failure cause.                                                                                                                                                   |
| 500         | ModelArts.3924 | Failed to create the application code for application {id} because {reason}. | Failed to create the AppCode of the application {ID}. Fault cause: {fault cause}.                | Locate the fault based on the failure cause.                                                                                                                                                   |

| Status Code | Error Codes    | Error Message                                                              | Description                                                                                                      | Solution                                     |
|-------------|----------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| 500         | ModelArts.3925 | Failed to delete app-auth api {id} because {reason}.                       | Failed to delete API {ID} that supports application authentication. Fault cause: {fault cause}.                  | Locate the fault based on the failure cause. |
| 500         | ModelArts.3926 | Failed to reset the secret of application {id} because {reason}.           | Failed to reset the private key of the application {ID}. Fault cause: {fault cause}.                             | Locate the fault based on the failure cause. |
| 500         | ModelArts.3927 | Failed to reset the application code of application {id} because {reason}. | Failed to reset the AppCode of the application {ID}. Fault cause: {fault cause}.                                 | Locate the fault based on the failure cause. |
| 500         | ModelArts.3928 | Failed to obtain the app-auth API information because {reason}.            | Failed to obtain information about the API that supports application authentication. Fault cause: {fault cause}. | Locate the fault based on the failure cause. |
| 500         | ModelArts.3932 | Failed to obtain the application information because {reason}.             | Failed to obtain the application information. Fault cause: {fault cause}.                                        | Locate the fault based on the failure cause. |
| 500         | ModelArts.3933 | Failed to delete application {id} because {reason}.                        | Failed to delete the application {ID}. Fault cause: {fault cause}.                                               | Locate the fault based on the failure cause. |

| Status Code | Error Codes    | Error Message                                                               | Description                                                                                     | Solution                                               |
|-------------|----------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| 500         | ModelArts.3934 | Failed to delete the application code of application {id} because {reason}. | Failed to delete the AppCode of the application {ID}. Fault cause: {fault cause}.               | Locate the fault based on the failure cause.           |
| 500         | ModelArts.3937 | Failed to authorize the app-auth API to the application because {reason}.   | Failed to authorize the API to the application. Fault cause: {fault cause}.                     | Locate the fault based on the failure cause.           |
| 500         | ModelArts.3938 | Failed to unbind the app-auth API from the application because {reason}.    | Failed to cancel the authorization from the API to the application. Fault cause: {fault cause}. | Locate the fault based on the failure cause.           |
| 500         | ModelArts.4105 | Failed to obtain the temporary AK/SK.                                       | An exception occurred when obtaining the temporary AK/SK.                                       | Internal error. Contact technical support.             |
| 500         | ModelArts.4106 | Failed to obtain the OBS agency.                                            | Obtaining the OBS agency failed.                                                                | Authorize the OBS agency.                              |
| 500         | ModelArts.4204 | Request API error. %s                                                       | Multiple APIs matched.                                                                          | Ensure no conflict occurs in API planning.             |
| 500         | ModelArts.4301 | Failed to obtain %s.                                                        | Obtaining the token of the cloud service administrator failed.                                  | Internal error. Contact technical support.             |
| 500         | ModelArts.4302 | Gateway forwarding error because %s.                                        | Accessing the service is rejected.                                                              | Ensure the service to be accessed is running properly. |

| Status Code | Error Codes    | Error Message                                             | Description                                                           | Solution                                                                                                     |
|-------------|----------------|-----------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 500         | ModelArts.4354 | Insufficient quota                                        | The number of created datasets has reached the maximum allowed limit. | Delete unused datasets or apply for a higher quota.                                                          |
| 500         | ModelArts.4360 | Sync data source error                                    | Failed to synchronize the data source.                                | Check the synchronization task status and result.                                                            |
| 500         | ModelArts.4367 | Update dataset state failed                               | Failed to delete the dataset.                                         | Check the dataset status.                                                                                    |
| 500         | ModelArts.4373 | No migratory job                                          | Failed to create the dataset migration task.                          | Check whether the source dataset of the migration task is valid.                                             |
| 500         | ModelArts.4424 | Delete sample failed                                      | Failed to delete the dataset sample.                                  | Ensure that the sample to be deleted is correct and that there is unfinished import or synchronization task. |
| 500         | ModelArts.4503 | Failed to obtain the backend service because %s.          | The service does not exist.                                           | Ensure the service to be accessed is available.                                                              |
| 500         | ModelArts.4505 | Internal backend service error because reading timed out. | Internal server error.                                                | Ensure the service to be accessed is running properly.                                                       |
| 500         | ModelArts.4614 | Task failed                                               | Failed to run the task.                                               | Check the execution result of the processor task.                                                            |
| 500         | ModelArts.4801 | Failed to obtain the consul %s.                           | Obtaining service instances for Consul failed.                        | Internal error. Contact technical support.                                                                   |

| Status Code | Error Codes    | Error Message                                                           | Description                                          | Solution                                 |
|-------------|----------------|-------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------|
| 500         | ModelArts.5000 | Please try again later or contact customer service to solve the problem | Internal error.                                      | System error. Contact technical support. |
| 500         | ModelArts.5003 | Internal Error: access IAM service failed                               | Failed to access IAM.                                | System error. Contact technical support. |
| 500         | ModelArts.5004 | Internal Error: access moderation service failed.                       | Failed to access Text Moderation.                    | System error. Contact technical support. |
| 500         | ModelArts.5005 | Internal Error: access ModelArts service failed                         | Failed to access ModelArts.                          | System error. Contact technical support. |
| 500         | ModelArts.5006 | Internal Error: access AI service failed                                | Failed to access the managed services in AI Gallery. | System error. Contact technical support. |
| 500         | ModelArts.5007 | Internal Error: access AI manager failed                                | Failed to access the manager services in AI Gallery. | System error. Contact technical support. |
| 500         | ModelArts.5008 | Internal Error: access SMN service failed                               | Failed to access SMN.                                | System error. Contact technical support. |
| 500         | ModelArts.5009 | Database operation failed                                               | Database operation error.                            | System error. Contact technical support. |
| 500         | ModelArts.5010 | OBS operation failed                                                    | Failed to access OBS.                                | System error. Contact technical support. |
| 500         | ModelArts.5019 | Internal Error: access CBC service failed                               | Failed to access CBC.                                | System error. Contact technical support. |



| Status Code | Error Codes    | Error Message                                                  | Description                                                  | Solution                                 |
|-------------|----------------|----------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------|
| 500         | ModelArts.5021 | Internal Error: access LCS service failed                      | Failed to access LCS.                                        | System error. Contact technical support. |
| 500         | ModelArts.5039 | Dear User,the traffic is a little busy. Please try again later | Excessive requests.                                          | Try again later.                         |
| 500         | ModelArts.5050 | Internal Error: access Hilens service failed                   | Failed to access HiLens.                                     | System error. Contact technical support. |
| 500         | ModelArts.5100 | The import path illegal.                                       | The import path illegal.                                     | Please select another object.            |
| 500         | ModelArts.5101 | The item version already exists.                               | The item version already exists.                             | Select another version.                  |
| 500         | ModelArts.5300 | Failed to explore the user source address.                     | Failed to traverse user source addresses.                    | System error. Contact technical support. |
| 500         | ModelArts.5301 | Failed to download the source file from OBS.                   | Failed to download the source file from OBS.                 | System error. Contact technical support. |
| 500         | ModelArts.5302 | Failed to upload the source file to the destination address.   | Failed to upload the source file to the destination address. | System error. Contact technical support. |
| 500         | ModelArts.5308 | Internal Error: access VAS service failed                      | Failed to access VAS.                                        | System error. Contact technical support. |
| 500         | ModelArts.5311 | Failed to get market category id.                              | No market category ID found.                                 | System error. Contact technical support. |
| 500         | ModelArts.5401 | Fail to Crypt.                                                 | Fail to Crypt.                                               | Please re-encrypt or decrypt.            |

| Status Code | Error Codes    | Error Message                                                                                                            | Description                                                           | Solution                                 |
|-------------|----------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------|
| 500         | ModelArts.6102 | The server has encountered an error and fails to process the request. Please try again later or submit a service ticket. | Internal error.                                                       | System error. Contact technical support. |
| 500         | ModelArts.6200 | No resources available. Please try again later or submit a service ticket.                                               | Internal error.                                                       | System error. Contact technical support. |
| 500         | ModelArts.6691 | System error. Check the service status.                                                                                  | The algorithm service is abnormal.                                    | System error. Check the service state.   |
| 500         | ModelArts.6692 | System error. Check the service status.                                                                                  | The dataset service is abnormal.                                      | System error. Check the service state.   |
| 500         | ModelArts.6699 | Internal error.                                                                                                          | Network error.                                                        | Check network connectivity.              |
| 500         | ModelArts.7001 | Workspace internal error.                                                                                                | An unknown error occurs in the workspace.                             | System error. Contact technical support. |
| 500         | ModelArts.7008 | workspace in read-only status, please wait a few minutes                                                                 | The workspace is abnormal. Only the read-only operation is supported. | System error. Contact technical support. |
| 500         | ModelArts.7009 | call {apiType} api failed                                                                                                | The workspace is abnormal.                                            | System error. Contact technical support. |
| 500         | ModelArts.7100 | get enterprise project id failed                                                                                         | EPS request error.                                                    | System error. Contact technical support. |

| Status Code | Error Codes    | Error Message                                | Description                                                                                            | Solution                                                           |
|-------------|----------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| 500         | ModelArts.7101 | Call pdp auth api failed.                    | PDP request error.                                                                                     | System error. Contact technical support.                           |
| 501         | ModelArts.4383 | Unsupported operation, dataset %s type is %s | The operation cannot be performed in the dataset.                                                      | Check whether the dataset supports the current operation.          |
| 501         | ModelArts.4385 | Auto deploy task exist                       | Failed to start the deploy task because an auto deploy task is being executed in the dataset.          | Start a new deploy task after the current task is complete.        |
| 501         | ModelArts.4386 | Auto labeling task exist                     | Failed to start the auto labeling task because an auto labeling task is being executed in the dataset. | Start a new auto labeling task after the current task is complete. |
| 501         | ModelArts.4387 | Pre-label task exist                         | Failed to start the pre-labeling task because a pre-labeling task is being executed in the dataset.    | Start a new pre-labeling task after the current task is complete.  |
| 501         | ModelArts.4394 | Task is running                              | Failed to obtain the migration result because a migration task is being executed in the dataset.       | Wait until the migration task is complete.                         |
| 503         | ModelArts.4302 | Gateway forwarding error because %s.         | The backend service is unavailable.                                                                    | Internal error. Contact technical support.                         |

| Status Code | Error Codes    | Error Message                                    | Description                                      | Solution                                               |
|-------------|----------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------------|
| 503         | ModelArts.4700 | Unavailable gateway.                             | The gateway is being stopped.                    | The platform is being upgraded. Try again later.       |
| 504         | ModelArts.4503 | Failed to obtain the backend service because %s. | The response from the backend service timed out. | Ensure the service to be accessed is running properly. |

## 27.3 Obtaining a Project ID and Name

### Scenarios

A project ID or name is required for some requests when an API is called. Therefore, obtain the project ID and name before calling the API. Use either of the following methods:

- [Obtaining a Project ID and Name from the Console](#)
- [Obtaining a Project ID by Calling an API](#)

### Obtaining a Project ID and Name from the Console

To do so, perform the following operations:

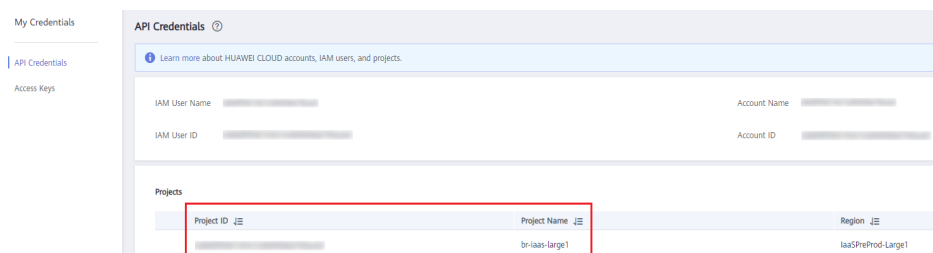
1. Sign up and log in to the ModelArts console.
2. In the upper right corner of the page, click the username and choose **My Credentials** from the drop-down list. The **My Credentials** page is displayed.

#### NOTE

If you have logged in to the official HUAWEI CLOUD website but not the console, click your username in the upper right corner and choose **My Account** from the drop-down list. On the **Basic Information** page, click **Manage** following **Security Credentials**. Then, the **My Credentials** page is displayed.

3. On the **API Credentials** page, view the project ID and name in the **Projects** area.

**Figure 27-1** Viewing the project ID



If there are multiple projects, unfold the target region and obtain the project ID from the **Project ID** column.

## Obtaining a Project ID by Calling an API

A project ID can be obtained by calling a specific API. For details, see [Querying Project Information Based on the Specified Criteria](#).

The API for obtaining a project ID is **GET https://{<IAM-endpoint>}/v3/projects**. To obtain {<IAM-endpoint>}, see [Request URI Regions and Endpoints](#).

The following is an example response. For example, if ModelArts is deployed in the **ap-southeast-1** region, the value of **name** in the response body is **ap-southeast-1**. The value of **id** in **projects** is the project ID.

```
{
 "projects": [{
 "domain_id": "65382450e8f64ac0870cd180d14e684b",
 "is_domain": false,
 "parent_id": "65382450e8f64ac0870cd180d14e684b",
 "name": "ap-southeast-1",
 "description": "",
 "links": {
 "next": null,
 "previous": null,
 "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
 },
 "id": "a4a5d4098fb4474fa22cd05f897d6b99",
 "enabled": true
 }],
 "links": {
 "next": null,
 "previous": null,
 "self": "https://www.example.com/v3/projects"
 }
}
```

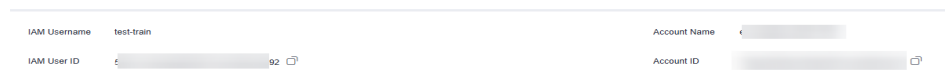
## 27.4 Obtaining an Account Name and ID

When you call APIs, certain requests require the account name and ID. To obtain an account name and ID, do as follows:

1. Sign up and log in to the console.
2. Hover the cursor over the username and choose **My Credentials** from the drop-down list.

On the **API Credentials** page, view the account name and ID.

**Figure 27-2** Viewing the account name and ID



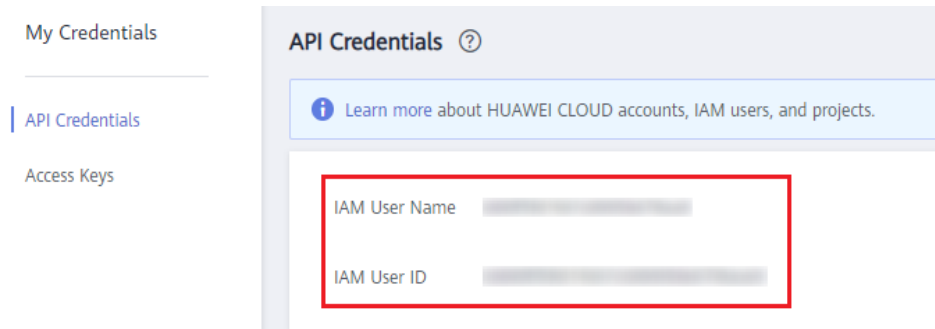
## 27.5 Obtaining a Username and ID

When you call APIs, certain requests require the username and ID. To obtain a username and ID, do as follows:

1. Log in to the management console after registration.
2. Hover the cursor on the username and choose **My Credentials** from the drop-down list.

On the **API Credentials** page, view the IAM username and ID.

**Figure 27-3** Viewing the username and ID



# 28 Historical APIs

## 28.1 Data Management (Old Version)

### 28.1.1 Querying the Dataset List

#### Function

This API is used to query the created datasets that meet the search criteria by page.

#### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

#### URI

GET /v2/{project\_id}/datasets

**Table 28-1** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-2** Query Parameters

| Parameter          | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| check_running_task | No        | Boolean | Whether to detect tasks (including initialization tasks) that are running in a dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Detect tasks (including initialization tasks) that are running in the dataset.</li><li>• <b>false</b>: Do not detect tasks (including initialization tasks) that are running in the dataset. (Default value)</li></ul>                                                                                                                                                                                 |
| contain_versions   | No        | Boolean | Whether the dataset contains a version.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| dataset_type       | No        | Integer | Dataset type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>400</b>: table dataset</li><li>• <b>600</b>: video labeling</li><li>• <b>900</b>: custom format</li></ul> |
| file_preview       | No        | Boolean | Whether a dataset supports preview when it is queried. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Preview is supported and the list of four dataset files is returned.</li><li>• <b>false</b>: Preview is not supported. (Default value)</li></ul>                                                                                                                                                                                                                                                                                        |
| limit              | No        | Integer | Maximum number of records returned on each page. The value ranges from 1 to 100. The default value is <b>10</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                            |



| Parameter         | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset            | No        | Integer | Start page of the paging list. The default value is <b>0</b> .                                                                                                                                                                                                                                                                                                                                                                                                |
| order             | No        | String  | Sorting sequence of the query. Options: <ul style="list-style-type: none"><li>• <b>asc</b>: ascending order</li><li>• <b>desc</b>: descending order (default value)</li></ul>                                                                                                                                                                                                                                                                                 |
| running_task_type | No        | Integer | Type of the running tasks (including initialization tasks) to be detected. The options are as follows: <ul style="list-style-type: none"><li>• <b>0</b>: auto labeling</li><li>• <b>1</b>: pre-labeling</li><li>• <b>2</b>: export</li><li>• <b>3</b>: version switch</li><li>• <b>4</b>: manifest file export</li><li>• <b>5</b>: manifest file import</li><li>• <b>6</b>: version publishing</li><li>• <b>7</b>: auto grouping</li></ul>                    |
| search_content    | No        | String  | Fuzzy search keyword. By default, this parameter is left blank.                                                                                                                                                                                                                                                                                                                                                                                               |
| sort_by           | No        | String  | Sorting mode of the query. Options: <ul style="list-style-type: none"><li>• <b>create_time</b>: Sort by creation time. (Default value)</li><li>• <b>dataset_name</b>: Sort by dataset name.</li></ul>                                                                                                                                                                                                                                                         |
| support_export    | No        | Boolean | Whether to filter datasets that can be exported only (including datasets of image classification, object detection, and custom format). If this parameter is left blank or the value is set to <b>false</b> , datasets are not filtered. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Filter out only datasets that can be exported.</li><li>• <b>false</b>: Do not filter out only datasets that can be exported. (Default value)</li></ul> |

| Parameter            | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| train_evaluate_ratio | No        | String  | Version split ratio for dataset filtering. The numbers before and after the comma indicate the minimum and maximum split ratios, and the versions whose split ratios are within the range are filtered out, for example, <b>0.0,1.0</b> . Note: If this parameter is left blank or unavailable, the system does not filter datasets based on the version split ratio by default. |
| version_format       | No        | Integer | Dataset version format for dataset filtering. This parameter is used to filter datasets that meet the filter criteria. Options: <ul style="list-style-type: none"><li>• <b>0</b>: default format</li><li>• <b>1</b>: CarbonData (supported only by table datasets)</li><li>• <b>2</b>: CSV</li></ul>                                                                             |
| with_labels          | No        | Boolean | Whether to return dataset labels. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Return label information.</li><li>• <b>false</b>: Do not return label information. (Default value)</li></ul>                                                                                                                                                                     |
| workspace_id         | No        | String  | Workspace ID. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value.                                                                                                                                                                                                                                              |
| dataset_version      | No        | String  | Dataset version, which is used to distinguish a dataset before and after it is decoupled from labeling tasks. Options: <ul style="list-style-type: none"><li>• <b>v1</b>: dataset before it is decoupled from labeling tasks (default value)</li><li>• <b>v2</b>: dataset after it is decoupled from labeling tasks (default value)</li><li>• <b>all</b>: all datasets</li></ul> |

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 28-3** Response body parameters

| Parameter    | Type                                                   | Description                                            |
|--------------|--------------------------------------------------------|--------------------------------------------------------|
| datasets     | Array of <a href="#">DatasetAndFilePreview</a> objects | Dataset list queried by page.                          |
| total_number | Integer                                                | Total number of datasets. The value cannot exceed 100. |

**Table 28-4** DatasetAndFilePreview

| Parameter                  | Type                                        | Description                                                                                                                                                   |
|----------------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_sample_count     | Integer                                     | Number of labeled samples in a dataset.                                                                                                                       |
| annotated_sub_sample_count | Integer                                     | Number of labeled subsamples.                                                                                                                                 |
| content_labeling           | Boolean                                     | Whether to enable content labeling for the speech paragraph labeling dataset. This function is enabled by default.                                            |
| create_time                | Long                                        | Time when a dataset is created.                                                                                                                               |
| current_version_id         | String                                      | Current version ID of a dataset.                                                                                                                              |
| current_version_name       | String                                      | Current version name of a dataset. Version name. The value is a string of 1 to 32 characters consisting of letters, digits, underscores (_), and hyphens (-). |
| data_format                | String                                      | Data format.                                                                                                                                                  |
| data_sources               | Array of <a href="#">DataSource</a> objects | Data source list.                                                                                                                                             |
| data_statistics            | Map<String,Object>                          | Sample statistics on a dataset, including the statistics on sample metadata in JSON format.                                                                   |

| Parameter             | Type                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_update_time      | Long                | Time when a sample and a label are updated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| data_url              | String              | Data path for training.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| dataset_format        | Integer             | Dataset format. Options: <ul style="list-style-type: none"><li>• <b>0</b>: file</li><li>• <b>1</b>: table</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| dataset_id            | String              | Dataset ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| dataset_name          | String              | Dataset name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| dataset_tags          | Array of strings    | Key identifier list of a dataset, for example, ["Image", "Object detection"].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| dataset_type          | Integer             | Dataset type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>400</b>: table dataset</li><li>• <b>600</b>: video labeling</li><li>• <b>900</b>: custom format</li></ul> |
| dataset_version_count | Integer             | Version number of a dataset.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| deleted_sample_count  | Integer             | Number of deleted samples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| deletion_stats        | Map<String,Integer> | Deletion reason statistics.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| description           | String              | Dataset description.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| enterprise_project_id | String              | Enterprise project ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| exist_running_task    | Boolean             | Whether the dataset contains running (including initialization) tasks. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The dataset contains running tasks.</li><li>• <b>false</b>: The dataset does not contain running tasks.</li></ul>                                                                                                                                                                                                                                                                                                       |

| Parameter             | Type                          | Description                                                                                                                                                                                                                                   |
|-----------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| exist_workforce_task  | Boolean                       | Whether the dataset contains team labeling tasks. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The dataset contains team labeling tasks.</li><li>• <b>false</b>: The dataset does not contain team labeling tasks.</li></ul> |
| feature_supports      | Array of strings              | List of features supported by the dataset. Currently, only the value <b>0</b> is supported, indicating that the OBS file size is limited.                                                                                                     |
| import_data           | Boolean                       | Whether to import data. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Import data.</li><li>• <b>false</b>: Do not import data.</li></ul>                                                                                      |
| import_task_id        | String                        | ID of an import task.                                                                                                                                                                                                                         |
| inner_annotation_path | String                        | Path for storing the labeling result of a dataset.                                                                                                                                                                                            |
| inner_data_path       | String                        | Path for storing the internal data of a dataset.                                                                                                                                                                                              |
| inner_log_path        | String                        | Path for storing internal logs of a dataset.                                                                                                                                                                                                  |
| inner_task_path       | String                        | Path for internal task of a dataset.                                                                                                                                                                                                          |
| inner_temp_path       | String                        | Path for storing internal temporary files of a dataset.                                                                                                                                                                                       |
| inner_work_path       | String                        | Output directory of a dataset.                                                                                                                                                                                                                |
| label_task_count      | Integer                       | Number of labeling tasks.                                                                                                                                                                                                                     |
| labels                | Array of <b>Label</b> objects | Dataset label list.                                                                                                                                                                                                                           |
| loading_sample_count  | Integer                       | Number of loading samples.                                                                                                                                                                                                                    |
| managed               | Boolean                       | Whether a dataset is hosted. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The dataset is hosted.</li><li>• <b>false</b>: The dataset is not hosted.</li></ul>                                                                |
| next_version_num      | Integer                       | Number of next versions of a dataset.                                                                                                                                                                                                         |

| Parameter                | Type                                            | Description                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| running_tasks_id         | Array of strings                                | ID list of running (including initialization) tasks.                                                                                                                                                                                                                                                                                                           |
| samples                  | Array of <a href="#">AnnotationFile</a> objects | Sample list.                                                                                                                                                                                                                                                                                                                                                   |
| schema                   | Array of <a href="#">Field</a> objects          | Schema list.                                                                                                                                                                                                                                                                                                                                                   |
| status                   | Integer                                         | Dataset status. Options: <ul style="list-style-type: none"><li>● 0: creating dataset</li><li>● 1: normal dataset</li><li>● 2: deleting dataset</li><li>● 3: deleted dataset</li><li>● 4: abnormal dataset</li><li>● 5: synchronizing dataset</li><li>● 6: releasing dataset</li><li>● 7: dataset in version switching</li><li>● 8: importing dataset</li></ul> |
| third_path               | String                                          | Third-party path.                                                                                                                                                                                                                                                                                                                                              |
| total_sample_count       | Integer                                         | Total number of dataset samples.                                                                                                                                                                                                                                                                                                                               |
| total_sub_sample_count   | Integer                                         | Total number of subsamples generated from the parent samples. For example, the total number of key frame images extracted from the video labeling dataset is that of subsamples.                                                                                                                                                                               |
| unconfirmed_sample_count | Integer                                         | Number of auto labeling samples to be confirmed.                                                                                                                                                                                                                                                                                                               |
| update_time              | Long                                            | Time when a dataset is updated.                                                                                                                                                                                                                                                                                                                                |
| versions                 | Array of <a href="#">DatasetVersion</a> objects | Dataset version information. Currently, only the current version information of a dataset is recorded.                                                                                                                                                                                                                                                         |
| work_path                | String                                          | Output dataset path, which is used to store output files such as label files. The path is an OBS path in the format of <i>/Bucket name/File path</i> . For example: <b>/obs-bucket</b> .                                                                                                                                                                       |
| work_path_type           | Integer                                         | Type of the dataset output path. The default value is 0, indicating an OBS bucket.                                                                                                                                                                                                                                                                             |

| Parameter            | Type                                       | Description                                                                                                                         |
|----------------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| workforce_descriptor | <a href="#">WorkforceDescriptor</a> object | Team labeling information.                                                                                                          |
| workforce_task_count | Integer                                    | Number of team labeling tasks of a dataset.                                                                                         |
| workspace_id         | String                                     | Workspace ID. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value. |

**Table 28-5** DataSource

| Parameter          | Type                                       | Description                                                                                                                                                                                                                                                                                    |
|--------------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_path          | String                                     | Data source path.                                                                                                                                                                                                                                                                              |
| data_type          | Integer                                    | Data type. Options: <ul style="list-style-type: none"><li>● <b>0</b>: OBS bucket (default value)</li><li>● <b>1</b>: GaussDB(DWS)</li><li>● <b>2</b>: DLI</li><li>● <b>3</b>: RDS</li><li>● <b>4</b>: MRS</li><li>● <b>5</b>: AI Gallery</li><li>● <b>6</b>: Inference service</li></ul>       |
| schema_maps        | Array of <a href="#">SchemaMap</a> objects | Schema mapping information corresponding to the table data.                                                                                                                                                                                                                                    |
| source_info        | <a href="#">SourceInfo</a> object          | Information required for importing a table data source.                                                                                                                                                                                                                                        |
| with_column_header | Boolean                                    | Whether the first row in the file is a column name. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>● <b>true</b>: The first row in the file is the column name.</li><li>● <b>false</b>: The first row in the file is not the column name.</li></ul> |

**Table 28-6** SchemaMap

| Parameter | Type   | Description                     |
|-----------|--------|---------------------------------|
| dest_name | String | Name of the destination column. |

| Parameter | Type   | Description                |
|-----------|--------|----------------------------|
| src_name  | String | Name of the source column. |

**Table 28-7** SourceInfo

| Parameter     | Type   | Description                                                                                                                                              |
|---------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| cluster_id    | String | MRS cluster ID. You can log in to the MRS console to view the information.                                                                               |
| cluster_mode  | String | Running mode of an MRS cluster. Options: <ul style="list-style-type: none"><li>• <b>0</b>: normal cluster</li><li>• <b>1</b>: security cluster</li></ul> |
| cluster_name  | String | MRS cluster name You can log in to the MRS console to view the information.                                                                              |
| database_name | String | Name of the database to which the table dataset is imported.                                                                                             |
| input         | String | HDFS path of the table data set. For example, /datasets/demo.                                                                                            |
| ip            | String | IP address of your GaussDB(DWS) cluster.                                                                                                                 |
| port          | String | Port number of your GaussDB(DWS) cluster.                                                                                                                |
| queue_name    | String | DLI queue name of a table dataset.                                                                                                                       |
| subnet_id     | String | Subnet ID of an MRS cluster.                                                                                                                             |
| table_name    | String | Name of the table to which a table dataset is imported.                                                                                                  |
| user_name     | String | Username, which is mandatory for GaussDB(DWS) data.                                                                                                      |
| user_password | String | User password, which is mandatory for GaussDB(DWS) data.                                                                                                 |
| vpc_id        | String | ID of the VPC where an MRS cluster resides.                                                                                                              |

**Table 28-8** Label

| Parameter  | Type                                            | Description                                                                                                                      |
|------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| attributes | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included. |
| name       | String                                          | Label name.                                                                                                                      |



| Parameter | Type                                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| property  | <a href="#">LabelProperty</a> object | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| type      | Integer                              | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-9** AnnotationFile

| Parameter   | Type               | Description                        |
|-------------|--------------------|------------------------------------|
| create_time | Long               | Time when a sample is created.     |
| dataset_id  | String             | Dataset ID.                        |
| depth       | Integer            | Number of image sample channels.   |
| file_Name   | String             | Sample name.                       |
| file_id     | String             | Sample ID.                         |
| file_type   | String             | File type.                         |
| height      | Integer            | Image sample height.               |
| size        | Long               | Image sample size.                 |
| tags        | Map<String,String> | Label information of a sample.     |
| url         | String             | OBS address of the preview sample. |
| width       | Integer            | Image sample width.                |

**Table 28-10** Field

| Parameter   | Type    | Description         |
|-------------|---------|---------------------|
| description | String  | Schema description. |
| name        | String  | Schema name.        |
| schema_id   | Integer | Schema ID.          |
| type        | String  | Schema value type.  |

**Table 28-11** DatasetVersion

| Parameter                  | Type    | Description                                                                                                                                                                                                                                   |
|----------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| add_sample_count           | Integer | Number of added samples.                                                                                                                                                                                                                      |
| analysis_cache_path        | String  | Cache path for feature analysis.                                                                                                                                                                                                              |
| analysis_statuses          | Integer | Status of a feature analysis task. Options: <ul style="list-style-type: none"><li>• <b>0</b>: initialized</li><li>• <b>1</b>: running</li><li>• <b>2</b>: completed</li><li>• <b>3</b>: failed</li></ul>                                      |
| analysis_task_id           | String  | ID of a feature analysis task.                                                                                                                                                                                                                |
| annotated_sample_count     | Integer | Number of samples with labeled versions.                                                                                                                                                                                                      |
| annotated_sub_sample_count | Integer | Number of labeled subsamples.                                                                                                                                                                                                                 |
| clear_hard_property        | Boolean | Whether to clear hard example properties during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Clear hard example properties. (Default value)</li><li>• <b>false</b>: Do not clear hard example properties.</li></ul> |
| code                       | String  | Status code of a preprocessing task such as rotation and cropping.                                                                                                                                                                            |
| create_time                | Long    | Time when a version is created.                                                                                                                                                                                                               |

| Parameter              | Type                | Description                                                                                                                                                                                                                                                                                   |
|------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| crop                   | Boolean             | Whether to crop the image. This field is valid only for the object detection dataset whose labeling box is in the rectangle shape. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Crop the image.</li><li>• <b>false</b>: Do not crop the image. (Default value)</li></ul>     |
| crop_path              | String              | Path for storing cropped files.                                                                                                                                                                                                                                                               |
| crop_rotate_cache_path | String              | Temporary directory for executing the rotation and cropping task.                                                                                                                                                                                                                             |
| data_analysis          | Map<String,Object>  | Feature analysis result in JSON format.                                                                                                                                                                                                                                                       |
| data_path              | String              | Path for storing data.                                                                                                                                                                                                                                                                        |
| data_statistics        | Map<String,Object>  | Sample statistics on a dataset, including the statistics on sample metadata in JSON format.                                                                                                                                                                                                   |
| data_validate          | Boolean             | Whether data is validated by the validation algorithm before release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The data has been validated.</li><li>• <b>false</b>: The data has not been validated.</li></ul>                                                           |
| deleted_sample_count   | Integer             | Number of deleted samples.                                                                                                                                                                                                                                                                    |
| deletion_stats         | Map<String,Integer> | Deletion reason statistics.                                                                                                                                                                                                                                                                   |
| description            | String              | Description of a version.                                                                                                                                                                                                                                                                     |
| export_images          | Boolean             | Whether to export images to the version output directory during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Export images to the version output directory.</li><li>• <b>false</b>: Do not export images to the version output directory. (Default value)</li></ul> |
| extract_serial_number  | Boolean             | Whether to parse the subsample number during release. The field is valid for the healthcare dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Parse the subsample number.</li><li>• <b>false</b>: Do not parse the subsample number. (Default value)</li></ul>           |

| Parameter                       | Type                                        | Description                                                                                                                                                                                                                                             |
|---------------------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| include_dataset_data            | Boolean                                     | Whether to include the source data of a dataset during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The source data of a dataset is included.</li><li>• <b>false</b>: The source data of a dataset is not included.</li></ul> |
| is_current                      | Boolean                                     | Whether the current dataset version is used. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The current dataset version is used.</li><li>• <b>false</b>: The current dataset version is not used.</li></ul>                              |
| label_stats                     | Array of <a href="#">LabelStats</a> objects | Label statistics list of a released version.                                                                                                                                                                                                            |
| label_type                      | String                                      | Label type of a released version. Options: <ul style="list-style-type: none"><li>• <b>multi</b>: Multi-label samples are included.</li><li>• <b>single</b>: All samples are single-labeled.</li></ul>                                                   |
| manifest_cache_input_path       | String                                      | Input path for the <b>manifest</b> file cache during version release.                                                                                                                                                                                   |
| manifest_path                   | String                                      | Path for storing the <b>manifest</b> file with the released version.                                                                                                                                                                                    |
| message                         | String                                      | Task information recorded during release (for example, error information).                                                                                                                                                                              |
| modified_sample_count           | Integer                                     | Number of modified samples.                                                                                                                                                                                                                             |
| previous_annotated_sample_count | Integer                                     | Number of labeled samples of parent versions.                                                                                                                                                                                                           |
| previous_total_sample_count     | Integer                                     | Total samples of parent versions.                                                                                                                                                                                                                       |
| previous_version_id             | String                                      | Parent version ID                                                                                                                                                                                                                                       |
| processor_task_id               | String                                      | ID of a preprocessing task such as rotation and cropping.                                                                                                                                                                                               |

| Parameter             | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| processor_task_status | Integer | Status of a preprocessing task such as rotation and cropping. The options are as follows: <ul style="list-style-type: none"><li>• 0: initialized - 1: running</li><li>• 2: completed</li><li>• 3: failed</li><li>• 4: stopped</li><li>• 5: timeout</li><li>• 6: Deletion failed.</li><li>• 7: Failed to stop.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| remove_sample_usage   | Boolean | Whether to clear the existing usage information of a dataset during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Clear the existing usage information of a dataset. (Default value)</li><li>• <b>false</b>: Do not clear the existing usage information of a dataset.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| rotate                | Boolean | Whether to rotate the image. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Rotate the image.</li><li>• <b>false</b>: Do not rotate the image. (Default value)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| rotate_path           | String  | Path for storing the rotated file.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| sample_state          | String  | Sample status. The options are as follows: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: not marked</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: The acceptance is passed.</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: approved</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: Sampling is to be accepted.</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: Sampling has been accepted.</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: The sampling is passed.</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: The sampling has been rejected.</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |

| Parameter                   | Type             | Description                                                                                                                                                                                                                                                        |
|-----------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_processor_task        | Boolean          | Whether to start a data analysis task during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Start a data analysis task during release.</li><li>• <b>false</b>: Do not start a data analysis task during release. (Default value)</li></ul> |
| status                      | Integer          | Status of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>0</b>: creating</li><li>• <b>1</b>: running</li><li>• <b>2</b>: deleting</li><li>• <b>3</b>: deleted</li><li>• <b>4</b>: error</li></ul>                                          |
| tags                        | Array of strings | Key identifier list of the dataset. The labeling type is used as the default label when the labeling task releases a version. For example, ["Image", "Object detection"].                                                                                          |
| task_type                   | Integer          | Labeling task type of the released version, which is the same as the dataset type.                                                                                                                                                                                 |
| total_sample_count          | Integer          | Total number of version samples.                                                                                                                                                                                                                                   |
| total_sub_sample_count      | Integer          | Total number of subsamples generated from the parent samples.                                                                                                                                                                                                      |
| train_evaluate_sample_ratio | String           | Split training and verification ratio during version release. The default value is <b>1.00</b> , indicating that all released versions are training sets.                                                                                                          |
| update_time                 | Long             | Time when a version is updated.                                                                                                                                                                                                                                    |
| version_format              | String           | Format of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>Default</b>: default format</li><li>• <b>CarbonData</b>: CarbonData (supported only by table datasets)</li><li>• <b>CSV</b>: CSV</li></ul>                                        |
| version_id                  | String           | Dataset version ID.                                                                                                                                                                                                                                                |
| version_name                | String           | Dataset version name.                                                                                                                                                                                                                                              |

| Parameter          | Type    | Description                                                                                                                                                                                                                                                                                                                       |
|--------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| with_column_header | Boolean | Whether the first row in the released CSV file is a column name. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The first row in the released CSV file is a column name.</li><li>• <b>false</b>: The first row in the released CSV file is not a column name.</li></ul> |

**Table 28-12** LabelStats

| Parameter    | Type                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| attributes   | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included.                                                                                                                                                                                                                                                                                                                                                                                                          |
| count        | Integer                                         | Number of labels.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| name         | String                                          | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property     | <a href="#">LabelProperty</a> object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| sample_count | Integer                                         | Number of samples containing the label.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| type         | Integer                                         | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-13** LabelAttribute

| Parameter     | Type   | Description                         |
|---------------|--------|-------------------------------------|
| default_value | String | Default value of a label attribute. |

| Parameter | Type                                                 | Description                                                                                                                                              |
|-----------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String                                               | Label attribute ID. You can query the tag by invoking the tag list.                                                                                      |
| name      | String                                               | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&".                                             |
| type      | String                                               | Label attribute type. Options: <ul style="list-style-type: none"><li>• <b>text</b>: text</li><li>• <b>select</b>: single-choice drop-down list</li></ul> |
| values    | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values.                                                                                                                          |

**Table 28-14** LabelAttributeValue

| Parameter | Type   | Description               |
|-----------|--------|---------------------------|
| id        | String | Label attribute value ID. |
| value     | String | Label attribute value.    |

**Table 28-15** LabelProperty

| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> .                                                                                                                                                                                                                                                                                   |
| @modelarts:default_shape | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |



| Parameter            | Type   | Description                                                                                                                                                                                                    |
|----------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:from_type | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |
| @modelarts:rename_to | String | Default attribute: The new name of the label.                                                                                                                                                                  |
| @modelarts:shortcut  | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                       |
| @modelarts:to_type   | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |

**Table 28-16** WorkforceDescriptor

| Parameter                         | Type    | Description                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| current_task_id                   | String  | ID of a team labeling task.                                                                                                                                                                                                                                                                                                                  |
| current_task_name                 | String  | Name of a team labeling task.                                                                                                                                                                                                                                                                                                                |
| reject_num                        | Integer | Number of rejected samples.                                                                                                                                                                                                                                                                                                                  |
| repetition                        | Integer | Number of persons who label each sample. The minimum value is <b>1</b> .                                                                                                                                                                                                                                                                     |
| is_synchronize_auto_labeling_data | Boolean | Whether to synchronously update auto labeling data. Options: <ul style="list-style-type: none"><li>● <b>true</b>: Update auto labeling data synchronously.</li><li>● <b>false</b>: Do not update auto labeling data synchronously.</li></ul>                                                                                                 |
| is_synchronize_data               | Boolean | Whether to synchronize updated data, such as uploading files, synchronizing data sources, and assigning imported unlabeled files to team members. Options: <ul style="list-style-type: none"><li>● <b>true</b>: Synchronize updated data to team members.</li><li>● <b>false</b>: Do not synchronize updated data to team members.</li></ul> |

| Parameter      | Type                                    | Description                    |
|----------------|-----------------------------------------|--------------------------------|
| workers        | Array of <a href="#">Worker</a> objects | List of labeling team members. |
| workforce_id   | String                                  | ID of a labeling team.         |
| workforce_name | String                                  | Name of a labeling team.       |

**Table 28-17** Worker

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                                                                                    |
|--------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time  | Long    | Creation time.                                                                                                                                                                                                                                                                                                                                                 |
| description  | String  | Labeling team member description. The value contains 0 to 256 characters and does not support the following special characters: ^! <>=&""                                                                                                                                                                                                                      |
| email        | String  | Email address of a labeling team member.                                                                                                                                                                                                                                                                                                                       |
| role         | Integer | Role. Options: <ul style="list-style-type: none"><li>● <b>0</b>: labeling personnel</li><li>● <b>1</b>: reviewer</li><li>● <b>2</b>: team administrator</li><li>● <b>3</b>: dataset owner</li></ul>                                                                                                                                                            |
| status       | Integer | Current login status of a labeling team member. Options: <ul style="list-style-type: none"><li>● <b>0</b>: The invitation email has not been sent.</li><li>● <b>1</b>: The invitation email has been sent but the user has not logged in.</li><li>● <b>2</b>: The user has logged in.</li><li>● <b>3</b>: The labeling team member has been deleted.</li></ul> |
| update_time  | Long    | Update time.                                                                                                                                                                                                                                                                                                                                                   |
| worker_id    | String  | ID of a labeling team member.                                                                                                                                                                                                                                                                                                                                  |
| workforce_id | String  | ID of a labeling team.                                                                                                                                                                                                                                                                                                                                         |

## Example Requests

### Querying the Dataset List

```
GET https://{endpoint}/v2/{project_id}/datasets?
offset=0&limit=10&sort_by=create_time&order=desc&dataset_type=0&file_preview=true
```

## Example Responses

Status code: 200

OK

```
{
 "total_number" : 1,
 "datasets" : [{
 "dataset_id" : "gfgHHSokody6AJigS5A",
 "dataset_name" : "dataset-f9e8",
 "dataset_type" : 0,
 "data_format" : "Default",
 "next_version_num" : 4,
 "status" : 1,
 "data_sources" : [{
 "data_type" : 0,
 "data_path" : "/test-obs/classify/input/animals/"
 }],
 "create_time" : 1605690595404,
 "update_time" : 1605690595404,
 "description" : "",
 "current_version_id" : "54IXbeJhfttGpL46lbv",
 "current_version_name" : "V003",
 "total_sample_count" : 10,
 "annotated_sample_count" : 10,
 "work_path" : "/test-obs/classify/output/",
 "inner_work_path" : "/test-obs/classify/output/dataset-f9e8-gfgHHSokody6AJigS5A/",
 "inner_annotation_path" : "/test-obs/classify/output/dataset-f9e8-gfgHHSokody6AJigS5A/annotation/",
 "inner_data_path" : "/test-obs/classify/output/dataset-f9e8-gfgHHSokody6AJigS5A/data/",
 "inner_log_path" : "/test-obs/classify/output/dataset-f9e8-gfgHHSokody6AJigS5A/logs/",
 "inner_temp_path" : "/test-obs/classify/output/dataset-f9e8-gfgHHSokody6AJigS5A/temp/",
 "inner_task_path" : "/test-obs/classify/output/dataset-f9e8-gfgHHSokody6AJigS5A/task/",
 "work_path_type" : 0,
 "workspace_id" : "0",
 "enterprise_project_id" : "0",
 "exist_running_task" : false,
 "exist_workforce_task" : false,
 "running_tasks_id" : [],
 "workforce_task_count" : 0,
 "feature_supports" : ["0"],
 "managed" : false,
 "import_data" : false,
 "label_task_count" : 1,
 "dataset_format" : 0,
 "content_labeling" : true,
 "samples" : [{
 "url" : "https://test-obs.obs.xxx.com:443/classify/input/animals/15.jpg?
AccessKeyId=vprCCTY1NmHudlvC0bXr&Expires=1606100112&Signature=tuUo9jl6lqoMKAwNBz5g8dxO
%2FdE%3D",
 "create_time" : 1605690596035
 }, {
 "url" : "https://test-obs.obs.xxx.com:443/classify/input/animals/8.jpg?
AccessKeyId=vprCCTY1NmHudlvC0bXr&Expires=1606100112&Signature=NITOdBnkUXtdnKuEgDzZpkQzNfM
%3D",
 "create_time" : 1605690596046
 }, {
 "url" : "https://test-obs.obs.xxx.com:443/classify/input/animals/9.jpg?
AccessKeyId=vprCCTY1NmHudlvC0bXr&Expires=1606100112&Signature=
%2BwUo1BL38%2F2d7p7anPi4fNzm1VU%3D",
 "create_time" : 1605690596050
 }, {
 "url" : "https://test-obs.obs.xxx.com:443/classify/input/animals/7.jpg?
AccessKeyId=vprCCTY1NmHudlvC0bXr&Expires=1606100112&Signature=tOrHfcWo
%2FEJ0wRzfi1M5Wk2MrXg%3D",
 "create_time" : 1605690596043
 }]
 }]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.2 Creating a Dataset

### Function

This API is used to create a dataset.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets

**Table 28-18** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Parameters

**Table 28-19** Request body parameters

| Parameter    | Mandatory | Type                                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------|-----------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_format  | No        | String                                      | Data format. Options: <ul style="list-style-type: none"><li>• <b>Default:</b> default format</li><li>• <b>CarbonData:</b> CarbonData (supported only by table datasets)</li></ul>                                                                                                                                                                                                                                                                                                                                                                            |
| data_sources | Yes       | Array of <a href="#">DataSource</a> objects | Input dataset path, which is used to synchronize source data (such as images, text files, and audio files) in the directory and its subdirectories to the dataset. For a table dataset, this parameter indicates the import directory. The work directory of a table dataset cannot be an OBS path in a KMS-encrypted bucket. Only one data source can be imported at a time.                                                                                                                                                                                |
| dataset_name | Yes       | String                                      | Dataset name. The value contains 1 to 100 characters. Only letters, digits, underscores (_), and hyphens (-) are allowed, for example, dataset-9f3b.                                                                                                                                                                                                                                                                                                                                                                                                         |
| dataset_type | No        | Integer                                     | Dataset type. Options: <ul style="list-style-type: none"><li>• <b>0:</b> image classification</li><li>• <b>1:</b> object detection</li><li>• <b>3:</b> image segmentation</li><li>• <b>100:</b> text classification</li><li>• <b>101:</b> named entity recognition</li><li>• <b>102:</b> text triplet</li><li>• <b>200:</b> sound classification</li><li>• <b>201:</b> speech content</li><li>• <b>202:</b> speech paragraph labeling</li><li>• <b>400:</b> table dataset</li><li>• <b>600:</b> video labeling</li><li>• <b>900:</b> custom format</li></ul> |

| Parameter          | Mandatory | Type                          | Description                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------|-----------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| description        | No        | String                        | Dataset description. The value is empty by default. The description contains 0 to 256 characters and does not support the following special characters: ^!<>=&""                                                                                                                                                                                                                                                                          |
| import_annotations | No        | Boolean                       | Indicates whether to automatically import the labeling information in the input directory. Object detection, image classification, and text classification are supported. The options are as follows: <ul style="list-style-type: none"><li>• <b>true</b>: Import the annotation information in the input directory (default value).</li><li>• <b>false</b>: The annotation information in the input directory is not imported.</li></ul> |
| import_data        | No        | Boolean                       | Whether to import data. This parameter is used only for table datasets. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Import data when creating a database.</li><li>• <b>false</b>: Do not import data when creating a database. (Default value)</li></ul>                                                                                                                                                                |
| label_format       | No        | <b>LabelFormat</b> object     | Label format information. This parameter is used only for text datasets.                                                                                                                                                                                                                                                                                                                                                                  |
| labels             | No        | Array of <b>Label</b> objects | Dataset label list.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| managed            | No        | Boolean                       | Whether to host a dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Host a dataset.</li><li>• <b>false</b>: Do not host a dataset. (Default value)</li></ul>                                                                                                                                                                                                                                                         |
| schema             | No        | Array of <b>Field</b> objects | Schema list.                                                                                                                                                                                                                                                                                                                                                                                                                              |

| Parameter             | Mandatory | Type                               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|-----------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| work_path             | Yes       | String                             | Output dataset path, which is used to store output files such as label files. <ul style="list-style-type: none"><li>• The format is <i>/Bucket name/File path</i>, for example, <b>/obs-bucket/flower/rose/</b>. (The directory is used as the path.)</li><li>• A bucket cannot be directly used as a path.</li><li>• The output dataset path is different from the input dataset path or its subdirectory.</li><li>• The value contains 3 to 700 characters.</li></ul> |
| work_path_type        | Yes       | Integer                            | Type of the dataset output path. The default value is 0, indicating an OBS bucket.                                                                                                                                                                                                                                                                                                                                                                                      |
| workforce_information | No        | <b>WorkforceInformation</b> object | Team labeling information.                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| workspace_id          | No        | String                             | Workspace ID. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value.                                                                                                                                                                                                                                                                                                                                     |

**Table 28-20** DataSource

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                              |
|-----------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_path | No        | String  | Data source path.                                                                                                                                                                                                                                                                        |
| data_type | No        | Integer | Data type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: OBS bucket (default value)</li><li>• <b>1</b>: GaussDB(DWS)</li><li>• <b>2</b>: DLI</li><li>• <b>3</b>: RDS</li><li>• <b>4</b>: MRS</li><li>• <b>5</b>: AI Gallery</li><li>• <b>6</b>: Inference service</li></ul> |

| Parameter          | Mandatory | Type                                       | Description                                                                                                                                                                                                                                                                                    |
|--------------------|-----------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| schema_maps        | No        | Array of <a href="#">SchemaMap</a> objects | Schema mapping information corresponding to the table data.                                                                                                                                                                                                                                    |
| source_info        | No        | <a href="#">SourceInfo</a> object          | Information required for importing a table data source.                                                                                                                                                                                                                                        |
| with_column_header | No        | Boolean                                    | Whether the first row in the file is a column name. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The first row in the file is the column name.</li><li>• <b>false</b>: The first row in the file is not the column name.</li></ul> |

**Table 28-21** SchemaMap

| Parameter | Mandatory | Type   | Description                     |
|-----------|-----------|--------|---------------------------------|
| dest_name | No        | String | Name of the destination column. |
| src_name  | No        | String | Name of the source column.      |

**Table 28-22** SourceInfo

| Parameter     | Mandatory | Type   | Description                                                                                                                                              |
|---------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| cluster_id    | No        | String | MRS cluster ID. You can log in to the MRS console to view the information.                                                                               |
| cluster_mode  | No        | String | Running mode of an MRS cluster. Options: <ul style="list-style-type: none"><li>• <b>0</b>: normal cluster</li><li>• <b>1</b>: security cluster</li></ul> |
| cluster_name  | No        | String | MRS cluster name You can log in to the MRS console to view the information.                                                                              |
| database_name | No        | String | Name of the database to which the table dataset is imported.                                                                                             |



| Parameter     | Mandatory | Type   | Description                                                   |
|---------------|-----------|--------|---------------------------------------------------------------|
| input         | No        | String | HDFS path of the table data set. For example, /datasets/demo. |
| ip            | No        | String | IP address of your GaussDB(DWS) cluster.                      |
| port          | No        | String | Port number of your GaussDB(DWS) cluster.                     |
| queue_name    | No        | String | DLI queue name of a table dataset.                            |
| subnet_id     | No        | String | Subnet ID of an MRS cluster.                                  |
| table_name    | No        | String | Name of the table to which a table dataset is imported.       |
| user_name     | No        | String | Username, which is mandatory for GaussDB(DWS) data.           |
| user_password | No        | String | User password, which is mandatory for GaussDB(DWS) data.      |
| vpc_id        | No        | String | ID of the VPC where an MRS cluster resides.                   |

**Table 28-23** LabelFormat

| Parameter             | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| label_type            | No        | String | Label type of text classification. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The label is separated from the text, and they are distinguished by the fixed suffix <b>_result</b>. For example, the text file is <b>abc.txt</b>, and the label file is <b>abc_result.txt</b>.</li><li>• <b>1</b>: Default value. Labels and texts are stored in the same file and separated by separators. You can use <b>text_sample_separator</b> to specify the separator between the text and label and <b>text_label_separator</b> to specify the separator between labels.</li></ul> |
| text_label_separator  | No        | String | Separator between labels. By default, a comma (,) is used as the separator. The separator needs to be escaped. The separator can contain only one character, such as a letter, a digit, or any of the following special characters: !@#\$%^&* _= ?/'.:,;                                                                                                                                                                                                                                                                                                                                   |
| text_sample_separator | No        | String | Separator between the text and label. By default, the <b>Tab</b> key is used as the separator. The separator needs to be escaped. The separator can contain only one character, such as a letter, a digit, or any of the following special characters: !@#\$%^&* _= ?/'.:,;                                                                                                                                                                                                                                                                                                                |

**Table 28-24** Label

| Parameter  | Mandatory | Type                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------|-----------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| attributes | No        | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included.                                                                                                                                                                                                                                                                                                                                                                                                          |
| name       | No        | String                                          | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property   | No        | <a href="#">LabelProperty</a> object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| type       | No        | Integer                                         | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-25** LabelAttribute

| Parameter     | Mandatory | Type   | Description                                                                                                  |
|---------------|-----------|--------|--------------------------------------------------------------------------------------------------------------|
| default_value | No        | String | Default value of a label attribute.                                                                          |
| id            | No        | String | Label attribute ID. You can query the tag by invoking the tag list.                                          |
| name          | No        | String | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&". |

| Parameter | Mandatory | Type                                        | Description                                                                                                                                              |
|-----------|-----------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | No        | String                                      | Label attribute type. Options: <ul style="list-style-type: none"><li>• <b>text</b>: text</li><li>• <b>select</b>: single-choice drop-down list</li></ul> |
| values    | No        | Array of <b>LabelAttributeValue</b> objects | List of label attribute values.                                                                                                                          |

**Table 28-26** LabelAttributeValue

| Parameter | Mandatory | Type   | Description               |
|-----------|-----------|--------|---------------------------|
| id        | No        | String | Label attribute value ID. |
| value     | No        | String | Label attribute value.    |

**Table 28-27** LabelProperty

| Parameter                | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | No        | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> .                                                                                                                                                                                                                                                                                   |
| @modelarts:default_shape | No        | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |

| Parameter            | Mandatory | Type   | Description                                                                                                                                                                                                    |
|----------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:from_type | No        | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |
| @modelarts:rename_to | No        | String | Default attribute: The new name of the label.                                                                                                                                                                  |
| @modelarts:shortcut  | No        | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                       |
| @modelarts:to_type   | No        | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |

**Table 28-28** Field

| Parameter   | Mandatory | Type    | Description         |
|-------------|-----------|---------|---------------------|
| description | No        | String  | Schema description. |
| name        | No        | String  | Schema name.        |
| schema_id   | No        | Integer | Schema ID.          |
| type        | No        | String  | Schema value type.  |

**Table 28-29** WorkforceInformation

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                                                                                                      |
|----------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_sync_type | No        | Integer | Synchronization type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: not to be synchronized</li><li>• <b>1</b>: data to be synchronized</li><li>• <b>2</b>: label to be synchronized</li><li>• <b>3</b>: data and label to be synchronized</li></ul> |

| Parameter                      | Mandatory | Type                                    | Description                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------|-----------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| repetition                     | No        | Integer                                 | Number of persons who label each sample. The minimum value is 1.                                                                                                                                                                                                                                                                             |
| synchronize_auto_labeling_data | No        | Boolean                                 | Whether to synchronously update auto labeling data. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Update auto labeling data synchronously.</li><li>• <b>false</b>: Do not update auto labeling data synchronously.</li></ul>                                                                                                 |
| synchronize_data               | No        | Boolean                                 | Whether to synchronize updated data, such as uploading files, synchronizing data sources, and assigning imported unlabeled files to team members. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Synchronize updated data to team members.</li><li>• <b>false</b>: Do not synchronize updated data to team members.</li></ul> |
| task_id                        | No        | String                                  | ID of a team labeling task.                                                                                                                                                                                                                                                                                                                  |
| task_name                      | Yes       | String                                  | Name of a team labeling task. The name contains 1 to 64 characters, including only letters, digits, underscores (_), and hyphens (-).                                                                                                                                                                                                        |
| workforces_config              | No        | <a href="#">WorkforcesConfig</a> object | Manpower assignment of a team labeling task. You can delegate the administrator to assign the manpower or do it by yourself.                                                                                                                                                                                                                 |

**Table 28-30** WorkforcesConfig

| Parameter  | Mandatory | Type                                             | Description                                |
|------------|-----------|--------------------------------------------------|--------------------------------------------|
| agency     | No        | String                                           | Administrator                              |
| workforces | No        | Array of <a href="#">WorkforceConfig</a> objects | List of teams that execute labeling tasks. |

**Table 28-31** WorkforceConfig

| Parameter      | Mandatory | Type                                    | Description                                                                                                                     |
|----------------|-----------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| workers        | No        | Array of <a href="#">Worker</a> objects | List of labeling team members.                                                                                                  |
| workforce_id   | No        | String                                  | ID of a labeling team.                                                                                                          |
| workforce_name | No        | String                                  | Name of a labeling team. The value contains 0 to 1024 characters and does not support the following special characters: !<>=&'' |

**Table 28-32** Worker

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                    |
|-------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time | No        | Long    | Creation time.                                                                                                                                                                                                                                                                                                                                                 |
| description | No        | String  | Labeling team member description. The value contains 0 to 256 characters and does not support the following special characters: ^!<>=&''                                                                                                                                                                                                                       |
| email       | No        | String  | Email address of a labeling team member.                                                                                                                                                                                                                                                                                                                       |
| role        | No        | Integer | Role. Options: <ul style="list-style-type: none"><li>• <b>0</b>: labeling personnel</li><li>• <b>1</b>: reviewer</li><li>• <b>2</b>: team administrator</li><li>• <b>3</b>: dataset owner</li></ul>                                                                                                                                                            |
| status      | No        | Integer | Current login status of a labeling team member. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The invitation email has not been sent.</li><li>• <b>1</b>: The invitation email has been sent but the user has not logged in.</li><li>• <b>2</b>: The user has logged in.</li><li>• <b>3</b>: The labeling team member has been deleted.</li></ul> |
| update_time | No        | Long    | Update time.                                                                                                                                                                                                                                                                                                                                                   |

| Parameter    | Mandatory | Type   | Description                   |
|--------------|-----------|--------|-------------------------------|
| worker_id    | No        | String | ID of a labeling team member. |
| workforce_id | No        | String | ID of a labeling team.        |

## Response Parameters

Status code: 201

**Table 28-33** Response body parameters

| Parameter      | Type   | Description           |
|----------------|--------|-----------------------|
| dataset_id     | String | Dataset ID.           |
| error_code     | String | Error code.           |
| error_msg      | String | Error message.        |
| import_task_id | String | ID of an import task. |

## Example Requests

- Creating an Image Classification Dataset

```
{
 "workspace_id" : "0",
 "dataset_name" : "dataset-457f",
 "dataset_type" : 0,
 "data_sources" : [{
 "data_type" : 0,
 "data_path" : "/test-obs/classify/input/animals/"
 }],
 "description" : "",
 "work_path" : "/test-obs/classify/output/",
 "work_path_type" : 0,
 "labels" : [{
 "name" : "Rabbits",
 "type" : 0,
 "property" : {
 "@modelarts:color" : "#3399ff"
 }
 }, {
 "name" : "Bees",
 "type" : 0,
 "property" : {
 "@modelarts:color" : "#3399ff"
 }
 }]
}
```

- Creating an Object Detection Dataset

```
{
 "workspace_id" : "0",
 "dataset_name" : "dataset-95a6",
 "dataset_type" : 1,
 "data_sources" : [{
```



```
"data_type" : 0,
"data_path" : "/test-obs/detect/input/animals/"
}],
"description" : "",
"work_path" : "/test-obs/detect/output/",
"work_path_type" : 0,
"labels" : [{
 "name" : "Rabbits",
 "type" : 1,
 "property" : {
 "@modelarts:color" : "#3399ff"
 }
}, {
 "name" : "Bees",
 "type" : 1,
 "property" : {
 "@modelarts:color" : "#3399ff"
 }
}
]
```

- Creating a Table Dataset

```
{
 "workspace_id" : "0",
 "dataset_name" : "dataset-de83",
 "dataset_type" : 400,
 "data_sources" : [{
 "data_type" : 0,
 "data_path" : "/test-obs/table/input/",
 "with_column_header" : true
 }],
 "description" : "",
 "work_path" : "/test-obs/table/output/",
 "work_path_type" : 0,
 "schema" : [{
 "schema_id" : 1,
 "name" : "150",
 "type" : "STRING"
 }, {
 "schema_id" : 2,
 "name" : "4",
 "type" : "STRING"
 }, {
 "schema_id" : 3,
 "name" : "setosa",
 "type" : "STRING"
 }, {
 "schema_id" : 4,
 "name" : "versicolor",
 "type" : "STRING"
 }, {
 "schema_id" : 5,
 "name" : "virginica",
 "type" : "STRING"
 }],
 "import_data" : true
}
```

## Example Responses

**Status code: 201**

Created

```
{
 "dataset_id" : "WxCREuCKBSAIQr9xrde"
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 201         | Created      |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.3 Querying Details About a Dataset

### Function

This API is used to query details about a dataset.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}

**Table 28-34** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-35** Query Parameters

| Parameter          | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| check_running_task | No        | Boolean | Whether to detect tasks (including initialization tasks) that are running in a dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Detect tasks (including initialization tasks) that are running in the dataset.</li><li>• <b>false</b>: Do not detect tasks that are running in the dataset. (Default value)</li></ul>                                                                                                |
| running_task_type  | No        | Integer | Type of the running tasks (including initialization tasks) to be detected. The options are as follows: <ul style="list-style-type: none"><li>• <b>0</b>: auto labeling</li><li>• <b>1</b>: pre-labeling</li><li>• <b>2</b>: export</li><li>• <b>3</b>: version switch</li><li>• <b>4</b>: manifest file export</li><li>• <b>5</b>: manifest file import</li><li>• <b>6</b>: version publishing</li><li>• <b>7</b>: auto grouping</li></ul> |

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 28-36** Response body parameters

| Parameter                  | Type    | Description                             |
|----------------------------|---------|-----------------------------------------|
| annotated_sample_count     | Integer | Number of labeled samples in a dataset. |
| annotated_sub_sample_count | Integer | Number of labeled subsamples.           |

| Parameter            | Type                                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| content_labeling     | Boolean                                     | Whether to enable content labeling for the speech paragraph labeling dataset. This function is enabled by default.                                                                                                                                                                                                                                                                                                                                                       |
| create_time          | Long                                        | Time when a dataset is created.                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| current_version_id   | String                                      | Current version ID of a dataset.                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| current_version_name | String                                      | Current version name of a dataset. Version name. The value is a string of 1 to 32 characters consisting of letters, digits, underscores (_), and hyphens (-).                                                                                                                                                                                                                                                                                                            |
| data_format          | String                                      | Data format.                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| data_sources         | Array of <a href="#">DataSource</a> objects | Data source list.                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| data_statistics      | Map<String, Object>                         | Sample statistics on a dataset, including the statistics on sample metadata.                                                                                                                                                                                                                                                                                                                                                                                             |
| data_update_time     | Long                                        | Time when a sample and a label are updated.                                                                                                                                                                                                                                                                                                                                                                                                                              |
| dataset_format       | Integer                                     | Dataset format. Options: <ul style="list-style-type: none"><li>● 0: file</li><li>● 1: table</li></ul>                                                                                                                                                                                                                                                                                                                                                                    |
| dataset_id           | String                                      | Dataset ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| dataset_name         | String                                      | Dataset name.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| dataset_tags         | Array of strings                            | Key identifier list of a dataset, for example, ["Image", "Object detection"].                                                                                                                                                                                                                                                                                                                                                                                            |
| dataset_type         | Integer                                     | Dataset type. Options: <ul style="list-style-type: none"><li>● 0: image classification</li><li>● 1: object detection</li><li>● 3: image segmentation</li><li>● 100: text classification</li><li>● 101: named entity recognition</li><li>● 102: text triplet</li><li>● 200: sound classification</li><li>● 201: speech content</li><li>● 202: speech paragraph labeling</li><li>● 400: table dataset</li><li>● 600: video labeling</li><li>● 900: custom format</li></ul> |

| Parameter             | Type                | Description                                                                                                                                                                                                                                            |
|-----------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dataset_version_count | Integer             | Number of dataset versions.                                                                                                                                                                                                                            |
| deleted_sample_count  | Integer             | Number of deleted samples.                                                                                                                                                                                                                             |
| deletion_stats        | Map<String,Integer> | Deletion reason statistics.                                                                                                                                                                                                                            |
| description           | String              | Dataset description.                                                                                                                                                                                                                                   |
| enterprise_project_id | String              | Enterprise project ID.                                                                                                                                                                                                                                 |
| exist_running_task    | Boolean             | Whether the dataset contains running (including initialization) tasks. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The dataset contains running tasks.</li><li>• <b>false</b>: The dataset does not contain running tasks.</li></ul> |
| exist_workforce_task  | Boolean             | Whether the dataset contains team labeling tasks. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The dataset contains team labeling tasks.</li><li>• <b>false</b>: The dataset does not contain team labeling tasks.</li></ul>          |
| feature_supports      | Array of strings    | List of features supported by the dataset. Currently, only the value <b>0</b> is supported, indicating that the OBS file size is limited.                                                                                                              |
| import_data           | Boolean             | Whether to import data. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Import data.</li><li>• <b>false</b>: Do not import data.</li></ul>                                                                                               |
| import_task_id        | String              | ID of an import task.                                                                                                                                                                                                                                  |
| inner_annotation_path | String              | Path for storing the labeling result of a dataset.                                                                                                                                                                                                     |
| inner_data_path       | String              | Path for storing the internal data of a dataset.                                                                                                                                                                                                       |
| inner_log_path        | String              | Path for storing internal logs of a dataset.                                                                                                                                                                                                           |
| inner_task_path       | String              | Path for internal task of a dataset.                                                                                                                                                                                                                   |
| inner_temp_path       | String              | Path for storing internal temporary files of a dataset.                                                                                                                                                                                                |

| Parameter                | Type                                   | Description                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| inner_work_path          | String                                 | Output directory of a dataset.                                                                                                                                                                                                                                                                                                                                                                                                |
| label_task_count         | Integer                                | Number of labeling tasks.                                                                                                                                                                                                                                                                                                                                                                                                     |
| labels                   | Array of <a href="#">Label</a> objects | Dataset label list.                                                                                                                                                                                                                                                                                                                                                                                                           |
| loading_sample_count     | Integer                                | Number of loading samples.                                                                                                                                                                                                                                                                                                                                                                                                    |
| managed                  | Boolean                                | Whether a dataset is hosted. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The dataset is hosted.</li><li>• <b>false</b>: The dataset is not hosted.</li></ul>                                                                                                                                                                                                                                                |
| next_version_num         | Integer                                | Number of next versions of a dataset.                                                                                                                                                                                                                                                                                                                                                                                         |
| running_tasks_id         | Array of strings                       | ID list of running (including initialization) tasks.                                                                                                                                                                                                                                                                                                                                                                          |
| schema                   | Array of <a href="#">Field</a> objects | Schema list.                                                                                                                                                                                                                                                                                                                                                                                                                  |
| status                   | Integer                                | Dataset status. Options: <ul style="list-style-type: none"><li>• <b>0</b>: creating dataset</li><li>• <b>1</b>: normal dataset</li><li>• <b>2</b>: deleting dataset</li><li>• <b>3</b>: deleted dataset</li><li>• <b>4</b>: abnormal dataset</li><li>• <b>5</b>: synchronizing dataset</li><li>• <b>6</b>: releasing dataset</li><li>• <b>7</b>: dataset in version switching</li><li>• <b>8</b>: importing dataset</li></ul> |
| third_path               | String                                 | Third-party path.                                                                                                                                                                                                                                                                                                                                                                                                             |
| total_sample_count       | Integer                                | Total number of dataset samples.                                                                                                                                                                                                                                                                                                                                                                                              |
| total_sub_sample_count   | Integer                                | Total number of subsamples generated from the parent samples. For example, the total number of key frame images extracted from the video labeling dataset is that of subsamples.                                                                                                                                                                                                                                              |
| unconfirmed_sample_count | Integer                                | Number of auto labeling samples to be confirmed.                                                                                                                                                                                                                                                                                                                                                                              |
| update_time              | Long                                   | Time when a dataset is updated.                                                                                                                                                                                                                                                                                                                                                                                               |

| Parameter            | Type                                            | Description                                                                                                                                                                              |
|----------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| versions             | Array of <a href="#">DatasetVersion</a> objects | Dataset version information. Currently, only the current version information of a dataset is recorded.                                                                                   |
| work_path            | String                                          | Output dataset path, which is used to store output files such as label files. The path is an OBS path in the format of <i>/Bucket name/File path</i> . For example: <b>/obs-bucket</b> . |
| work_path_type       | Integer                                         | Type of the dataset output path. The default value is 0, indicating an OBS bucket.                                                                                                       |
| workforce_descriptor | <a href="#">WorkforceDescriptor</a> object      | Team labeling information.                                                                                                                                                               |
| workforce_task_count | Integer                                         | Number of team labeling tasks of a dataset.                                                                                                                                              |
| workspace_id         | String                                          | Workspace ID. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value.                                                      |

**Table 28-37** DataSource

| Parameter   | Type                                       | Description                                                                                                                                                                                                                                                                              |
|-------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_path   | String                                     | Data source path.                                                                                                                                                                                                                                                                        |
| data_type   | Integer                                    | Data type. Options: <ul style="list-style-type: none"><li>● <b>0</b>: OBS bucket (default value)</li><li>● <b>1</b>: GaussDB(DWS)</li><li>● <b>2</b>: DLI</li><li>● <b>3</b>: RDS</li><li>● <b>4</b>: MRS</li><li>● <b>5</b>: AI Gallery</li><li>● <b>6</b>: Inference service</li></ul> |
| schema_maps | Array of <a href="#">SchemaMap</a> objects | Schema mapping information corresponding to the table data.                                                                                                                                                                                                                              |
| source_info | <a href="#">SourceInfo</a> object          | Information required for importing a table data source.                                                                                                                                                                                                                                  |

| Parameter          | Type    | Description                                                                                                                                                                                                                                                                                    |
|--------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| with_column_header | Boolean | Whether the first row in the file is a column name. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The first row in the file is the column name.</li><li>• <b>false</b>: The first row in the file is not the column name.</li></ul> |

**Table 28-38** SchemaMap

| Parameter | Type   | Description                     |
|-----------|--------|---------------------------------|
| dest_name | String | Name of the destination column. |
| src_name  | String | Name of the source column.      |

**Table 28-39** SourceInfo

| Parameter     | Type   | Description                                                                                                                                              |
|---------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| cluster_id    | String | MRS cluster ID. You can log in to the MRS console to view the information.                                                                               |
| cluster_mode  | String | Running mode of an MRS cluster. Options: <ul style="list-style-type: none"><li>• <b>0</b>: normal cluster</li><li>• <b>1</b>: security cluster</li></ul> |
| cluster_name  | String | MRS cluster name You can log in to the MRS console to view the information.                                                                              |
| database_name | String | Name of the database to which the table dataset is imported.                                                                                             |
| input         | String | HDFS path of the table data set. For example, / datasets/demo.                                                                                           |
| ip            | String | IP address of your GaussDB(DWS) cluster.                                                                                                                 |
| port          | String | Port number of your GaussDB(DWS) cluster.                                                                                                                |
| queue_name    | String | DLI queue name of a table dataset.                                                                                                                       |
| subnet_id     | String | Subnet ID of an MRS cluster.                                                                                                                             |
| table_name    | String | Name of the table to which a table dataset is imported.                                                                                                  |
| user_name     | String | Username, which is mandatory for GaussDB(DWS) data.                                                                                                      |



| Parameter     | Type   | Description                                              |
|---------------|--------|----------------------------------------------------------|
| user_password | String | User password, which is mandatory for GaussDB(DWS) data. |
| vpc_id        | String | ID of the VPC where an MRS cluster resides.              |

**Table 28-40** Label

| Parameter  | Type                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| attributes | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included.                                                                                                                                                                                                                                                                                                                                                                                                          |
| name       | String                                          | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property   | <a href="#">LabelProperty</a> object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| type       | Integer                                         | Label type. Options: <ul style="list-style-type: none"><li>● <b>0</b>: image classification</li><li>● <b>1</b>: object detection</li><li>● <b>3</b>: image segmentation</li><li>● <b>100</b>: text classification</li><li>● <b>101</b>: named entity recognition</li><li>● <b>102</b>: text triplet relationship</li><li>● <b>103</b>: text triplet entity</li><li>● <b>200</b>: sound classification</li><li>● <b>201</b>: speech content</li><li>● <b>202</b>: speech paragraph labeling</li><li>● <b>600</b>: video labeling</li></ul> |

**Table 28-41** Field

| Parameter   | Type    | Description         |
|-------------|---------|---------------------|
| description | String  | Schema description. |
| name        | String  | Schema name.        |
| schema_id   | Integer | Schema ID.          |
| type        | String  | Schema value type.  |

**Table 28-42** DatasetVersion

| Parameter                  | Type               | Description                                                                                                                                                                                                                                                                               |
|----------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| add_sample_count           | Integer            | Number of added samples.                                                                                                                                                                                                                                                                  |
| analysis_cache_path        | String             | Cache path for feature analysis.                                                                                                                                                                                                                                                          |
| analysis_status            | Integer            | Status of a feature analysis task. Options: <ul style="list-style-type: none"><li>● <b>0</b>: initialized</li><li>● <b>1</b>: running</li><li>● <b>2</b>: completed</li><li>● <b>3</b>: failed</li></ul>                                                                                  |
| analysis_task_id           | String             | ID of a feature analysis task.                                                                                                                                                                                                                                                            |
| annotated_sample_count     | Integer            | Number of samples with labeled versions.                                                                                                                                                                                                                                                  |
| annotated_sub_sample_count | Integer            | Number of labeled subsamples.                                                                                                                                                                                                                                                             |
| clear_hard_property        | Boolean            | Whether to clear hard example properties during release. Options: <ul style="list-style-type: none"><li>● <b>true</b>: Clear hard example properties. (Default value)</li><li>● <b>false</b>: Do not clear hard example properties.</li></ul>                                             |
| code                       | String             | Status code of a preprocessing task such as rotation and cropping.                                                                                                                                                                                                                        |
| create_time                | Long               | Time when a version is created.                                                                                                                                                                                                                                                           |
| crop                       | Boolean            | Whether to crop the image. This field is valid only for the object detection dataset whose labeling box is in the rectangle shape. Options: <ul style="list-style-type: none"><li>● <b>true</b>: Crop the image.</li><li>● <b>false</b>: Do not crop the image. (Default value)</li></ul> |
| crop_path                  | String             | Path for storing cropped files.                                                                                                                                                                                                                                                           |
| crop_rotate_cache_path     | String             | Temporary directory for executing the rotation and cropping task.                                                                                                                                                                                                                         |
| data_analysis              | Map<String,Object> | Feature analysis result in JSON format.                                                                                                                                                                                                                                                   |
| data_path                  | String             | Path for storing data.                                                                                                                                                                                                                                                                    |

| Parameter             | Type                                        | Description                                                                                                                                                                                                                                                                                   |
|-----------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_statistics       | Map<String,Object>                          | Sample statistics on a dataset, including the statistics on sample metadata in JSON format.                                                                                                                                                                                                   |
| data_validate         | Boolean                                     | Whether data is validated by the validation algorithm before release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The data has been validated.</li><li>• <b>false</b>: The data has not been validated.</li></ul>                                                           |
| deleted_sample_count  | Integer                                     | Number of deleted samples.                                                                                                                                                                                                                                                                    |
| deletion_stats        | Map<String,Integer>                         | Deletion reason statistics.                                                                                                                                                                                                                                                                   |
| description           | String                                      | Description of a version.                                                                                                                                                                                                                                                                     |
| export_images         | Boolean                                     | Whether to export images to the version output directory during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Export images to the version output directory.</li><li>• <b>false</b>: Do not export images to the version output directory. (Default value)</li></ul> |
| extract_serial_number | Boolean                                     | Whether to parse the subsample number during release. The field is valid for the healthcare dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Parse the subsample number.</li><li>• <b>false</b>: Do not parse the subsample number. (Default value)</li></ul>           |
| include_dataset_data  | Boolean                                     | Whether to include the source data of a dataset during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The source data of a dataset is included.</li><li>• <b>false</b>: The source data of a dataset is not included.</li></ul>                                       |
| is_current            | Boolean                                     | Whether the current dataset version is used. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The current dataset version is used.</li><li>• <b>false</b>: The current dataset version is not used.</li></ul>                                                                    |
| label_stats           | Array of <a href="#">LabelStats</a> objects | Label statistics list of a released version.                                                                                                                                                                                                                                                  |
| label_type            | String                                      | Label type of a released version. Options: <ul style="list-style-type: none"><li>• <b>multi</b>: Multi-label samples are included.</li><li>• <b>single</b>: All samples are single-labeled.</li></ul>                                                                                         |

| Parameter                       | Type    | Description                                                                                                                                                                                                                                                                                               |
|---------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| manifest_cache_input_path       | String  | Input path for the <b>manifest</b> file cache during version release.                                                                                                                                                                                                                                     |
| manifest_path                   | String  | Path for storing the <b>manifest</b> file with the released version.                                                                                                                                                                                                                                      |
| message                         | String  | Task information recorded during release (for example, error information).                                                                                                                                                                                                                                |
| modified_sample_count           | Integer | Number of modified samples.                                                                                                                                                                                                                                                                               |
| previous_annotated_sample_count | Integer | Number of labeled samples of parent versions.                                                                                                                                                                                                                                                             |
| previous_total_sample_count     | Integer | Total samples of parent versions.                                                                                                                                                                                                                                                                         |
| previous_version_id             | String  | Parent version ID                                                                                                                                                                                                                                                                                         |
| processor_task_id               | String  | ID of a preprocessing task such as rotation and cropping.                                                                                                                                                                                                                                                 |
| processor_task_status           | Integer | Status of a preprocessing task such as rotation and cropping. The options are as follows: <ul style="list-style-type: none"><li>0: initialized - 1: running</li><li>2: completed</li><li>3: failed</li><li>4: stopped</li><li>5: timeout</li><li>6: Deletion failed.</li><li>7: Failed to stop.</li></ul> |
| remove_sample_usage             | Boolean | Whether to clear the existing usage information of a dataset during release. Options: <ul style="list-style-type: none"><li><b>true</b>: Clear the existing usage information of a dataset. (Default value)</li><li><b>false</b>: Do not clear the existing usage information of a dataset.</li></ul>     |
| rotate                          | Boolean | Whether to rotate the image. Options: <ul style="list-style-type: none"><li><b>true</b>: Rotate the image.</li><li><b>false</b>: Do not rotate the image. (Default value)</li></ul>                                                                                                                       |
| rotate_path                     | String  | Path for storing the rotated file.                                                                                                                                                                                                                                                                        |

| Parameter              | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_state           | String           | Sample status. The options are as follows: <ul style="list-style-type: none"><li>• <code>__ALL__</code>: labeled</li><li>• <code>__NONE__</code>: not marked</li><li>• <code>__UNCHECK__</code>: to be accepted</li><li>• <code>__ACCEPTED__</code>: The acceptance is passed.</li><li>• <code>__REJECTED__</code>: rejected</li><li>• <code>__UNREVIEWED__</code>: to be reviewed</li><li>• <code>__REVIEWED__</code>: approved</li><li>• <code>__WORKFORCE_SAMPLED__</code>: sampled</li><li>• <code>__WORKFORCE_SAMPLED_UNCHECK__</code>: Sampling is to be accepted.</li><li>• <code>__WORKFORCE_SAMPLED_CHECKED__</code>: Sampling has been accepted.</li><li>• <code>__WORKFORCE_SAMPLED_ACCEPTED__</code>: The sampling is passed.</li><li>• <code>__WORKFORCE_SAMPLED_REJECTED__</code>: The sampling has been rejected.</li><li>• <code>__AUTO_ANNOTATION__</code>: to be confirmed</li></ul> |
| start_processor_task   | Boolean          | Whether to start a data analysis task during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Start a data analysis task during release.</li><li>• <b>false</b>: Do not start a data analysis task during release. (Default value)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| status                 | Integer          | Status of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>0</b>: creating</li><li>• <b>1</b>: running</li><li>• <b>2</b>: deleting</li><li>• <b>3</b>: deleted</li><li>• <b>4</b>: error</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| tags                   | Array of strings | Key identifier list of the dataset. The labeling type is used as the default label when the labeling task releases a version. For example, ["Image", "Object detection"].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| task_type              | Integer          | Labeling task type of the released version, which is the same as the dataset type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| total_sample_count     | Integer          | Total number of version samples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| total_sub_sample_count | Integer          | Total number of subsamples generated from the parent samples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Parameter                   | Type    | Description                                                                                                                                                                                                                                                                                                                       |
|-----------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| train_evaluate_sample_ratio | String  | Split training and verification ratio during version release. The default value is <b>1.00</b> , indicating that all released versions are training sets.                                                                                                                                                                         |
| update_time                 | Long    | Time when a version is updated.                                                                                                                                                                                                                                                                                                   |
| version_format              | String  | Format of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>Default</b>: default format</li><li>• <b>CarbonData</b>: CarbonData (supported only by table datasets)</li><li>• <b>CSV</b>: CSV</li></ul>                                                                                                       |
| version_id                  | String  | Dataset version ID.                                                                                                                                                                                                                                                                                                               |
| version_name                | String  | Dataset version name.                                                                                                                                                                                                                                                                                                             |
| with_column_header          | Boolean | Whether the first row in the released CSV file is a column name. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The first row in the released CSV file is a column name.</li><li>• <b>false</b>: The first row in the released CSV file is not a column name.</li></ul> |

**Table 28-43** LabelStats

| Parameter    | Type                                   | Description                                                                                                                      |
|--------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| attributes   | Array of <b>LabelAttribute</b> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included. |
| count        | Integer                                | Number of labels.                                                                                                                |
| name         | String                                 | Label name.                                                                                                                      |
| property     | <b>LabelProperty</b> object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                      |
| sample_count | Integer                                | Number of samples containing the label.                                                                                          |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Integer | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-44** LabelAttribute

| Parameter     | Type                                                 | Description                                                                                                                                              |
|---------------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| default_value | String                                               | Default value of a label attribute.                                                                                                                      |
| id            | String                                               | Label attribute ID. You can query the tag by invoking the tag list.                                                                                      |
| name          | String                                               | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&''.                                            |
| type          | String                                               | Label attribute type. Options: <ul style="list-style-type: none"><li>• <b>text</b>: text</li><li>• <b>select</b>: single-choice drop-down list</li></ul> |
| values        | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values.                                                                                                                          |

**Table 28-45** LabelAttributeValue

| Parameter | Type   | Description               |
|-----------|--------|---------------------------|
| id        | String | Label attribute value ID. |
| value     | String | Label attribute value.    |

**Table 28-46** LabelProperty

| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFF0</b> .                                                                                                                                                                                                                                                                                    |
| @modelarts:default_shape | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:from_type     | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |
| @modelarts:rename_to     | String | Default attribute: The new name of the label.                                                                                                                                                                                                                                                                                                                                                                                    |
| @modelarts:shortcut      | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                                                                                                                                                                                                                                         |
| @modelarts:to_type       | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |

**Table 28-47** WorkforceDescriptor

| Parameter         | Type    | Description                                                              |
|-------------------|---------|--------------------------------------------------------------------------|
| current_task_id   | String  | ID of a team labeling task.                                              |
| current_task_name | String  | Name of a team labeling task.                                            |
| reject_num        | Integer | Number of rejected samples.                                              |
| repetition        | Integer | Number of persons who label each sample. The minimum value is <b>1</b> . |



| Parameter                         | Type                                    | Description                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_synchronize_auto_labeling_data | Boolean                                 | Whether to synchronously update auto labeling data. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Update auto labeling data synchronously.</li><li>• <b>false</b>: Do not update auto labeling data synchronously.</li></ul>                                                                                                 |
| is_synchronize_data               | Boolean                                 | Whether to synchronize updated data, such as uploading files, synchronizing data sources, and assigning imported unlabeled files to team members. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Synchronize updated data to team members.</li><li>• <b>false</b>: Do not synchronize updated data to team members.</li></ul> |
| workers                           | Array of <a href="#">Worker</a> objects | List of labeling team members.                                                                                                                                                                                                                                                                                                               |
| workforce_id                      | String                                  | ID of a labeling team.                                                                                                                                                                                                                                                                                                                       |
| workforce_name                    | String                                  | Name of a labeling team.                                                                                                                                                                                                                                                                                                                     |

**Table 28-48** Worker

| Parameter   | Type    | Description                                                                                                                                                                                         |
|-------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time | Long    | Creation time.                                                                                                                                                                                      |
| description | String  | Labeling team member description. The value contains 0 to 256 characters and does not support the following special characters: ^! <>=&"'                                                           |
| email       | String  | Email address of a labeling team member.                                                                                                                                                            |
| role        | Integer | Role. Options: <ul style="list-style-type: none"><li>• <b>0</b>: labeling personnel</li><li>• <b>1</b>: reviewer</li><li>• <b>2</b>: team administrator</li><li>• <b>3</b>: dataset owner</li></ul> |

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                                                                                    |
|--------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status       | Integer | Current login status of a labeling team member. Options: <ul style="list-style-type: none"><li>● <b>0</b>: The invitation email has not been sent.</li><li>● <b>1</b>: The invitation email has been sent but the user has not logged in.</li><li>● <b>2</b>: The user has logged in.</li><li>● <b>3</b>: The labeling team member has been deleted.</li></ul> |
| update_time  | Long    | Update time.                                                                                                                                                                                                                                                                                                                                                   |
| worker_id    | String  | ID of a labeling team member.                                                                                                                                                                                                                                                                                                                                  |
| workforce_id | String  | ID of a labeling team.                                                                                                                                                                                                                                                                                                                                         |

## Example Requests

### Querying Details About a Dataset

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}
```

## Example Responses

### Status code: 200

OK

```
{
 "dataset_id": "gfghHSokody6AJigS5A",
 "dataset_name": "dataset-f9e8",
 "dataset_type": 0,
 "data_format": "Default",
 "next_version_num": 4,
 "status": 1,
 "data_sources": [{
 "data_type": 0,
 "data_path": "/test-obs/classify/input/animals/"
 }],
 "create_time": 1605690595404,
 "update_time": 1605690595404,
 "description": "",
 "current_version_id": "54IXbeJhfttGpL46lbv",
 "current_version_name": "V003",
 "total_sample_count": 10,
 "annotated_sample_count": 10,
 "unconfirmed_sample_count": 0,
 "work_path": "/test-obs/classify/output/",
 "inner_work_path": "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/",
 "inner_annotation_path": "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/annotation/",
 "inner_data_path": "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/data/",
 "inner_log_path": "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/logs/",
 "inner_temp_path": "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/temp/",
 "inner_task_path": "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/task/",
 "work_path_type": 0,
 "workspace_id": "0",
 "enterprise_project_id": "0",
 "workforce_task_count": 0,
```

```
"feature_supports" : ["0"],
"managed" : false,
"import_data" : false,
"label_task_count" : 1,
"dataset_format" : 0,
"dataset_version_count" : 3,
"content_labeling" : true,
"labels" : [{
 "name" : "Rabbits",
 "type" : 0,
 "property" : {
 "@modelarts:color" : "#3399ff"
 }
}, {
 "name" : "Bees",
 "type" : 0,
 "property" : {
 "@modelarts:color" : "#3399ff"
 }
}]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.4 Modifying a Dataset

### Function

Modify basic information about a dataset, such as name, description, version, and labels.

### Debugging

You can debug this API in [API Explorer](#) which supports automatic authentication. API Explorer can automatically generate SDK code examples and provide the SDK code example debugging.

### URI

PUT /v2/{project\_id}/datasets/{dataset\_id}

**Table 28-49** URI parameters

| Parameter  | Mandatory | Type   | Description                                                                    |
|------------|-----------|--------|--------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID                                                                     |
| project_id | Yes       | String | Project ID. For details, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Parameters

**Table 28-50** Request body parameters

| Parameter          | Mandatory | Type                                   | Description                                                                                                                        |
|--------------------|-----------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| add_labels         | No        | Array of <a href="#">Label</a> objects | List of added labels                                                                                                               |
| current_version_id | No        | String                                 | Current version ID of a dataset                                                                                                    |
| dataset_name       | No        | String                                 | Dataset name, which can contain 1 to 100 characters. Only letters, digits, numbers, underscores (_) and hyphens (-) are supported. |
| delete_labels      | No        | Array of <a href="#">Label</a> objects | List of labels to be deleted                                                                                                       |
| description        | No        | String                                 | Dataset description. The value contains 0 to 256 characters. Special characters (^!<>=&"') are not allowed.                        |
| update_labels      | No        | Array of <a href="#">Label</a> objects | List of labels to be updated                                                                                                       |

**Table 28-51** Label

| Parameter  | Mandatory | Type                                            | Description                                                                                                                           |
|------------|-----------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| attributes | No        | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is <b>music</b> , attributes can be <b>genre</b> or <b>artist</b> . |
| name       | No        | String                                          | Label name                                                                                                                            |

| Parameter | Mandatory | Type                                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| property  | No        | <a href="#">LabelProperty</a> object | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| type      | No        | Integer                              | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-52** LabelAttribute

| Parameter     | Mandatory | Type                                                 | Description                                                                                                                                                                 |
|---------------|-----------|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| default_value | No        | String                                               | Default value of a label attribute                                                                                                                                          |
| id            | No        | String                                               | Label attribute ID, which can be obtained in the label list.                                                                                                                |
| name          | No        | String                                               | Label attribute name, which can contain a maximum of 64 characters. Special characters (!<>=&"') cannot be included.                                                        |
| type          | No        | String                                               | Label attribute type. Options: <ul style="list-style-type: none"><li>• <b>text</b>: Select a text label.</li><li>• <b>select</b>: Select from the drop-down list.</li></ul> |
| values        | No        | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values                                                                                                                                              |

**Table 28-53** LabelAttributeValue

| Parameter | Mandatory | Type   | Description              |
|-----------|-----------|--------|--------------------------|
| id        | No        | String | Label attribute value ID |
| value     | No        | String | Label attribute value    |

**Table 28-54** LabelProperty

| Parameter                | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | No        | String | Label color, which is a hexadecimal code of the color. The default value is left blank. For example, <b>#FFFFFF0</b> .                                                                                                                                                                                                                                                                                        |
| @modelarts:default_shape | No        | String | Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dashed line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:from_type     | No        | String | Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |
| @modelarts:rename_to     | No        | String | The new name of the label                                                                                                                                                                                                                                                                                                                                                                                     |
| @modelarts:shortcut      | No        | String | Label shortcut key, for example, <b>D</b> . By default, this parameter is left blank.                                                                                                                                                                                                                                                                                                                         |

| Parameter              | Mandatory | Type   | Description                                                                                                                                                                                 |
|------------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:tail_o_type | No        | String | Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |

## Response Parameters

**Status code: 200**

**Table 28-55** Response body parameters

| Parameter  | Type   | Description |
|------------|--------|-------------|
| dataset_id | String | Dataset ID  |

## Request Example

Run the following command to update a dataset:

```
{
 "description" : "just a test",
 "add_labels" : [{
 "name" : "Ants",
 "type" : 0,
 "property" : {
 "@modelarts:color" : "#3399ff"
 }
 }]
}
```

## Response Example

**Status code: 200**

OK

```
{
 "dataset_id" : "gfgHHSokody6AJigS5A"
}
```

## Status Code

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |

| Status Code | Description |
|-------------|-------------|
| 403         | Forbidden   |
| 404         | Not Found   |

## Error Code

For details, see [Error Codes](#).

## 28.1.5 Deleting a Dataset

### Function

This API is used to delete a dataset without deleting the source data of the dataset.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

DELETE /v2/{project\_id}/datasets/{dataset\_id}

**Table 28-56** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

### Request Parameters

None

### Response Parameters

None

### Example Requests

Deleting a Dataset



```
DELETE https://{endpoint}/v2/{project_id}/datasets/{dataset_id}
```

## Example Responses

**Status code: 204**

No Content

```
{ }
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 204         | No Content   |
| 401         | Unauthorized |
| 403         | Forbidden    |

## Error Codes

See [Error Codes](#).

## 28.1.6 Obtaining Dataset Statistics

### Function

Obtain dataset statistics.

### Debugging

You can debug this API in [API Explorer](#) which supports automatic authentication. API Explorer can automatically generate SDK code examples and provide the SDK code example debugging.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/data-annotations/stats

**Table 28-57** URI parameters

| Parameter  | Mandatory | Type   | Description                                                                    |
|------------|-----------|--------|--------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID                                                                     |
| project_id | Yes       | String | Project ID. For details, see <a href="#">Obtaining a Project ID and Name</a> . |

Table 28-58 Query parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| email        | No        | String | Email address of a labeling team member                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| locale       | No        | String | Language . Options: <ul style="list-style-type: none"><li>• <b>zh-cn</b>: Chinese</li><li>• <b>en-us</b>: English (default value)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| sample_state | No        | String | Statistics on the specified sample state. Options: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: unlabeled</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: accepted</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: reviewed</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: sampling pending check</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: sampling checked</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: sampling accepted</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: sampling rejected</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |

Request Parameters

None

Response Parameters

Status code: 200

**Table 28-59** Response body parameters

| Parameter             | Type                               | Description                                                                                                                                                                                                                                                                                                                               |
|-----------------------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_path             | String                             | Path for storing data of a dataset                                                                                                                                                                                                                                                                                                        |
| data_splitting_enable | Boolean                            | Whether the dataset can be split into training set and validation set based on the sample labeling statistics. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The dataset can be split into training and validation sets.</li><li>• <b>false</b>: The dataset cannot be split into training and validation sets.</li></ul> |
| grouped_label_stats   | Map<String,Array<LabelStats>>      | Label statistics grouped by labeling type                                                                                                                                                                                                                                                                                                 |
| hard_detail_stats     | Map<String,PairOfIntAndHardDetail> | Statistics on hard example reasons. The type is <i>Map&lt;Integer, Pair&lt;Integer, HardDetail&gt;&gt;</i> . The key of <b>Map</b> indicates the ID of the hard example reason, the key of <b>Pair</b> indicates how many times has the hard example reason occurred, and the value of <b>Pair</b> indicates the hard example reason.     |
| key_sample_stats      | Map<String,Integer>                | Statistics on hard examples                                                                                                                                                                                                                                                                                                               |
| label_stats           | Array of LabelStats objects        | List of label statistics                                                                                                                                                                                                                                                                                                                  |
| metadata_stats        | Map<String,Object>                 | Statistics on sample metadata in JSON format.                                                                                                                                                                                                                                                                                             |
| sample_stats          | Map<String,Integer>                | Statistics on sample status                                                                                                                                                                                                                                                                                                               |

**Table 28-60** LabelStats

| Parameter  | Type                            | Description                                                                                                                      |
|------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| attributes | Array of LabelAttribute objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included. |
| count      | Integer                         | Number of labels                                                                                                                 |
| name       | String                          | Label name                                                                                                                       |
| property   | LabelProperty object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                      |

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_count | Integer | Number of samples containing the label                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| type         | Integer | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-61** PairOfIntAndHardDetail

| Parameter | Type                              | Description                                       |
|-----------|-----------------------------------|---------------------------------------------------|
| key       | Integer                           | Number of times that a hard example reason occurs |
| value     | <a href="#">HardDetail</a> object | Reason for a hard example                         |

**Table 28-62** HardDetail

| Parameter  | Type    | Description         |
|------------|---------|---------------------|
| alo_name   | String  | Alias               |
| id         | Integer | Reason ID           |
| reason     | String  | Reason description  |
| suggestion | String  | Handling suggestion |

**Table 28-63** LabelAttribute

| Parameter     | Type   | Description                        |
|---------------|--------|------------------------------------|
| default_value | String | Default value of a label attribute |

| Parameter | Type                                                 | Description                                                                                                                                                                 |
|-----------|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String                                               | Label attribute ID, which can be obtained in the label list.                                                                                                                |
| name      | String                                               | Label attribute name, which can contain a maximum of 64 characters. Special characters (!<>=&"') cannot be included.                                                        |
| type      | String                                               | Label attribute type. Options: <ul style="list-style-type: none"><li>• <b>text</b>: Select a text label.</li><li>• <b>select</b>: Select from the drop-down list.</li></ul> |
| values    | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values                                                                                                                                              |

**Table 28-64** LabelAttributeValue

| Parameter | Type   | Description              |
|-----------|--------|--------------------------|
| id        | String | Label attribute value ID |
| value     | String | Label attribute value    |

**Table 28-65** LabelProperty

| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | String | Label color, which is a hexadecimal code of a color, for example, <b>#FFFFFF0</b> . The default value is left blank.                                                                                                                                                                                                                                                                                          |
| @modelarts:default_shape | String | Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dashed line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |

| Parameter            | Type   | Description                                                                                                                                                                                 |
|----------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:from_type | String | Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |
| @modelarts:rename_to | String | The new name of the label                                                                                                                                                                   |
| @modelarts:shortcut  | String | Label shortcut key, for example, <b>D</b> . By default, this parameter is left blank.                                                                                                       |
| @modelarts:to_type   | String | Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |

## Request Example

Run the following command to obtain dataset statistics:

```
GET https://{endpoint}/v2/{project_id}/datasets/WxCREuCkBSAlQr9xrde/data-annotations/stats
```

## Response Example

**Status code: 200**

OK

```
{
 "label_stats" : [{
 "name" : "Bees",
 "type" : 1,
 "property" : {
 "@modelarts:color" : "#3399ff"
 },
 "count" : 8,
 "sample_count" : 5
 }],
 "sample_stats" : {
 "un_annotation" : 309,
 "all" : 317,
 "total" : 317,
 "deleted" : 0,
 "manual_annotation" : 8,
 "auto_annotation" : 0,
 "lefted" : 317
 },
 "key_sample_stats" : {
 "total" : 317,
 "non_key_sample" : 315,
 "key_sample" : 2
 },
 "metadata_stats" : { },
 "data_splitting_enable" : false
}
```

## Status Code

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Code

For details, see [Error Codes](#).

## 28.1.7 Querying the Monitoring Data of a Dataset

### Function

This API is used to query the monitoring data of a dataset within a specified time range.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/metrics

**Table 28-66** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-67** Query Parameters

| Parameter | Mandatory | Type | Description                             |
|-----------|-----------|------|-----------------------------------------|
| end_time  | Yes       | Long | End time of the monitoring information. |

| Parameter         | Mandatory | Type   | Description                               |
|-------------------|-----------|--------|-------------------------------------------|
| start_time        | Yes       | Long   | Start time of the monitoring information. |
| workforce_task_id | No        | String | ID of a team labeling task.               |

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 28-68** Response body parameters

| Parameter | Type                              | Description                     |
|-----------|-----------------------------------|---------------------------------|
| metrics   | Map<String, Map<String, Integer>> | Dataset monitoring information. |

## Example Requests

Querying the Monitoring Data of a Dataset

GET https://{endpoint}/v2/{project\_id}/datasets/{dataset\_id}/metrics

## Example Responses

Status code: 200

OK

```
{
 "metrics": {
 "un_annotation": {
 "1606233612612": 16,
 "1606320012681": 16
 },
 "failed_user": { },
 "total": {
 "1606233612612": 16,
 "1606320012681": 16
 },
 "queuing": { },
 "success": { },
 "unfinished": { },
 "manual_annotation": {
 "1606233612612": 0,
 "1606320012681": 0
 },
 "failed": { },
 "failed_system": { }
 }
}
```



```
}
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.8 Querying the Dataset Version List

### Function

This API is used to query the version list of a specific dataset.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/versions

**Table 28-69** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-70** Query Parameters

| Parameter            | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status               | No        | Integer | Status of a dataset version.<br>Options: <ul style="list-style-type: none"><li>• <b>0</b>: creating</li><li>• <b>1</b>: running</li><li>• <b>2</b>: deleting</li><li>• <b>3</b>: deleted</li><li>• <b>4</b>: error</li></ul>                                                                                                                                                     |
| train_evaluate_ratio | No        | String  | Version split ratio for version filtering. The numbers before and after the comma indicate the minimum and maximum split ratios, and the versions whose split ratios are within the range are filtered out, for example, <b>0.0,1.0</b> . Note: If this parameter is left blank or unavailable, the system does not filter datasets based on the version split ratio by default. |
| version_format       | No        | Integer | Format of a dataset version.<br>Options: <ul style="list-style-type: none"><li>• <b>0</b>: default format</li><li>• <b>1</b>: CarbonData (supported only by table datasets)</li><li>• <b>2</b>: CSV</li></ul>                                                                                                                                                                    |
| offset               | No        | Integer | Start page for pagination display. The default value is <b>0</b> .                                                                                                                                                                                                                                                                                                               |
| limit                | No        | Integer | Maximum number of records returned on each page. The value ranges from 1 to 1000. The default value is <b>1000</b> .                                                                                                                                                                                                                                                             |

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 28-71** Response body parameters

| Parameter    | Type                                            | Description                       |
|--------------|-------------------------------------------------|-----------------------------------|
| total_number | Integer                                         | Total number of dataset versions. |
| versions     | Array of <a href="#">DatasetVersion</a> objects | Dataset version list.             |

**Table 28-72** DatasetVersion

| Parameter                  | Type    | Description                                                                                                                                                                                                                                   |
|----------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| add_sample_count           | Integer | Number of added samples.                                                                                                                                                                                                                      |
| analysis_cache_path        | String  | Cache path for feature analysis.                                                                                                                                                                                                              |
| analysis_statuses          | Integer | Status of a feature analysis task. Options: <ul style="list-style-type: none"><li>• <b>0</b>: initialized</li><li>• <b>1</b>: running</li><li>• <b>2</b>: completed</li><li>• <b>3</b>: failed</li></ul>                                      |
| analysis_task_id           | String  | ID of a feature analysis task.                                                                                                                                                                                                                |
| annotated_sample_count     | Integer | Number of samples with labeled versions.                                                                                                                                                                                                      |
| annotated_sub_sample_count | Integer | Number of labeled subsamples.                                                                                                                                                                                                                 |
| clear_hard_property        | Boolean | Whether to clear hard example properties during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Clear hard example properties. (Default value)</li><li>• <b>false</b>: Do not clear hard example properties.</li></ul> |
| code                       | String  | Status code of a preprocessing task such as rotation and cropping.                                                                                                                                                                            |
| create_time                | Long    | Time when a version is created.                                                                                                                                                                                                               |

| Parameter              | Type                | Description                                                                                                                                                                                                                                                                                   |
|------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| crop                   | Boolean             | Whether to crop the image. This field is valid only for the object detection dataset whose labeling box is in the rectangle shape. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Crop the image.</li><li>• <b>false</b>: Do not crop the image. (Default value)</li></ul>     |
| crop_path              | String              | Path for storing cropped files.                                                                                                                                                                                                                                                               |
| crop_rotate_cache_path | String              | Temporary directory for executing the rotation and cropping task.                                                                                                                                                                                                                             |
| data_analysis          | Map<String,Object>  | Feature analysis result in JSON format.                                                                                                                                                                                                                                                       |
| data_path              | String              | Path for storing data.                                                                                                                                                                                                                                                                        |
| data_statistics        | Map<String,Object>  | Sample statistics on a dataset, including the statistics on sample metadata in JSON format.                                                                                                                                                                                                   |
| data_validate          | Boolean             | Whether data is validated by the validation algorithm before release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The data has been validated.</li><li>• <b>false</b>: The data has not been validated.</li></ul>                                                           |
| deleted_sample_count   | Integer             | Number of deleted samples.                                                                                                                                                                                                                                                                    |
| deletion_stats         | Map<String,Integer> | Deletion reason statistics.                                                                                                                                                                                                                                                                   |
| description            | String              | Description of a version.                                                                                                                                                                                                                                                                     |
| export_images          | Boolean             | Whether to export images to the version output directory during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Export images to the version output directory.</li><li>• <b>false</b>: Do not export images to the version output directory. (Default value)</li></ul> |
| extract_serial_number  | Boolean             | Whether to parse the subsample number during release. The field is valid for the healthcare dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Parse the subsample number.</li><li>• <b>false</b>: Do not parse the subsample number. (Default value)</li></ul>           |

| Parameter                       | Type                                        | Description                                                                                                                                                                                                                                             |
|---------------------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| include_dataset_data            | Boolean                                     | Whether to include the source data of a dataset during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The source data of a dataset is included.</li><li>• <b>false</b>: The source data of a dataset is not included.</li></ul> |
| is_current                      | Boolean                                     | Whether the current dataset version is used. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The current dataset version is used.</li><li>• <b>false</b>: The current dataset version is not used.</li></ul>                              |
| label_stats                     | Array of <a href="#">LabelStats</a> objects | Label statistics list of a released version.                                                                                                                                                                                                            |
| label_type                      | String                                      | Label type of a released version. Options: <ul style="list-style-type: none"><li>• <b>multi</b>: Multi-label samples are included.</li><li>• <b>single</b>: All samples are single-labeled.</li></ul>                                                   |
| manifest_cache_input_path       | String                                      | Input path for the <b>manifest</b> file cache during version release.                                                                                                                                                                                   |
| manifest_path                   | String                                      | Path for storing the <b>manifest</b> file with the released version.                                                                                                                                                                                    |
| message                         | String                                      | Task information recorded during release (for example, error information).                                                                                                                                                                              |
| modified_sample_count           | Integer                                     | Number of modified samples.                                                                                                                                                                                                                             |
| previous_annotated_sample_count | Integer                                     | Number of labeled samples of parent versions.                                                                                                                                                                                                           |
| previous_total_sample_count     | Integer                                     | Total samples of parent versions.                                                                                                                                                                                                                       |
| previous_version_id             | String                                      | Parent version ID                                                                                                                                                                                                                                       |
| processor_task_id               | String                                      | ID of a preprocessing task such as rotation and cropping.                                                                                                                                                                                               |

| Parameter             | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| processor_task_status | Integer | Status of a preprocessing task such as rotation and cropping. The options are as follows: <ul style="list-style-type: none"><li>• 0: initialized - 1: running</li><li>• 2: completed</li><li>• 3: failed</li><li>• 4: stopped</li><li>• 5: timeout</li><li>• 6: Deletion failed.</li><li>• 7: Failed to stop.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| remove_sample_usage   | Boolean | Whether to clear the existing usage information of a dataset during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Clear the existing usage information of a dataset. (Default value)</li><li>• <b>false</b>: Do not clear the existing usage information of a dataset.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| rotate                | Boolean | Whether to rotate the image. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Rotate the image.</li><li>• <b>false</b>: Do not rotate the image. (Default value)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| rotate_path           | String  | Path for storing the rotated file.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| sample_state          | String  | Sample status. The options are as follows: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: not marked</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: The acceptance is passed.</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: approved</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: Sampling is to be accepted.</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: Sampling has been accepted.</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: The sampling is passed.</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: The sampling has been rejected.</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |

| Parameter                   | Type             | Description                                                                                                                                                                                                                                                        |
|-----------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_processor_task        | Boolean          | Whether to start a data analysis task during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Start a data analysis task during release.</li><li>• <b>false</b>: Do not start a data analysis task during release. (Default value)</li></ul> |
| status                      | Integer          | Status of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>0</b>: creating</li><li>• <b>1</b>: running</li><li>• <b>2</b>: deleting</li><li>• <b>3</b>: deleted</li><li>• <b>4</b>: error</li></ul>                                          |
| tags                        | Array of strings | Key identifier list of the dataset. The labeling type is used as the default label when the labeling task releases a version. For example, ["Image", "Object detection"].                                                                                          |
| task_type                   | Integer          | Labeling task type of the released version, which is the same as the dataset type.                                                                                                                                                                                 |
| total_sample_count          | Integer          | Total number of version samples.                                                                                                                                                                                                                                   |
| total_sub_sample_count      | Integer          | Total number of subsamples generated from the parent samples.                                                                                                                                                                                                      |
| train_evaluate_sample_ratio | String           | Split training and verification ratio during version release. The default value is <b>1.00</b> , indicating that all released versions are training sets.                                                                                                          |
| update_time                 | Long             | Time when a version is updated.                                                                                                                                                                                                                                    |
| version_format              | String           | Format of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>Default</b>: default format</li><li>• <b>CarbonData</b>: CarbonData (supported only by table datasets)</li><li>• <b>CSV</b>: CSV</li></ul>                                        |
| version_id                  | String           | Dataset version ID.                                                                                                                                                                                                                                                |
| version_name                | String           | Dataset version name.                                                                                                                                                                                                                                              |

| Parameter          | Type    | Description                                                                                                                                                                                                                                                                                                                       |
|--------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| with_column_header | Boolean | Whether the first row in the released CSV file is a column name. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The first row in the released CSV file is a column name.</li><li>• <b>false</b>: The first row in the released CSV file is not a column name.</li></ul> |

**Table 28-73** LabelStats

| Parameter    | Type                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| attributes   | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included.                                                                                                                                                                                                                                                                                                                                                                                                          |
| count        | Integer                                         | Number of labels.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| name         | String                                          | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property     | <a href="#">LabelProperty</a> object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| sample_count | Integer                                         | Number of samples containing the label.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| type         | Integer                                         | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-74** LabelAttribute

| Parameter     | Type   | Description                         |
|---------------|--------|-------------------------------------|
| default_value | String | Default value of a label attribute. |



| Parameter | Type                                                 | Description                                                                                                                                              |
|-----------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String                                               | Label attribute ID. You can query the tag by invoking the tag list.                                                                                      |
| name      | String                                               | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&".                                             |
| type      | String                                               | Label attribute type. Options: <ul style="list-style-type: none"><li>• <b>text</b>: text</li><li>• <b>select</b>: single-choice drop-down list</li></ul> |
| values    | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values.                                                                                                                          |

**Table 28-75** LabelAttributeValue

| Parameter | Type   | Description               |
|-----------|--------|---------------------------|
| id        | String | Label attribute value ID. |
| value     | String | Label attribute value.    |

**Table 28-76** LabelProperty

| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> .                                                                                                                                                                                                                                                                                   |
| @modelarts:default_shape | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |

| Parameter            | Type   | Description                                                                                                                                                                                                    |
|----------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:from_type | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |
| @modelarts:rename_to | String | Default attribute: The new name of the label.                                                                                                                                                                  |
| @modelarts:shortcut  | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                       |
| @modelarts:to_type   | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |

## Example Requests

Querying the Version List of a Specific Dataset

GET https://{endpoint}/v2/{project\_id}/datasets/{dataset\_id}/versions

## Example Responses

**Status code: 200**

OK

```
{
 "total_number": 3,
 "versions": [{
 "version_id": "54lXbeJhfttGpL46lbv",
 "version_name": "V003",
 "version_format": "Default",
 "previous_version_id": "eSOKEQaXhKzxN00WkoV",
 "status": 1,
 "create_time": 1605930512183,
 "total_sample_count": 10,
 "annotated_sample_count": 10,
 "total_sub_sample_count": 0,
 "annotated_sub_sample_count": 0,
 "manifest_path": "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/annotation/V003/V003.manifest",
 "data_path": "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/annotation/V003/data/",
 "is_current": true,
 "analysis_status": 3,
 "train_evaluate_sample_ratio": "0.8",
 "remove_sample_usage": false,
 "export_images": false,
 "description": "",
 "task_type": 0,
 "extract_serial_number": false
 }, {
 "version_id": "eSOKEQaXhKzxN00WkoV",
 "version_name": "V002",
```

```
"version_format" : "Default",
"previous_version_id" : "vLGvUqOcxxGPIB0ugeE",
"status" : 1,
"create_time" : 1605691027084,
"total_sample_count" : 10,
"annotated_sample_count" : 10,
"total_sub_sample_count" : 0,
"annotated_sub_sample_count" : 0,
"manifest_path" : "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/annotation/V002/
V002.manifest",
"data_path" : "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/annotation/V002/data/",
"is_current" : false,
"analysis_status" : 3,
"train_evaluate_sample_ratio" : "0.9999",
"remove_sample_usage" : false,
"export_images" : false,
"description" : "",
"task_type" : 0,
"extract_serial_number" : false
}, {
 "version_id" : "vLGvUqOcxxGPIB0ugeE",
 "version_name" : "V001",
 "version_format" : "Default",
 "status" : 1,
 "create_time" : 1605690687346,
 "total_sample_count" : 10,
 "annotated_sample_count" : 10,
 "total_sub_sample_count" : 0,
 "annotated_sub_sample_count" : 0,
 "manifest_path" : "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/annotation/V001/
V001.manifest",
 "data_path" : "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/annotation/V001/data/",
 "is_current" : false,
 "analysis_status" : 3,
 "train_evaluate_sample_ratio" : "0.99",
 "remove_sample_usage" : false,
 "export_images" : false,
 "description" : "",
 "task_type" : 0,
 "extract_serial_number" : false
}]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.9 Creating a Dataset Labeling Version

### Function

This API is used to create a dataset labeling version.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/versions

**Table 28-77** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

### Request Parameters

**Table 28-78** Request body parameters

| Parameter           | Mandatory | Type    | Description                                                                                                                                                                                                                    |
|---------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| clear_hard_property | No        | Boolean | Whether to clear hard example properties. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Clear hard example properties. (Default value)</li><li>• <b>false</b>: Do not clear hard example properties.</li></ul> |
| description         | No        | String  | Version description. The value is empty by default. The description contains 0 to 256 characters and does not support the following special characters: !<>=&'"                                                                |

| Parameter                   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| export_images               | No        | Boolean | Whether to export images to the version output directory during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Export images to the version output directory.</li><li>• <b>false</b>: Do not export images to the version output directory. (Default value)</li></ul>                                                                          |
| remove_sample_usage         | No        | Boolean | Whether to clear the existing usage information of a dataset during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Clear the existing usage information of a dataset. (Default value)</li><li>• <b>false</b>: Do not clear the existing usage information of a dataset.</li></ul>                                                              |
| train_evaluate_sample_ratio | No        | String  | Split training and verification ratio during version release. The default value is <b>1.00</b> , indicating that all released versions are training sets.                                                                                                                                                                                                              |
| version_format              | No        | String  | Format of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>Default</b></li><li>• <b>CarbonData</b> (supported only by table datasets)</li><li>• <b>CSV</b></li></ul>                                                                                                                                                                             |
| version_name                | No        | String  | Version name consisting of 1 to 32 characters. Only letters, digits, underscores (_), and hyphens (-) are allowed.                                                                                                                                                                                                                                                     |
| with_column_header          | No        | Boolean | Whether to write the column name in the first line of the CSV file during release. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Write the column name in the first line of the CSV file. (Default value)</li><li>• <b>false</b>: Do not write the column name in the first line of the CSV file.</li></ul> |

## Response Parameters

Status code: 201

**Table 28-79** Response body parameters

| Parameter  | Type   | Description         |
|------------|--------|---------------------|
| version_id | String | Dataset version ID. |

## Example Requests

The following is an example of how to create a dataset labeling version whose version name is **V004** and the format of the dataset version is **Default**.

```
{
 "version_name" : "V004",
 "version_format" : "Default",
 "description" : "",
 "clear_hard_property" : true
}
```

## Example Responses

Status code: 201

Created

```
{
 "version_id" : "sntOdOuB0D9C6fC4TXs"
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 201         | Created      |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.10 Querying Details About a Dataset Version

### Function

This API is used to query the details about a dataset version.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/versions/{version\_id}

**Table 28-80** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| version_id | Yes       | String | Dataset version ID.                                                                                             |

### Request Parameters

None

### Response Parameters

**Status code: 200**

**Table 28-81** Response body parameters

| Parameter           | Type    | Description                      |
|---------------------|---------|----------------------------------|
| add_sample_count    | Integer | Number of added samples.         |
| analysis_cache_path | String  | Cache path for feature analysis. |

| Parameter                  | Type               | Description                                                                                                                                                                                                                                                                               |
|----------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| analysis_status            | Integer            | Status of a feature analysis task. Options: <ul style="list-style-type: none"><li>• <b>0</b>: initialized</li><li>• <b>1</b>: running</li><li>• <b>2</b>: completed</li><li>• <b>3</b>: failed</li></ul>                                                                                  |
| analysis_task_id           | String             | ID of a feature analysis task.                                                                                                                                                                                                                                                            |
| annotated_sample_count     | Integer            | Number of samples with labeled versions.                                                                                                                                                                                                                                                  |
| annotated_sub_sample_count | Integer            | Number of labeled subsamples.                                                                                                                                                                                                                                                             |
| clear_hard_property        | Boolean            | Whether to clear hard example properties during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Clear hard example properties. (Default value)</li><li>• <b>false</b>: Do not clear hard example properties.</li></ul>                                             |
| code                       | String             | Status code of a preprocessing task such as rotation and cropping.                                                                                                                                                                                                                        |
| create_time                | Long               | Time when a version is created.                                                                                                                                                                                                                                                           |
| crop                       | Boolean            | Whether to crop the image. This field is valid only for the object detection dataset whose labeling box is in the rectangle shape. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Crop the image.</li><li>• <b>false</b>: Do not crop the image. (Default value)</li></ul> |
| crop_path                  | String             | Path for storing cropped files.                                                                                                                                                                                                                                                           |
| crop_rotate_cache_path     | String             | Temporary directory for executing the rotation and cropping task.                                                                                                                                                                                                                         |
| data_analysis              | Map<String,Object> | Feature analysis result in JSON format.                                                                                                                                                                                                                                                   |
| data_path                  | String             | Path for storing data.                                                                                                                                                                                                                                                                    |
| data_statistics            | Map<String,Object> | Sample statistics on a dataset, including the statistics on sample metadata in JSON format.                                                                                                                                                                                               |
| data_validate              | Boolean            | Whether data is validated by the validation algorithm before release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The data has been validated.</li><li>• <b>false</b>: The data has not been validated.</li></ul>                                                       |



| Parameter                 | Type                                        | Description                                                                                                                                                                                                                                                                                   |
|---------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| deleted_sample_count      | Integer                                     | Number of deleted samples.                                                                                                                                                                                                                                                                    |
| deletion_stats            | Map<String,Integer>                         | Deletion reason statistics.                                                                                                                                                                                                                                                                   |
| description               | String                                      | Description of a version.                                                                                                                                                                                                                                                                     |
| export_images             | Boolean                                     | Whether to export images to the version output directory during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Export images to the version output directory.</li><li>• <b>false</b>: Do not export images to the version output directory. (Default value)</li></ul> |
| extract_serial_number     | Boolean                                     | Whether to parse the subsample number during release. The field is valid for the healthcare dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Parse the subsample number.</li><li>• <b>false</b>: Do not parse the subsample number. (Default value)</li></ul>           |
| include_dataset_data      | Boolean                                     | Whether to include the source data of a dataset during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The source data of a dataset is included.</li><li>• <b>false</b>: The source data of a dataset is not included.</li></ul>                                       |
| is_current                | Boolean                                     | Whether the current dataset version is used. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The current dataset version is used.</li><li>• <b>false</b>: The current dataset version is not used.</li></ul>                                                                    |
| label_stats               | Array of <a href="#">LabelStats</a> objects | Label statistics list of a released version.                                                                                                                                                                                                                                                  |
| label_type                | String                                      | Label type of a released version. Options: <ul style="list-style-type: none"><li>• <b>multi</b>: Multi-label samples are included.</li><li>• <b>single</b>: All samples are single-labeled.</li></ul>                                                                                         |
| manifest_cache_input_path | String                                      | Input path for the <b>manifest</b> file cache during version release.                                                                                                                                                                                                                         |
| manifest_path             | String                                      | Path for storing the <b>manifest</b> file with the released version.                                                                                                                                                                                                                          |
| message                   | String                                      | Task information recorded during release (for example, error information).                                                                                                                                                                                                                    |

| Parameter                       | Type    | Description                                                                                                                                                                                                                                                                                                             |
|---------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| modified_sample_count           | Integer | Number of modified samples.                                                                                                                                                                                                                                                                                             |
| previous_annotated_sample_count | Integer | Number of labeled samples of parent versions.                                                                                                                                                                                                                                                                           |
| previous_total_sample_count     | Integer | Total samples of parent versions.                                                                                                                                                                                                                                                                                       |
| previous_version_id             | String  | Parent version ID                                                                                                                                                                                                                                                                                                       |
| processor_task_id               | String  | ID of a preprocessing task such as rotation and cropping.                                                                                                                                                                                                                                                               |
| processor_task_status           | Integer | Status of a preprocessing task such as rotation and cropping. The options are as follows: <ul style="list-style-type: none"><li>• 0: initialized - 1: running</li><li>• 2: completed</li><li>• 3: failed</li><li>• 4: stopped</li><li>• 5: timeout</li><li>• 6: Deletion failed.</li><li>• 7: Failed to stop.</li></ul> |
| remove_sample_usage             | Boolean | Whether to clear the existing usage information of a dataset during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Clear the existing usage information of a dataset. (Default value)</li><li>• <b>false</b>: Do not clear the existing usage information of a dataset.</li></ul>               |
| rotate                          | Boolean | Whether to rotate the image. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Rotate the image.</li><li>• <b>false</b>: Do not rotate the image. (Default value)</li></ul>                                                                                                                                 |
| rotate_path                     | String  | Path for storing the rotated file.                                                                                                                                                                                                                                                                                      |

| Parameter              | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_state           | String           | Sample status. The options are as follows: <ul style="list-style-type: none"><li>• <code>__ALL__</code>: labeled</li><li>• <code>__NONE__</code>: not marked</li><li>• <code>__UNCHECK__</code>: to be accepted</li><li>• <code>__ACCEPTED__</code>: The acceptance is passed.</li><li>• <code>__REJECTED__</code>: rejected</li><li>• <code>__UNREVIEWED__</code>: to be reviewed</li><li>• <code>__REVIEWED__</code>: approved</li><li>• <code>__WORKFORCE_SAMPLED__</code>: sampled</li><li>• <code>__WORKFORCE_SAMPLED_UNCHECK__</code>: Sampling is to be accepted.</li><li>• <code>__WORKFORCE_SAMPLED_CHECKED__</code>: Sampling has been accepted.</li><li>• <code>__WORKFORCE_SAMPLED_ACCEPTED__</code>: The sampling is passed.</li><li>• <code>__WORKFORCE_SAMPLED_REJECTED__</code>: The sampling has been rejected.</li><li>• <code>__AUTO_ANNOTATION__</code>: to be confirmed</li></ul> |
| start_processor_task   | Boolean          | Whether to start a data analysis task during release. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Start a data analysis task during release.</li><li>• <b>false</b>: Do not start a data analysis task during release. (Default value)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| status                 | Integer          | Status of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>0</b>: creating</li><li>• <b>1</b>: running</li><li>• <b>2</b>: deleting</li><li>• <b>3</b>: deleted</li><li>• <b>4</b>: error</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| tags                   | Array of strings | Key identifier list of the dataset. The labeling type is used as the default label when the labeling task releases a version. For example, ["Image", "Object detection"].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| task_type              | Integer          | Labeling task type of the released version, which is the same as the dataset type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| total_sample_count     | Integer          | Total number of version samples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| total_sub_sample_count | Integer          | Total number of subsamples generated from the parent samples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Parameter                   | Type    | Description                                                                                                                                                                                                                                                                                                                       |
|-----------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| train_evaluate_sample_ratio | String  | Split training and verification ratio during version release. The default value is <b>1.00</b> , indicating that all released versions are training sets.                                                                                                                                                                         |
| update_time                 | Long    | Time when a version is updated.                                                                                                                                                                                                                                                                                                   |
| version_format              | String  | Format of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>Default</b>: default format</li><li>• <b>CarbonData</b>: CarbonData (supported only by table datasets)</li><li>• <b>CSV</b>: CSV</li></ul>                                                                                                       |
| version_id                  | String  | Dataset version ID.                                                                                                                                                                                                                                                                                                               |
| version_name                | String  | Dataset version name.                                                                                                                                                                                                                                                                                                             |
| with_column_header          | Boolean | Whether the first row in the released CSV file is a column name. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The first row in the released CSV file is a column name.</li><li>• <b>false</b>: The first row in the released CSV file is not a column name.</li></ul> |

**Table 28-82** LabelStats

| Parameter    | Type                                   | Description                                                                                                                      |
|--------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| attributes   | Array of <b>LabelAttribute</b> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included. |
| count        | Integer                                | Number of labels.                                                                                                                |
| name         | String                                 | Label name.                                                                                                                      |
| property     | <b>LabelProperty</b> object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                      |
| sample_count | Integer                                | Number of samples containing the label.                                                                                          |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Integer | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-83** LabelAttribute

| Parameter     | Type                                                 | Description                                                                                                                                              |
|---------------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| default_value | String                                               | Default value of a label attribute.                                                                                                                      |
| id            | String                                               | Label attribute ID. You can query the tag by invoking the tag list.                                                                                      |
| name          | String                                               | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&'".                                            |
| type          | String                                               | Label attribute type. Options: <ul style="list-style-type: none"><li>• <b>text</b>: text</li><li>• <b>select</b>: single-choice drop-down list</li></ul> |
| values        | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values.                                                                                                                          |

**Table 28-84** LabelAttributeValue

| Parameter | Type   | Description               |
|-----------|--------|---------------------------|
| id        | String | Label attribute value ID. |
| value     | String | Label attribute value.    |

**Table 28-85** LabelProperty

| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> .                                                                                                                                                                                                                                                                                   |
| @modelarts:default_shape | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:from_type     | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |
| @modelarts:rename_to     | String | Default attribute: The new name of the label.                                                                                                                                                                                                                                                                                                                                                                                    |
| @modelarts:shortcut      | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                                                                                                                                                                                                                                         |
| @modelarts:to_type       | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |

## Example Requests

Querying Details About a Dataset Version

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/versions/{version_id}
```

## Example Responses

**Status code: 200**

OK

```
{
 "version_id" : "eSOKEQaXhKzxN00WkoV",
 "version_name" : "V002",
```

```
{
 "version_format" : "Default",
 "previous_version_id" : "vIGvUqOcxxGPiB0ugeE",
 "status" : 1,
 "create_time" : 1605691027084,
 "total_sample_count" : 10,
 "annotated_sample_count" : 10,
 "total_sub_sample_count" : 0,
 "annotated_sub_sample_count" : 0,
 "manifest_path" : "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/annotation/V002/V002.manifest",
 "data_path" : "/test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/annotation/V002/data/",
 "is_current" : true,
 "analysis_status" : 3,
 "train_evaluate_sample_ratio" : "0.9999",
 "remove_sample_usage" : false,
 "export_images" : false,
 "description" : "",
 "label_stats" : [{
 "name" : "Rabbits",
 "type" : 0,
 "property" : {
 "@modelarts:color" : "#3399ff"
 },
 "count" : 5,
 "sample_count" : 5
 }, {
 "name" : "Bees",
 "type" : 0,
 "property" : {
 "@modelarts:color" : "#3399ff"
 },
 "count" : 5,
 "sample_count" : 5
 }],
 "label_type" : "single",
 "task_type" : 0,
 "extract_serial_number" : false
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.11 Deleting a Dataset Labeling Version

### Function

This API is used to delete a dataset labeling version.

## Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

## URI

DELETE /v2/{project\_id}/datasets/{dataset\_id}/versions/{version\_id}

**Table 28-86** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| version_id | Yes       | String | Dataset version ID.                                                                                             |

## Request Parameters

None

## Response Parameters

None

## Example Requests

Deleting a Dataset Labeling Version

```
DELETE https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/versions/{version_id}
```

## Example Responses

**Status code: 204**

No Content

```
{}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 204         | No Content   |
| 401         | Unauthorized |
| 403         | Forbidden    |



## Error Codes

See [Error Codes](#).

## 28.1.12 Obtaining a Sample List

### Function

Obtain a sample list by page.

### Debugging

You can debug this API in [API Explorer](#) which supports automatic authentication. API Explorer can automatically generate SDK code examples and provide the SDK code example debugging.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/data-annotations/samples

**Table 28-87** URI parameters

| Parameter  | Mandatory | Type   | Description                                                                    |
|------------|-----------|--------|--------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID                                                                     |
| project_id | Yes       | String | Project ID. For details, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-88** Query parameters

| Parameter  | Mandatory | Type   | Description                                                          |
|------------|-----------|--------|----------------------------------------------------------------------|
| email      | No        | String | Email address of a labeling team member                              |
| high_score | No        | String | Upper limit of the confidence score. The default value is <b>1</b> . |
| label_name | No        | String | Label name                                                           |

| Parameter  | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| label_type | No        | Integer | <b>Labeling Type:</b> Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>400</b>: table dataset</li><li>• <b>600</b>: video labeling</li><li>• <b>900</b>: free format</li></ul> |
| limit      | No        | Integer | Maximum number of records returned on each page. The value ranges from <b>1</b> to <b>100</b> . The default value is <b>10</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| locale     | No        | String  | Language Options: <ul style="list-style-type: none"><li>• <b>zh-cn</b>: Chinese</li><li>• <b>en-us</b>: English (default value)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                          |
| low_score  | No        | String  | Lower limit of the confidence score. The default value is <b>0</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| offset     | No        | Integer | Start page for pagination display. The default value is <b>0</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| order      | No        | String  | Sorting sequence of the query. Options: <ul style="list-style-type: none"><li>• <b>asc</b>: ascending order</li><li>• <b>desc</b>: descending order (default value)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                      |
| preview    | No        | Boolean | Whether preview is supported. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Preview is supported.</li><li>• <b>false</b>: Preview is not supported.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                      |

| Parameter         | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| process_parameter | No        | String  | Image resize configuration, which is the same as OBS settings. For details, see <a href="#">Resizing Images</a> . For example, <b>image/resize,m_lfit,h_200</b> indicates that the target image is resized proportionally and the height is set to 200 pixels.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| sample_state      | No        | String  | Sample status. Options: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: unlabeled</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: accepted</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: reviewed</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: sampling pending check</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: sampling checked</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: sampling accepted</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: sampling rejected</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| sample_type       | No        | Integer | Sample file type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image</li><li>• <b>1</b>: text</li><li>• <b>2</b>: audio</li><li>• <b>4</b>: table</li><li>• <b>6</b>: video</li><li>• <b>9</b>: custom format (default value)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter         | Mandatory | Type   | Description                                                                                                        |
|-------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------|
| search_conditions | No        | String | Multi-dimensional search condition after URL encoding. The relationship between multiple search conditions is AND. |
| version_id        | No        | String | Dataset version ID                                                                                                 |

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 28-89** Response body parameters

| Parameter    | Type                                                | Description       |
|--------------|-----------------------------------------------------|-------------------|
| sample_count | Integer                                             | Number of samples |
| samples      | Array of <a href="#">DescribeSampleResp</a> objects | List of samples   |

**Table 28-90** DescribeSampleResp

| Parameter        | Type                                     | Description                                                                                                                                                                                                                |
|------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| check_accept     | Boolean                                  | Whether the acceptance is passed, which is used for team labeling. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The acceptance is passed.</li><li>• <b>false</b>: The acceptance is not passed.</li></ul> |
| check_comment    | String                                   | Acceptance comment, which is used for team labeling.                                                                                                                                                                       |
| check_score      | String                                   | Acceptance score, which is used for team labeling.                                                                                                                                                                         |
| deletion_reasons | Array of strings                         | Reason for deleting a sample, which is used for healthcare.                                                                                                                                                                |
| hard_details     | Map<String, <a href="#">HardDetail</a> > | Difficult problem details, including description, causes, and suggestions of difficult problems.                                                                                                                           |

| Parameter      | Type                                         | Description                                                                                                                                                                                                    |
|----------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| labelers       | Array of <a href="#">Worker</a> objects      | Labeling personnel list of sample allocation. The list records the team members receiving the samples, which is used for team labeling.                                                                        |
| labels         | Array of <a href="#">SampleLabel</a> objects | List of sample labels                                                                                                                                                                                          |
| metadata       | <a href="#">SampleMetadata</a> object        | Attribute key-value pair of the sample metadata                                                                                                                                                                |
| review_accept  | Boolean                                      | Whether to accept the review, which is used for team labeling. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The review is accepted.</li><li>• <b>false</b>: The review is rejected.</li></ul> |
| review_comment | String                                       | Review comment, which is used for team labeling.                                                                                                                                                               |
| review_score   | String                                       | Review score, which is used for team labeling.                                                                                                                                                                 |
| sample_data    | Array of strings                             | List of sample data                                                                                                                                                                                            |
| sample_dir     | String                                       | Path for storing a sample                                                                                                                                                                                      |
| sample_id      | String                                       | Sample ID                                                                                                                                                                                                      |
| sample_name    | String                                       | Sample name                                                                                                                                                                                                    |
| sample_size    | Long                                         | Sample size or text length, in bytes                                                                                                                                                                           |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_status  | String  | Sample status. Options: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: unlabeled</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: accepted</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: reviewed</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: sampling pending check</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: sampling checked</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: sampling accepted</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: sampling rejected</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| sample_time    | Long    | Sample time, when OBS is last modified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| sample_type    | Integer | Sample type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image</li><li>• <b>1</b>: text</li><li>• <b>2</b>: audio</li><li>• <b>4</b>: table</li><li>• <b>6</b>: video</li><li>• <b>9</b>: free format</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| score          | String  | Comprehensive score, which is used for team labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| source         | String  | Source address of sample data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| sub_sample_url | String  | Subsample URL, which is used for healthcare.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| worker_id      | String  | ID of a labeling team member, which is used for team labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**Table 28-91** HardDetail

| Parameter | Type   | Description |
|-----------|--------|-------------|
| alo_name  | String | Alias       |

| Parameter  | Type    | Description         |
|------------|---------|---------------------|
| id         | Integer | Reason ID           |
| reason     | String  | Reason description  |
| suggestion | String  | Handling suggestion |

**Table 28-92** Worker

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                                                   |
|--------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time  | Long    | Worker creation time                                                                                                                                                                                                                                                                                                          |
| description  | String  | Labeling team member description. The value contains 0 to 256 characters. Special characters (^!<>=&"') are not allowed.                                                                                                                                                                                                      |
| email        | String  | Email address of a labeling team member                                                                                                                                                                                                                                                                                       |
| role         | Integer | Role. Options: <ul style="list-style-type: none"><li>● <b>0</b>: marker</li><li>● <b>1</b>: reviewer</li><li>● <b>2</b>: team manager</li><li>● <b>3</b>: dataset owner</li></ul>                                                                                                                                             |
| status       | Integer | Current login status of a labeled member. Options: <ul style="list-style-type: none"><li>● <b>0</b>: No invitation email is sent.</li><li>● <b>1</b>: The invitation email is sent but the member has not logged in.</li><li>● <b>2</b>: The member has logged in.</li><li>● <b>3</b>: The member has been deleted.</li></ul> |
| update_time  | Long    | Worker update time                                                                                                                                                                                                                                                                                                            |
| worker_id    | String  | ID of a labeling team member                                                                                                                                                                                                                                                                                                  |
| workforce_id | String  | ID of a labeling team                                                                                                                                                                                                                                                                                                         |

**Table 28-93** SampleLabel

| Parameter    | Type   | Description                                                                                                                                                                                                                           |
|--------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_by | String | Video labeling method, which is used to determine whether a video is labeled manually or automatically. Options: <ul style="list-style-type: none"><li>● <b>human</b>: manual labeling</li><li>● <b>auto</b>: auto labeling</li></ul> |

| Parameter | Type                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String                                     | Label ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| name      | String                                     | Label name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| property  | <a href="#">SampleLabelProperty</a> object | Attribute key-value pair of the sample label, such as the object shape and shape feature                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| score     | Float                                      | Confidence. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| type      | Integer                                    | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-94** SampleLabelProperty

| Parameter            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:content   | String  | Speech text content, which is a default attribute dedicated to the speech label (including the speech content and speech start and end points)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| @modelarts:end_index | Integer | End position of the text, which is a default attribute dedicated to the named entity label. The end position does not include the character corresponding to the value of <b>end_index</b> . Examples: <ul style="list-style-type: none"><li>• If the text is "<b>Barack Hussein Obama II (born on August 4, 1961) is an attorney and politician.</b>", the <b>start_index</b> and <b>end_index</b> of <b>Barack Hussein Obama II</b> are <b>0</b> and <b>23</b>, respectively.</li><li>• If the text is "<b>Hope is the thing with feathers</b>", <b>start_index</b> and <b>end_index</b> of <b>Hope</b> are <b>0</b> and <b>4</b>, respectively.</li></ul> |



| Parameter           | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:end_time | String | Speech end time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| @modelarts:feature  | Object | <p>Shape feature, which is a default attribute dedicated to the object detection label, with type of <b>List</b>. The upper left corner of an image is used as the coordinate origin <b>[0, 0]</b>. Each coordinate point is represented by <b>[x, y]</b>. <i>x</i> indicates the horizontal coordinate, and <i>y</i> indicates the vertical coordinate (both <i>x</i> and <i>y</i> are greater than or equal to 0). The format of each shape is as follows:</p> <ul style="list-style-type: none"><li>• <b>bndbox</b>: consists of two points, for example, <b>[[0,10],[50,95]]</b>. The upper left vertex of the rectangle is the first point, and the lower right vertex is the second point. That is, the x-coordinate of the first point must be less than the x-coordinate of the second point, and the y-coordinate of the first point must be less than the y-coordinate of the second point.</li><li>• <b>polygon</b>: consists of multiple points that are connected in sequence to form a polygon, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li><li>• <b>circle</b>: consists of the center and radius, for example, <b>[[100,100],[50]]</b>.</li><li>• <b>line</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>dashed</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>point</b>: consists of one point, for example, <b>[[0,100]]</b>.</li><li>• <b>polyline</b>: consists of multiple points, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li></ul> |
| @modelarts:from     | String | Start entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter                   | Type   | Description                                                                                                                                                                                                                                      |
|-----------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard             | String | Whether the sample is labeled as a hard example, which is a default attribute. Options: <ul style="list-style-type: none"><li>● <b>0/false</b>: The label is not a hard example.</li><li>● <b>1/true</b>: The label is a hard example.</li></ul> |
| @modelarts:hard_coefficient | String | Coefficient of difficulty of each label level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                        |

| Parameter               | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | String | <p>Reasons why the sample is a hard example, which is a default attribute. Use a hyphen (-) to separate every two hard example reason IDs, for example, <b>3-20-21-19</b>. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on flplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |

| Parameter                | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:shape         | String  | Object shape, which is a default attribute dedicated to the object detection label and is left empty by default. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dashed line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:speech_source | String  | Speech source, which is a default attribute dedicated to the speech start/end point label and can be set to a speaker or narrator                                                                                                                                                                                                                                                                                  |
| @modelarts:start_index   | Integer | Start position of the text, which is a default attribute dedicated to the named entity label. The start value begins from 0, including the character corresponding to the value of <b>start_index</b> .                                                                                                                                                                                                            |
| @modelarts:start_time    | String  | Speech start time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                           |
| @modelarts:triplet_id    | String  | Direction entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                    |

**Table 28-95** SampleMetadata

| Parameter                   | Type    | Description                                                                                                                                                                                                                          |
|-----------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:import_origin    | Integer | Sample source, which is a default attribute.                                                                                                                                                                                         |
| @modelarts:hard             | Double  | Whether the sample is labeled as a hard sample, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The label is not a hard example.</li><li>• <b>1</b>: The label is a hard example.</li></ul> |
| @modelarts:hard_coefficient | Double  | Coefficient of difficulty of each sample level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                           |

| Parameter               | Type              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | Array of integers | <p>ID of a hard example reason, which is a default attribute. Options:</p> <ul style="list-style-type: none"><li>● <b>0</b>: No object is identified.</li><li>● <b>1</b>: The confidence is low.</li><li>● <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>● <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>● <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>● <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>● <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>● <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>● <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>● <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>● <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>● <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>● <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>● <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>● <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>● <b>15</b>: There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on fliplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |

| Parameter       | Type            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:size | Array of object | Image size (width, height, and depth of the image), which is a default attribute, with type of <b>List&lt;Integer&gt;</b> . In the list, the first number indicates the width (pixels), the second number indicates the height (pixels), and the third number indicates the depth (the depth can be left blank and the default value is <b>3</b> ). For example, <b>[100,200,3]</b> and <b>[100,200]</b> are both valid. Note: This parameter is mandatory only when the sample label list contains the object detection label. |

## Request Example

Run the following command to obtain a sample list by page:

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/data-annotations/samples
```

## Response Example

**Status code: 200**

OK

```
{
 "sample_count" : 2,
 "samples" : [{
 "sample_id" : "012f99f3cf405860130b6ed2350c2228",
 "sample_type" : 0,
 "labels" : [{
 "name" : "car",
 "type" : 0,
 "property" : { }
 }],
 "source" : "https://test-obs.obs.xxx.com:443/image/aifood/%E5%86%B0%E6%BF%80%E5%87%8C/36502.jpg?AccessKeyId=RciyO7RHmhNTfOZVryUH&Expires=1606296688&x-image-process=image%2Fresize%2Cm_lfit%2Ch_200&Signature=icyvHhFew9vnmy3zh1uZMP15Mbg%3D",
 "metadata" : {
 "@modelarts:import_origin" : 0
 },
 "sample_time" : 1589190552106,
 "sample_status" : "MANUAL_ANNOTATION",
 "labelers" : [{
 "email" : "xxx@xxx.com",
 "worker_id" : "5d8d4033b428fed5ac158942c33940a2",
 "role" : 0
 }]
 }, {
 "sample_id" : "0192f3acfb000666033a0f85c21577c7",
 "sample_type" : 0,
 "labels" : [{
 "name" : "car",
 "type" : 0,
 "property" : { }
 }],
 "source" : "https://test-obs.obs.xxx.com:443/image/aifood/%E5%86%B0%E6%BF%80%E5%87%8C/36139.jpg?AccessKeyId=RciyO7RHmhNTfOZVryUH&Expires=1606296688&x-image-process=image%2Fresize%2Cm_lfit%2Ch_200&Signature=RRr9r2cghLCXk%2B0%2BfHtYJi8eZ4k%3D",
 "metadata" : {
```



```
{
 "@modelarts:import_origin" : 0
},
"sample_time" : 1589190543327,
"sample_status" : "MANUAL_ANNOTATION",
"labelers" : [{
 "email" : "xxx@xxx.com",
 "worker_id" : "a2abd3f27b4e92c593c15282f8b6bd29",
 "role" : 0
}]
}]
}
```

## Status Code

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Code

For details, see [Error Codes](#).

## 28.1.13 Adding Samples in Batches

### Function

This API is used to add samples in batches.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/data-annotations/samples

**Table 28-96** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Parameters

**Table 28-97** Request body parameters

| Parameter        | Mandatory | Type                                    | Description                                                                                                                                                                                                                                                                                                                                                    |
|------------------|-----------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| final_annotation | No        | Boolean                                 | Whether to directly import to the final result. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Import labels to the labeled dataset. (Default value).</li><li>• <b>false</b>: Import labels to the to-be-confirmed dataset. Currently, to-be-confirmed datasets only support categories of image classification and object detection.</li></ul> |
| label_format     | No        | <a href="#">LabelFormat</a> object      | Label format. This parameter is used only for text datasets.                                                                                                                                                                                                                                                                                                   |
| samples          | No        | Array of <a href="#">Sample</a> objects | Sample list.                                                                                                                                                                                                                                                                                                                                                   |

**Table 28-98** LabelFormat

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| label_type | No        | String | Label type of text classification. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The label is separated from the text, and they are distinguished by the fixed suffix <b>_result</b>. For example, the text file is <b>abc.txt</b>, and the label file is <b>abc_result.txt</b>.</li><li>• <b>1</b>: Default value. Labels and texts are stored in the same file and separated by separators. You can use <b>text_sample_separator</b> to specify the separator between the text and label and <b>text_label_separator</b> to specify the separator between labels.</li></ul> |

| Parameter             | Mandatory | Type   | Description                                                                                                                                                                                                                                                                  |
|-----------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| text_label_separator  | No        | String | Separator between labels. By default, a comma (,) is used as the separator. The separator needs to be escaped. The separator can contain only one character, such as a letter, a digit, or any of the following special characters: !@#\$%^&* _= ?/'/:.,;                    |
| text_sample_separator | No        | String | Separator between the text and label. By default, the <b>Tab</b> key is used as the separator. The separator needs to be escaped. The separator can contain only one character, such as a letter, a digit, or any of the following special characters: !@#\$%^&* _= ?/'/:.,; |

Table 28-99 Sample

| Parameter   | Mandatory | Type                                | Description                                                                                                                                                                    |
|-------------|-----------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data        | No        | Object                              | Byte data of sample files. The type is <b>java.nio.ByteBuffer</b> . When this parameter is called, the string converted from the byte data is uploaded.                        |
| data_source | No        | <b>DataSource</b> object            | Data source.                                                                                                                                                                   |
| encoding    | No        | String                              | Encoding type of sample files, which is used to upload .txt or .csv files. The value can be <b>UTF-8</b> , <b>GBK</b> , or <b>GB2312</b> . The default value is <b>UTF-8</b> . |
| labels      | No        | Array of <b>SampleLabel</b> objects | Sample label list.                                                                                                                                                             |
| metadata    | No        | <b>SampleMetadata</b> object        | Key-value pair of the sample <b>metadata</b> attribute.                                                                                                                        |
| name        | No        | String                              | Name of sample files. The value contains 0 to 1,024 characters and cannot contain special characters (!<>=&"').                                                                |

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                       |
|-------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_type | No        | Integer | Sample type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image</li><li>• <b>1</b>: text</li><li>• <b>2</b>: speech</li><li>• <b>4</b>: table</li><li>• <b>6</b>: video</li><li>• <b>9</b>: custom format</li></ul> |

**Table 28-100** DataSource

| Parameter          | Mandatory | Type                                       | Description                                                                                                                                                                                                                                                                                    |
|--------------------|-----------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_path          | No        | String                                     | Data source path.                                                                                                                                                                                                                                                                              |
| data_type          | No        | Integer                                    | Data type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: OBS bucket (default value)</li><li>• <b>1</b>: GaussDB(DWS)</li><li>• <b>2</b>: DLI</li><li>• <b>3</b>: RDS</li><li>• <b>4</b>: MRS</li><li>• <b>5</b>: AI Gallery</li><li>• <b>6</b>: Inference service</li></ul>       |
| schema_maps        | No        | Array of <a href="#">SchemaMap</a> objects | Schema mapping information corresponding to the table data.                                                                                                                                                                                                                                    |
| source_info        | No        | <a href="#">SourceInfo</a> object          | Information required for importing a table data source.                                                                                                                                                                                                                                        |
| with_column_header | No        | Boolean                                    | Whether the first row in the file is a column name. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The first row in the file is the column name.</li><li>• <b>false</b>: The first row in the file is not the column name.</li></ul> |

**Table 28-101** SchemaMap

| Parameter | Mandatory | Type   | Description                     |
|-----------|-----------|--------|---------------------------------|
| dest_name | No        | String | Name of the destination column. |
| src_name  | No        | String | Name of the source column.      |

**Table 28-102** SourceInfo

| Parameter     | Mandatory | Type   | Description                                                                                                                                              |
|---------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| cluster_id    | No        | String | MRS cluster ID. You can log in to the MRS console to view the information.                                                                               |
| cluster_mode  | No        | String | Running mode of an MRS cluster. Options: <ul style="list-style-type: none"><li>• <b>0</b>: normal cluster</li><li>• <b>1</b>: security cluster</li></ul> |
| cluster_name  | No        | String | MRS cluster name You can log in to the MRS console to view the information.                                                                              |
| database_name | No        | String | Name of the database to which the table dataset is imported.                                                                                             |
| input         | No        | String | HDFS path of the table data set. For example, /datasets/demo.                                                                                            |
| ip            | No        | String | IP address of your GaussDB(DWS) cluster.                                                                                                                 |
| port          | No        | String | Port number of your GaussDB(DWS) cluster.                                                                                                                |
| queue_name    | No        | String | DLI queue name of a table dataset.                                                                                                                       |
| subnet_id     | No        | String | Subnet ID of an MRS cluster.                                                                                                                             |
| table_name    | No        | String | Name of the table to which a table dataset is imported.                                                                                                  |
| user_name     | No        | String | Username, which is mandatory for GaussDB(DWS) data.                                                                                                      |
| user_password | No        | String | User password, which is mandatory for GaussDB(DWS) data.                                                                                                 |

| Parameter | Mandatory | Type   | Description                                 |
|-----------|-----------|--------|---------------------------------------------|
| vpc_id    | No        | String | ID of the VPC where an MRS cluster resides. |

**Table 28-103** SampleLabel

| Parameter    | Mandatory | Type                                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|-----------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_by | No        | String                                         | Video labeling method, which is used to distinguish whether a video is labeled manually or automatically. Options: <ul style="list-style-type: none"><li>• <b>human</b>: manual labeling</li><li>• <b>auto</b>: automatic labeling</li></ul>                                                                                                                                                                                                                                                                                              |
| id           | No        | String                                         | Label ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| name         | No        | String                                         | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property     | No        | <a href="#">SampleLabel Property</a><br>object | Attribute key-value pair of the sample label, such as the object shape and shape feature.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| score        | No        | Float                                          | Confidence. The value range is [0,1].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| type         | No        | Integer                                        | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-104** SampleLabelProperty

| Parameter            | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:content   | No        | String  | Speech text content, which is a default attribute dedicated to the speech label (including the speech content and speech start and end points).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| @modelarts:end_index | No        | Integer | End position of the text, which is a default attribute dedicated to the named entity label. The end position does not include the character corresponding to the value of <b>end_index</b> .<br>Example: <ul style="list-style-type: none"><li>• If the text is "<b>Barack Hussein Obama II (born August 4, 1961) is an attorney and politician.</b>", <b>start_index</b> and <b>end_index</b> of <b>Barack Hussein Obama II</b> are <b>0</b> and <b>23</b>, respectively.</li><li>• If the text is "<b>Hope is the thing with feathers</b>", <b>start_index</b> and <b>end_index</b> of <b>Hope</b> are <b>0</b> and <b>4</b>, respectively.</li></ul> |
| @modelarts:end_time  | No        | String  | Speech end time, which is a default attribute dedicated to the speech start/end point label, in the format of <b>hh:mm:ss.SSS</b> . ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                                                                                                                                                                                                                                                          |

| Parameter          | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:feature | No        | Object | <p>Shape feature, which is a default attribute dedicated to the object detection label, with type of <b>List</b>. The upper left corner of the image is used as the coordinate origin [0, 0]. Each coordinate point is represented by [x, y], where x indicates the horizontal coordinate and y indicates the vertical coordinate (both x and y are <math>\geq 0</math>). The format of each shape is as follows:</p> <ul style="list-style-type: none"><li>• <b>bndbox</b> consists of two points, for example, <b>[[0,10],[50,95]]</b>. The upper left vertex of the rectangle is the first point, and the lower right vertex is the second point. That is, the x-coordinate of the first point must be less than the x-coordinate of the second point, and the y-coordinate of the first point must be less than the y-coordinate of the second point.</li><li>• <b>polygon</b>: consists of multiple points that are connected in sequence to form a polygon, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li><li>• <b>circle</b>: consists of the center and radius, for example, <b>[[100,100],[50]]</b>.</li><li>• <b>line</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>dashed</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li></ul> |



| Parameter                   | Mandatory | Type   | Description                                                                                                                                                                                                                            |
|-----------------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             |           |        | <ul style="list-style-type: none"><li>• <b>point</b>: consists of one point, for example, <b>[[0,100]]</b>.</li><li>• <b>polyline</b>: consists of multiple points, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li></ul> |
| @modelarts:from             | No        | String | ID of the head entity in the triplet relationship label, which is a default attribute dedicated to the triplet relationship label.                                                                                                     |
| @modelarts:hard             | No        | String | Sample labeled as a hard sample or not, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0/false</b>: not a hard example</li><li>• <b>1/true</b>: hard example</li></ul>                              |
| @modelarts:hard_coefficient | No        | String | Coefficient of difficulty of each label level, which is a default attribute. The value range is <b>[0,1]</b> .                                                                                                                         |

| Parameter               | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | No        | String | <p>Reasons that the sample is a hard sample, which is a default attribute. Use a hyphen (-) to separate every two hard sample reason IDs, for example, <b>3-20-21-19</b>.</p> <p>Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No target objects are identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>• <b>10:</b> There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11:</b> There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12:</b> There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13:</b> There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14:</b> There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>• <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>• <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>• <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>• <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>• <b>19:</b> The data enhancement result based on</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p>GaussianBlur is inconsistent with the prediction result of the original image.</p> <ul style="list-style-type: none"><li>• <b>20:</b> The data enhancement result based on fliplr is inconsistent with the prediction result of the original image.</li><li>• <b>21:</b> The data enhancement result based on Crop is inconsistent with the prediction result of the original image.</li><li>• <b>22:</b> The data enhancement result based on flipud is inconsistent with the prediction result of the original image.</li><li>• <b>23:</b> The data enhancement result based on scale is inconsistent with the prediction result of the original image.</li><li>• <b>24:</b> The data enhancement result based on translate is inconsistent with the prediction result of the original image.</li><li>• <b>25:</b> The data enhancement result based on shear is inconsistent with the prediction result of the original image.</li><li>• <b>26:</b> The data enhancement result based on superpixels is inconsistent with the prediction result of the original image.</li><li>• <b>27:</b> The data enhancement result based on sharpen is inconsistent with the prediction result of the original image.</li><li>• <b>28:</b> The data enhancement result based on add is inconsistent with the prediction result of the original image.</li></ul> |

| Parameter                | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          |           |         | <ul style="list-style-type: none"><li>• <b>29</b>: The data enhancement result based on invert is inconsistent with the prediction result of the original image.</li><li>• <b>30</b>: The data is predicted to be abnormal.</li></ul>                                                                                                                                                                                 |
| @modelarts:shape         | No        | String  | Object shape, which is a default attribute dedicated to the object detection label and is left empty by default.<br>Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:speech_source | No        | String  | Speech source, which is a default attribute dedicated to the speech start/end point label and can be set to a speaker or narrator.                                                                                                                                                                                                                                                                                    |
| @modelarts:start_index   | No        | Integer | Start position of the text, which is a default attribute dedicated to the named entity label. The start value begins from 0, including the character corresponding to the value of <b>start_index</b> .                                                                                                                                                                                                               |
| @modelarts:start_time    | No        | String  | Speech start time, which is a default attribute dedicated to the speech start/end point label, in the format of <b>hh:mm:ss.SSS</b> . ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                      |
| @modelarts:tail_id       | No        | String  | ID of the tail entity in the triplet relationship label, which is a default attribute dedicated to the triplet relationship label.                                                                                                                                                                                                                                                                                    |

**Table 28-105** SampleMetadata

| Parameter                   | Mandatory | Type    | Description                                                                                                                                                                                        |
|-----------------------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:import_origin    | No        | Integer | Sample source, which is a built-in attribute.                                                                                                                                                      |
| @modelarts:hard             | No        | Double  | Whether the sample is labeled as a hard sample, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0</b>: non-hard sample</li><li>• <b>1</b>: hard sample</li></ul> |
| @modelarts:hard_coefficient | No        | Double  | Coefficient of difficulty of each sample level, which is a default attribute. The value range is <b>[0,1]</b> .                                                                                    |

| Parameter               | Mandatory | Type              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|-----------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | No        | Array of integers | <p>ID of a hard sample reason, which is a default attribute. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>• <b>11:</b> There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12:</b> There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13:</b> There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14:</b> There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>• <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>• <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>• <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>• <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>• <b>19:</b> The data enhancement result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>• <b>20:</b> The data enhancement result based on fliplr is</li></ul> |



| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p>inconsistent with the prediction result of the original image.</p> <ul style="list-style-type: none"> <li>• <b>21:</b> The data enhancement result based on Crop is inconsistent with the prediction result of the original image.</li> <li>• <b>22:</b> The data enhancement result based on flipud is inconsistent with the prediction result of the original image.</li> <li>• <b>23:</b> The data enhancement result based on scale is inconsistent with the prediction result of the original image.</li> <li>• <b>24:</b> The data enhancement result based on translate is inconsistent with the prediction result of the original image.</li> <li>• <b>25:</b> The data enhancement result based on shear is inconsistent with the prediction result of the original image.</li> <li>• <b>26:</b> The data enhancement result based on superpixels is inconsistent with the prediction result of the original image.</li> <li>• <b>27:</b> The data enhancement result based on sharpen is inconsistent with the prediction result of the original image.</li> <li>• <b>28:</b> The data enhancement result based on add is inconsistent with the prediction result of the original image.</li> <li>• <b>29:</b> The data enhancement result based on invert is inconsistent with the prediction result of the original image.</li> </ul> |

| Parameter       | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |           |                  | <ul style="list-style-type: none"><li>• <b>30</b>: The data is predicted to be abnormal.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                              |
| @modelarts:size | No        | Array of objects | Image size (width, height, and depth of the image), which is a default attribute, with type of <b>List&lt;Integer&gt;</b> . In the list, the first number indicates the width (pixels), the second number indicates the height (pixels), and the third number indicates the depth (the depth can be left blank and the default value is <b>3</b> ). For example, <b>[100,200,3]</b> and <b>[100,200]</b> are both valid. Note: This parameter is mandatory only when the sample label list contains the object detection label. |

## Response Parameters

Status code: 200

**Table 28-106** Response body parameters

| Parameter  | Type                                     | Description                                                                                                                                            |
|------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String                                   | Error code.                                                                                                                                            |
| error_msg  | String                                   | Error message.                                                                                                                                         |
| results    | Array of <b>UploadSampleResp</b> objects | Response list for adding samples in batches.                                                                                                           |
| success    | Boolean                                  | Whether the operation is successful. Options: <ul style="list-style-type: none"><li>• <b>true</b>: successful</li><li>• <b>false</b>: failed</li></ul> |

**Table 28-107** UploadSampleResp

| Parameter  | Type   | Description    |
|------------|--------|----------------|
| error_code | String | Error code.    |
| error_msg  | String | Error message. |

| Parameter | Type    | Description                                                                                                                                            |
|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| info      | String  | Description.                                                                                                                                           |
| name      | String  | Name of a sample file.                                                                                                                                 |
| success   | Boolean | Whether the operation is successful. Options: <ul style="list-style-type: none"><li>● <b>true</b>: successful</li><li>● <b>false</b>: failed</li></ul> |

### Example Requests

Adding Samples in Batches

```
{
 "samples": [{
 "name": "2.jpg",
 "data": "/9j/4AAQSkZJRgABAQAAQABAAQ/
2wBDAAgGBgcGBQgHBwcJCQgKDBQNDAsLDBkSEw8UHRofHh0aHBwgJ4nlCslxwKDCpLDAxNDQ0Hyc5PT
gyPC4zNDL/
2wBDAQkJCQwLDBgNDRgyIRwhMjlyMjlyMjlyMjlyMjlyMjlyMjlyMjlyMjlyMjlyMjlyMjlyMjlyMjlyMjlyMjL/
wAARCAA1AJUDASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/
8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRVS0fAkM2JyggkKFhcYG
RoUicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTUWVWl5iZmq
KjpKWmp6ipqrKztLW2t7i5usLDxMXGx8jJytLT1NXW19jZ2uHi4+Tl5ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQE
BAQEBAQAAAAAAAAECAwQFBgcICQoL"
 }]
}
```

### Example Responses

Status code: 200

OK

```
{
 "success": true,
 "results": [{
 "success": true,
 "name": "/test-obs/classify/input/animals/2.jpg",
 "info": "960585877c92d63911ba555ab3129d36"
 }]
}
```

### Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.14 Deleting Samples in Batches

### Function

This API is used to delete samples in batches.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/data-annotations/samples/delete

**Table 28-108** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Parameters

**Table 28-109** Request body parameters

| Parameter     | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| delete_source | No        | Boolean          | Whether to delete the source file. This field is valid for non-text datasets. (A text dataset is the entire text file. Therefore, deleting a piece of data from the text file does not affect the source text.)<br>Options: <ul style="list-style-type: none"><li>● <b>false</b>: Do not delete the source file. (Default value)</li><li>● <b>true</b>: Delete the source file. (Note: This operation may affect the dataset versions or other datasets that have used these files. As a result, the page display, training, or inference is abnormal.)</li></ul> |
| samples       | No        | Array of strings | Sample ID list.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Response Parameters

**Status code: 200****Table 28-110** Response body parameters

| Parameter  | Type                                           | Description                                                                                                                                                                                         |
|------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String                                         | Error code.                                                                                                                                                                                         |
| error_msg  | String                                         | Error message.                                                                                                                                                                                      |
| results    | Array of <a href="#">BatchResponse</a> objects | Response list for deleting a sample in batches.                                                                                                                                                     |
| success    | Boolean                                        | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>● <b>true</b>: The operation is successful.</li><li>● <b>false</b>: The operation is failed.</li></ul> |

**Table 28-111** BatchResponse

| Parameter  | Type    | Description                                                                                                                                                                                         |
|------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String  | Error code.                                                                                                                                                                                         |
| error_msg  | String  | Error message.                                                                                                                                                                                      |
| success    | Boolean | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

## Example Requests

Deleting Samples in Batches

```
{
 "samples" : ["9cb9bc9b34bf53b6ec9a84998b1711bf", "9ea63ef78d8c9037c9bcb12b477821bf"]
}
```

## Example Responses

Status code: 200

OK

```
{
 "success" : true
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.15 Obtaining Details About a Sample

### Function

Obtain details about a sample.

## Debugging

You can debug this API in [API Explorer](#) which supports automatic authentication. API Explorer can automatically generate SDK code examples and provide the SDK code example debugging.

## URI

GET /v2/{project\_id}/datasets/{dataset\_id}/data-annotations/samples/{sample\_id}

**Table 28-112** URI parameters

| Parameter  | Mandatory | Type   | Description                                                                    |
|------------|-----------|--------|--------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID                                                                     |
| project_id | Yes       | String | Project ID. For details, see <a href="#">Obtaining a Project ID and Name</a> . |
| sample_id  | Yes       | String | Sample ID                                                                      |

**Table 28-113** Query parameters

| Parameter | Mandatory | Type   | Description                                                                                                                               |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------|
| locale    | No        | String | Language Options: <ul style="list-style-type: none"><li>• <b>zh-cn</b>: Chinese</li><li>• <b>en-us</b>: English (default value)</li></ul> |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_state | No        | String | Sample status. Options: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: unlabeled</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: accepted</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: reviewed</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: sampling pending check</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: sampling checked</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: sampling accepted</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: sampling rejected</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| worker_id    | No        | String | ID of a labeling team member                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Request Parameters

None

## Response Parameters

Status code: 200



**Table 28-114** Response body parameters

| Parameter        | Type                         | Description                                                                                                                                                                                                                |
|------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| check_accept     | Boolean                      | Whether the acceptance is passed, which is used for team labeling. Options: <ul style="list-style-type: none"><li>● <b>true</b>: The acceptance is passed.</li><li>● <b>false</b>: The acceptance is not passed.</li></ul> |
| check_comment    | String                       | Acceptance comment, which is used for team labeling.                                                                                                                                                                       |
| check_score      | String                       | Acceptance score, which is used for team labeling.                                                                                                                                                                         |
| deletion_reasons | Array of strings             | Reason for deleting a sample, which is used for healthcare.                                                                                                                                                                |
| hard_details     | Map<String,HardDetail>       | Difficult problem details, including description, causes, and suggestions of difficult problems.                                                                                                                           |
| labelers         | Array of Worker objects      | Labeling personnel list of sample allocation. The list records the team members receiving the samples, which is used for team labeling.                                                                                    |
| labels           | Array of SampleLabel objects | List of sample labels                                                                                                                                                                                                      |
| metadata         | SampleMetadata object        | Attribute key-value pair of the sample metadata                                                                                                                                                                            |
| review_accept    | Boolean                      | Whether to accept the review, which is used for team labeling. Options: <ul style="list-style-type: none"><li>● <b>true</b>: The review is accepted.</li><li>● <b>false</b>: The review is rejected.</li></ul>             |
| review_comment   | String                       | Review comment, which is used for team labeling.                                                                                                                                                                           |
| review_score     | String                       | Review score, which is used for team labeling.                                                                                                                                                                             |
| sample_data      | Array of strings             | List of sample data                                                                                                                                                                                                        |
| sample_dir       | String                       | Path for storing a sample                                                                                                                                                                                                  |
| sample_id        | String                       | Sample ID                                                                                                                                                                                                                  |
| sample_name      | String                       | Sample name                                                                                                                                                                                                                |
| sample_size      | Long                         | Sample size or text length, in bytes                                                                                                                                                                                       |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_status  | String  | Sample status. Options: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: unlabeled</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: accepted</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: reviewed</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: sampling pending check</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: sampling checked</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: sampling accepted</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: sampling rejected</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| sample_time    | Long    | Sample time, when OBS is last modified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| sample_type    | Integer | Sample type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image</li><li>• <b>1</b>: text</li><li>• <b>2</b>: audio</li><li>• <b>4</b>: table</li><li>• <b>6</b>: video</li><li>• <b>9</b>: free format</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| score          | String  | Comprehensive score, which is used for team labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| source         | String  | Source address of sample data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| sub_sample_url | String  | Subsample URL, which is used for healthcare.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| worker_id      | String  | ID of a labeling team member, which is used for team labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**Table 28-115** HardDetail

| Parameter | Type   | Description |
|-----------|--------|-------------|
| alo_name  | String | Alias       |

| Parameter  | Type    | Description         |
|------------|---------|---------------------|
| id         | Integer | Reason ID           |
| reason     | String  | Reason description  |
| suggestion | String  | Handling suggestion |

**Table 28-116** Worker

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                                                   |
|--------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time  | Long    | Worker creation time                                                                                                                                                                                                                                                                                                          |
| description  | String  | Labeling team member description. The value contains 0 to 256 characters. Special characters (^!<>=&"') are not allowed.                                                                                                                                                                                                      |
| email        | String  | Email address of a labeling team member                                                                                                                                                                                                                                                                                       |
| role         | Integer | Role. Options: <ul style="list-style-type: none"><li>● <b>0</b>: marker</li><li>● <b>1</b>: reviewer</li><li>● <b>2</b>: team manager</li><li>● <b>3</b>: dataset owner</li></ul>                                                                                                                                             |
| status       | Integer | Current login status of a labeled member. Options: <ul style="list-style-type: none"><li>● <b>0</b>: No invitation email is sent.</li><li>● <b>1</b>: The invitation email is sent but the member has not logged in.</li><li>● <b>2</b>: The member has logged in.</li><li>● <b>3</b>: The member has been deleted.</li></ul> |
| update_time  | Long    | Worker update time                                                                                                                                                                                                                                                                                                            |
| worker_id    | String  | ID of a labeling team member                                                                                                                                                                                                                                                                                                  |
| workforce_id | String  | ID of a labeling team                                                                                                                                                                                                                                                                                                         |

**Table 28-117** SampleLabel

| Parameter    | Type   | Description                                                                                                                                                                                                                           |
|--------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_by | String | Video labeling method, which is used to determine whether a video is labeled manually or automatically. Options: <ul style="list-style-type: none"><li>● <b>human</b>: manual labeling</li><li>● <b>auto</b>: auto labeling</li></ul> |

| Parameter | Type                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String                                     | Label ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| name      | String                                     | Label name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| property  | <a href="#">SampleLabelProperty</a> object | Attribute key-value pair of the sample label, such as the object shape and shape feature                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| score     | Float                                      | Confidence. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| type      | Integer                                    | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-118** SampleLabelProperty

| Parameter            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:content   | String  | Speech text content, which is a default attribute dedicated to the speech label (including the speech content and speech start and end points)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| @modelarts:end_index | Integer | End position of the text, which is a default attribute dedicated to the named entity label. The end position does not include the character corresponding to the value of <b>end_index</b> . Examples: <ul style="list-style-type: none"><li>• If the text is "<b>Barack Hussein Obama II (born on August 4, 1961) is an attorney and politician.</b>", the <b>start_index</b> and <b>end_index</b> of <b>Barack Hussein Obama II</b> are <b>0</b> and <b>23</b>, respectively.</li><li>• If the text is "<b>Hope is the thing with feathers</b>", <b>start_index</b> and <b>end_index</b> of <b>Hope</b> are <b>0</b> and <b>4</b>, respectively.</li></ul> |

| Parameter           | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:end_time | String | Speech end time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| @modelarts:feature  | Object | <p>Shape feature, which is a default attribute dedicated to the object detection label, with type of <b>List</b>. The upper left corner of an image is used as the coordinate origin <b>[0, 0]</b>. Each coordinate point is represented by <b>[x, y]</b>. <i>x</i> indicates the horizontal coordinate, and <i>y</i> indicates the vertical coordinate (both <i>x</i> and <i>y</i> are greater than or equal to 0). The format of each shape is as follows:</p> <ul style="list-style-type: none"><li>• <b>bndbox</b>: consists of two points, for example, <b>[[0,10],[50,95]]</b>. The upper left vertex of the rectangle is the first point, and the lower right vertex is the second point. That is, the x-coordinate of the first point must be less than the x-coordinate of the second point, and the y-coordinate of the first point must be less than the y-coordinate of the second point.</li><li>• <b>polygon</b>: consists of multiple points that are connected in sequence to form a polygon, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li><li>• <b>circle</b>: consists of the center and radius, for example, <b>[[100,100],[50]]</b>.</li><li>• <b>line</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>dashed</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>point</b>: consists of one point, for example, <b>[[0,100]]</b>.</li><li>• <b>polyline</b>: consists of multiple points, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li></ul> |
| @modelarts:from     | String | Start entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter                   | Type   | Description                                                                                                                                                                                                                                      |
|-----------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard             | String | Whether the sample is labeled as a hard example, which is a default attribute. Options: <ul style="list-style-type: none"><li>● <b>0/false</b>: The label is not a hard example.</li><li>● <b>1/true</b>: The label is a hard example.</li></ul> |
| @modelarts:hard_coefficient | String | Coefficient of difficulty of each label level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                        |

| Parameter               | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | String | <p>Reasons why the sample is a hard example, which is a default attribute. Use a hyphen (-) to separate every two hard example reason IDs, for example, <b>3-20-21-19</b>. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on flplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |



| Parameter              | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:shape       | String  | Object shape, which is a default attribute dedicated to the object detection label and is left empty by default. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dashed line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:source      | String  | Speech source, which is a default attribute dedicated to the speech start/end point label and can be set to a speaker or narrator                                                                                                                                                                                                                                                                                  |
| @modelarts:start_index | Integer | Start position of the text, which is a default attribute dedicated to the named entity label. The start value begins from 0, including the character corresponding to the value of <b>start_index</b> .                                                                                                                                                                                                            |
| @modelarts:start_time  | String  | Speech start time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                           |
| @modelarts:triplet_id  | String  | Direction entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                    |

**Table 28-119** SampleMetadata

| Parameter                   | Type    | Description                                                                                                                                                                                                                           |
|-----------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:import_origin    | Integer | Sample source, which is a default attribute.                                                                                                                                                                                          |
| @modelarts:hard             | Double  | Whether the sample is labeled as a hard example, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The label is not a hard example.</li><li>• <b>1</b>: The label is a hard example.</li></ul> |
| @modelarts:hard_coefficient | Double  | Coefficient of difficulty of each sample level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                            |

| Parameter               | Type              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | Array of integers | <p>ID of a hard example reason, which is a default attribute. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>• <b>15</b>: There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on fliplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |

| Parameter       | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:size | Array of objects | Image size (width, height, and depth of the image), which is a default attribute, with type of <b>List&lt;Integer&gt;</b> . In the list, the first number indicates the width (pixels), the second number indicates the height (pixels), and the third number indicates the depth (the depth can be left blank and the default value is <b>3</b> ). For example, <b>[100,200,3]</b> and <b>[100,200]</b> are both valid. Note: This parameter is mandatory only when the sample label list contains the object detection label. |

## Request Example

Run the following command to obtain details about a sample:

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/data-annotations/samples/{sample_id}
```

## Response Example

**Status code: 200**

OK

```
{
 "sample_id" : "012f99f3cf405860130b6ed2350c2228",
 "sample_type" : 0,
 "labels" : [{
 "name" : "car",
 "type" : 0,
 "property" : { }
 }],
 "source" : "https://test-obs.obs.xxx.com:443/image/aifood/%E5%86%B0%E6%BF%80%E5%87%8C/36502.jpg?AccessKeyId=RciyO7RHmhNTfOZVryUH&Expires=1606297079&Signature=Ju4FYpEu973ii%2FAdUvLTfpLCTbg%3D",
 "metadata" : {
 "@modelarts:import_origin" : 0
 },
 "sample_time" : 1589190552106,
 "sample_status" : "MANUAL_ANNOTATION",
 "labelers" : [{
 "email" : "xxx@xxx.com",
 "worker_id" : "5d8d4033b428fed5ac158942c33940a2",
 "role" : 0
 }]
}
```

## Status Code

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |

| Status Code | Description |
|-------------|-------------|
| 403         | Forbidden   |
| 404         | Not Found   |

## Error Code

For details, see [Error Codes](#).

## 28.1.16 Obtaining Sample Search Condition

### Function

This API is used to obtain sample search condition.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/data-annotations/search-condition

**Table 28-120** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

### Request Parameters

None

### Response Parameters

Status code: 200

**Table 28-121** Response body parameters

| Parameter | Type                                   | Description                            |
|-----------|----------------------------------------|----------------------------------------|
| labelers  | Array of strings                       | List of labeling team members.         |
| labels    | Array of <a href="#">Label</a> objects | Label list.                            |
| metadata  | Map<String,Array<String>>              | Attribute key-value pair of a dataset. |

**Table 28-122** Label

| Parameter  | Type                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| attributes | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included.                                                                                                                                                                                                                                                                                                                                                                                                          |
| name       | String                                          | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property   | <a href="#">LabelProperty</a> object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| type       | Integer                                         | Label type. Options: <ul style="list-style-type: none"><li>● <b>0</b>: image classification</li><li>● <b>1</b>: object detection</li><li>● <b>3</b>: image segmentation</li><li>● <b>100</b>: text classification</li><li>● <b>101</b>: named entity recognition</li><li>● <b>102</b>: text triplet relationship</li><li>● <b>103</b>: text triplet entity</li><li>● <b>200</b>: sound classification</li><li>● <b>201</b>: speech content</li><li>● <b>202</b>: speech paragraph labeling</li><li>● <b>600</b>: video labeling</li></ul> |

**Table 28-123** LabelAttribute

| Parameter     | Type   | Description                                                         |
|---------------|--------|---------------------------------------------------------------------|
| default_value | String | Default value of a label attribute.                                 |
| id            | String | Label attribute ID. You can query the tag by invoking the tag list. |

| Parameter | Type                                                 | Description                                                                                                                                              |
|-----------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | String                                               | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&''.                                            |
| type      | String                                               | Label attribute type. Options: <ul style="list-style-type: none"><li>● <b>text</b>: text</li><li>● <b>select</b>: single-choice drop-down list</li></ul> |
| values    | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values.                                                                                                                          |

**Table 28-124** LabelAttributeValue

| Parameter | Type   | Description               |
|-----------|--------|---------------------------|
| id        | String | Label attribute value ID. |
| value     | String | Label attribute value.    |

**Table 28-125** LabelProperty

| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> .                                                                                                                                                                                                                                                                                   |
| @modelarts:default_shape | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>● <b>bndbox</b>: rectangle</li><li>● <b>polygon</b>: polygon</li><li>● <b>circle</b>: circle</li><li>● <b>line</b>: straight line</li><li>● <b>dashed</b>: dotted line</li><li>● <b>point</b>: point</li><li>● <b>polyline</b>: polyline</li></ul> |
| @modelarts:from_type     | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |

| Parameter            | Type   | Description                                                                                                                                                                                                    |
|----------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:rename_to | String | Default attribute: The new name of the label.                                                                                                                                                                  |
| @modelarts:shortcut  | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                       |
| @modelarts:tail_type | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |

## Example Requests

Obtaining Sample Search Condition

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/data-annotations/search-condition
```

## Example Responses

**Status code: 200**

OK

```
{
 "labels" : [{
 "name" : "Rabbits",
 "type" : 0,
 "property" : {
 "@modelarts:color" : "#3399ff"
 }
 }, {
 "name" : "Bees",
 "type" : 0,
 "property" : {
 "@modelarts:color" : "#3399ff"
 }
 }],
 "metadata" : { },
 "labelers" : ["human/test_123/test_123", "human/xxx@xxx.com", "human/xxx@xxx.com"]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |



## Error Codes

See [Error Codes](#).

## 28.1.17 Obtaining a Sample List of a Team Labeling Task by Page

### Function

Obtain a sample list of a team labeling task by page.

### Debugging

You can debug this API in [API Explorer](#) which supports automatic authentication. API Explorer can automatically generate SDK code examples and provide the SDK code example debugging.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}/data-annotations/samples

**Table 28-126** URI parameters

| Parameter         | Mandatory | Type   | Description                                                                    |
|-------------------|-----------|--------|--------------------------------------------------------------------------------|
| dataset_id        | Yes       | String | Dataset ID                                                                     |
| project_id        | Yes       | String | Project ID. For details, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a team labeling task.                                                    |

**Table 28-127** Query parameters

| Parameter  | Mandatory | Type   | Description |
|------------|-----------|--------|-------------|
| label_name | No        | String | Label name  |

| Parameter         | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| label_type        | No        | Integer | <b>Labeling Type:</b> Options: <ul style="list-style-type: none"><li>• <b>0:</b> image classification</li><li>• <b>1:</b> object detection</li><li>• <b>3:</b> image segmentation</li><li>• <b>100:</b> text classification</li><li>• <b>101:</b> named entity recognition</li><li>• <b>102:</b> text triplet</li><li>• <b>200:</b> sound classification</li><li>• <b>201:</b> speech content</li><li>• <b>202:</b> speech paragraph labeling</li><li>• <b>400:</b> table dataset</li><li>• <b>600:</b> video labeling</li><li>• <b>900:</b> free format</li></ul> |
| limit             | No        | Integer | Maximum number of records returned on each page. The value ranges from <b>1</b> to <b>100</b> . The default value is <b>10</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| locale            | No        | String  | Language Options: <ul style="list-style-type: none"><li>• <b>zh-cn:</b> Chinese</li><li>• <b>en-us:</b> English (default value)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                          |
| offset            | No        | Integer | Start page for pagination display. The default value is <b>0</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| process_parameter | No        | String  | Image resize configuration, which is the same as OBS settings. For details, see <a href="#">Resizing Images</a> . For example, <b>image/resize,m_lfit,h_200</b> indicates that the target image is resized proportionally and the height is set to 200 pixels.                                                                                                                                                                                                                                                                                                     |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_state      | No        | String | Sample status. Options: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: unlabeled</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: accepted</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: reviewed</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: sampling pending check</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: sampling checked</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: sampling accepted</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: sampling rejected</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| search_conditions | No        | String | Multi-dimensional search criteria after URL encoding. The relationship between multiple search conditions is AND.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 28-128** Response body parameters

| Parameter    | Type                                                | Description       |
|--------------|-----------------------------------------------------|-------------------|
| sample_count | Integer                                             | Number of samples |
| samples      | Array of <a href="#">DescribeSampleResp</a> objects | List of samples   |

**Table 28-129** DescribeSampleResp

| Parameter        | Type                                         | Description                                                                                                                                                                                                                |
|------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| check_accept     | Boolean                                      | Whether the acceptance is passed, which is used for team labeling. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The acceptance is passed.</li><li>• <b>false</b>: The acceptance is not passed.</li></ul> |
| check_comment    | String                                       | Acceptance comment, which is used for team labeling.                                                                                                                                                                       |
| check_score      | String                                       | Acceptance score, which is used for team labeling.                                                                                                                                                                         |
| deletion_reasons | Array of strings                             | Reason for deleting a sample, which is used for healthcare.                                                                                                                                                                |
| hard_details     | Map<String, <a href="#">HardDetail</a> >     | Difficult problem details, including description, causes, and suggestions of difficult problems.                                                                                                                           |
| labelers         | Array of <a href="#">Worker</a> objects      | Labeling personnel list of sample allocation. The list records the team members receiving the samples, which is used for team labeling.                                                                                    |
| labels           | Array of <a href="#">SampleLabel</a> objects | List of sample labels                                                                                                                                                                                                      |
| metadata         | <a href="#">SampleMetadata</a> object        | Attribute key-value pair of the sample metadata                                                                                                                                                                            |
| review_accept    | Boolean                                      | Whether to accept the review, which is used for team labeling. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The review is accepted.</li><li>• <b>false</b>: The review is rejected.</li></ul>             |
| review_comment   | String                                       | Review comment, which is used for team labeling.                                                                                                                                                                           |
| review_score     | String                                       | Review score, which is used for team labeling.                                                                                                                                                                             |

| Parameter      | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_data    | Array of strings | List of sample data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| sample_dir     | String           | Path for storing a sample                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| sample_id      | String           | Sample ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| sample_name    | String           | Sample name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| sample_size    | Long             | Sample size or text length, in bytes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| sample_status  | String           | Sample status. Options: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: unlabeled</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: accepted</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: reviewed</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: sampling pending check</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: sampling checked</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: sampling accepted</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: sampling rejected</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| sample_time    | Long             | Sample time, when OBS is last modified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| sample_type    | Integer          | Sample type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image</li><li>• <b>1</b>: text</li><li>• <b>2</b>: audio</li><li>• <b>4</b>: table</li><li>• <b>6</b>: video</li><li>• <b>9</b>: free format</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| score          | String           | Comprehensive score, which is used for team labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| source         | String           | Source address of sample data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| sub_sample_url | String           | Subsample URL, which is used for healthcare.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Parameter | Type   | Description                                                    |
|-----------|--------|----------------------------------------------------------------|
| worker_id | String | ID of a labeling team member, which is used for team labeling. |

**Table 28-130** HardDetail

| Parameter  | Type    | Description         |
|------------|---------|---------------------|
| alo_name   | String  | Alias               |
| id         | Integer | Reason ID           |
| reason     | String  | Reason description  |
| suggestion | String  | Handling suggestion |

**Table 28-131** Worker

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                       |
|--------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time  | Long    | Worker creation time                                                                                                                                                                                                                                                                              |
| description  | String  | Labeling team member description. The value contains 0 to 256 characters. Special characters (^!<>=&"') are not allowed.                                                                                                                                                                          |
| email        | String  | Email address of a labeling team member                                                                                                                                                                                                                                                           |
| role         | Integer | Role. Options: <ul style="list-style-type: none"><li>● 0: marker</li><li>● 1: reviewer</li><li>● 2: team manager</li><li>● 3: dataset owner</li></ul>                                                                                                                                             |
| status       | Integer | Current login status of a labeled member. Options: <ul style="list-style-type: none"><li>● 0: No invitation email is sent.</li><li>● 1: The invitation email is sent but the member has not logged in.</li><li>● 2: The member has logged in.</li><li>● 3: The member has been deleted.</li></ul> |
| update_time  | Long    | Worker update time                                                                                                                                                                                                                                                                                |
| worker_id    | String  | ID of a labeling team member                                                                                                                                                                                                                                                                      |
| workforce_id | String  | ID of a labeling team                                                                                                                                                                                                                                                                             |

**Table 28-132** SampleLabel

| Parameter    | Type                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_by | String                                     | Video labeling method, which is used to determine whether a video is labeled manually or automatically. Options: <ul style="list-style-type: none"><li>• <b>human</b>: manual labeling</li><li>• <b>auto</b>: auto labeling</li></ul>                                                                                                                                                                                                                                                                                                     |
| id           | String                                     | Label ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| name         | String                                     | Label name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| property     | <a href="#">SampleLabelProperty</a> object | Attribute key-value pair of the sample label, such as the object shape and shape feature                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| score        | Float                                      | Confidence. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| type         | Integer                                    | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-133** SampleLabelProperty

| Parameter          | Type   | Description                                                                                                                                    |
|--------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:content | String | Speech text content, which is a default attribute dedicated to the speech label (including the speech content and speech start and end points) |

| Parameter            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:end_index | Integer | <p>End position of the text, which is a default attribute dedicated to the named entity label. The end position does not include the character corresponding to the value of <b>end_index</b>. Examples:</p> <ul style="list-style-type: none"><li>• If the text is "<b>Barack Hussein Obama II (born on August 4, 1961) is an attorney and politician.</b>", the <b>start_index</b> and <b>end_index</b> of <b>Barack Hussein Obama II</b> are <b>0</b> and <b>23</b>, respectively.</li><li>• If the text is "<b>Hope is the thing with feathers</b>", <b>start_index</b> and <b>end_index</b> of <b>Hope</b> are <b>0</b> and <b>4</b>, respectively.</li></ul> |
| @modelarts:end_time  | String  | <p>Speech end time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. (<b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)</p>                                                                                                                                                                                                                                                                                                                                                                                                       |



| Parameter                   | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:feature          | Object | <p>Shape feature, which is a default attribute dedicated to the object detection label, with type of <b>List</b>. The upper left corner of an image is used as the coordinate origin <b>[0, 0]</b>. Each coordinate point is represented by <b>[x, y]</b>. <i>x</i> indicates the horizontal coordinate, and <i>y</i> indicates the vertical coordinate (both <i>x</i> and <i>y</i> are greater than or equal to 0). The format of each shape is as follows:</p> <ul style="list-style-type: none"><li>• <b>bndbox</b>: consists of two points, for example, <b>[[0,10],[50,95]]</b>. The upper left vertex of the rectangle is the first point, and the lower right vertex is the second point. That is, the <i>x</i>-coordinate of the first point must be less than the <i>x</i>-coordinate of the second point, and the <i>y</i>-coordinate of the first point must be less than the <i>y</i>-coordinate of the second point.</li><li>• <b>polygon</b>: consists of multiple points that are connected in sequence to form a polygon, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li><li>• <b>circle</b>: consists of the center and radius, for example, <b>[[100,100],[50]]</b>.</li><li>• <b>line</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>dashed</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>point</b>: consists of one point, for example, <b>[[0,100]]</b>.</li><li>• <b>polyline</b>: consists of multiple points, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li></ul> |
| @modelarts:from             | String | Start entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| @modelarts:hard             | String | Whether the sample is labeled as a hard example, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0/false</b>: The label is not a hard example.</li><li>• <b>1/true</b>: The label is a hard example.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| @modelarts:hard_coefficient | String | Coefficient of difficulty of each label level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Parameter               | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | String | <p>Reasons why the sample is a hard example, which is a default attribute. Use a hyphen (-) to separate every two hard example reason IDs, for example, <b>3-20-21-19</b>. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on flplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |

| Parameter                | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:shape         | String  | Object shape, which is a default attribute dedicated to the object detection label and is left empty by default. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dashed line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:speech_source | String  | Speech source, which is a default attribute dedicated to the speech start/end point label and can be set to a speaker or narrator                                                                                                                                                                                                                                                                                  |
| @modelarts:start_index   | Integer | Start position of the text, which is a default attribute dedicated to the named entity label. The start value begins from 0, including the character corresponding to the value of <b>start_index</b> .                                                                                                                                                                                                            |
| @modelarts:start_time    | String  | Speech start time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                           |
| @modelarts:triplet_id    | String  | Direction entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                    |

**Table 28-134** SampleMetadata

| Parameter                   | Type    | Description                                                                                                                                                                                                                           |
|-----------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:import_origin    | Integer | Sample source, which is a default attribute.                                                                                                                                                                                          |
| @modelarts:hard             | Double  | Whether the sample is labeled as a hard example, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The label is not a hard example.</li><li>• <b>1</b>: The label is a hard example.</li></ul> |
| @modelarts:hard_coefficient | Double  | Coefficient of difficulty of each sample level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                            |

| Parameter               | Type              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | Array of integers | <p>ID of a hard example reason, which is a default attribute. Options:</p> <ul style="list-style-type: none"><li>● <b>0</b>: No object is identified.</li><li>● <b>1</b>: The confidence is low.</li><li>● <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>● <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>● <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>● <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>● <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>● <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>● <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>● <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>● <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>● <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>● <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>● <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>● <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>● <b>15</b>: There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on fliplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |

| Parameter       | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:size | Array of objects | Image size (width, height, and depth of the image), which is a default attribute, with type of <b>List&lt;Integer&gt;</b> . In the list, the first number indicates the width (pixels), the second number indicates the height (pixels), and the third number indicates the depth (the depth can be left blank and the default value is <b>3</b> ). For example, <b>[100,200,3]</b> and <b>[100,200]</b> are both valid. Note: This parameter is mandatory only when the sample label list contains the object detection label. |

## Request Example

Querying the Sample List of a Team Labeling Task by Page

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/data-annotations/samples
```

## Response Example

Status code: 200

OK

```
{
 "sample_count" : 2,
 "samples" : [{
 "sample_id" : "26c6dd793d80d3274eb89349ec76d678",
 "sample_type" : 0,
 "labels" : [],
 "source" : "https://test-obs.obs.xxx.com:443/detect/data/dataset-car-and-person/IMG_kitti_0000_000016.png?AccessKeyId=P19W9X830R1Z39P5X5M5&Expires=1606300137&x-obs-security-token=gQpjb1ub3J0aC03jKj8N6gtS4VsdTTW3QFoHMtpMoFLtCa6W_J4DxT0nYIfx...",
 "metadata" : {
 "@modelarts:import_origin" : 0,
 "@modelarts:size" : [1242, 375, 3]
 },
 "sample_time" : 1598263639997,
 "sample_status" : "UN_ANNOTATION",
 "worker_id" : "8c15ad080d3eabad14037b4eb00d6a6f",
 "labelers" : [{
 "email" : "xxx@xxx.com",
 "worker_id" : "afdda13895bc66322ffbf36ae833bcf0",
 "role" : 0
 }]
 }, {
 "sample_id" : "2971815bbb11a462161b48dddf19344f",
 "sample_type" : 0,
 "labels" : [],
 "source" : "https://test-obs.obs.xxx.com:443/detect/data/dataset-car-and-person/IMG_kitti_0000_000011.png?AccessKeyId=P19W9X830R1Z39P5X5M5&Expires=1606300137&x-obs-security-token=gQpjb1ub3J0aC03jKj8N6gtS4VsdTTW3QFoHMtpMoFLtC...",
 "metadata" : {
 "@modelarts:import_origin" : 0,
 "@modelarts:size" : [1242, 375, 3]
 },
 "sample_time" : 1598263639997,
 "sample_status" : "UN_ANNOTATION",
```

```
"worker_id" : "8c15ad080d3eabad14037b4eb00d6a6f",
"labelers" : [{
 "email" : "xxx@xxx.com",
 "worker_id" : "305595e1901a526017d2e11f3ab0ffe1",
 "role" : 0
}]
}]
}
```

## Status Code

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Code

For details, see [Error Codes](#).

## 28.1.18 Obtaining Details About a Team Labeling Sample

### Function

Obtain samples labeled by a team. The API can be called only after an acceptance task is initiated.

### Debugging

You can debug this API in [API Explorer](#) which supports automatic authentication. API Explorer can automatically generate SDK code examples and provide the SDK code example debugging.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}/data-annotations/samples/{sample\_id}

**Table 28-135** URI parameters

| Parameter  | Mandatory | Type   | Description                                                                    |
|------------|-----------|--------|--------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID                                                                     |
| project_id | Yes       | String | Project ID. For details, see <a href="#">Obtaining a Project ID and Name</a> . |



| Parameter         | Mandatory | Type   | Description      |
|-------------------|-----------|--------|------------------|
| sample_id         | Yes       | String | Sample ID        |
| workforce_task_id | Yes       | String | Labeling task ID |

**Table 28-136** Query parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| locale       | No        | String | Language Options: <ul style="list-style-type: none"><li>• <b>zh-cn</b>: Chinese</li><li>• <b>en-us</b>: English (default value)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| sample_state | No        | String | Sample status. Options: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: unlabeled</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: accepted</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: reviewed</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: sampling pending check</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: sampling checked</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: sampling accepted</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: sampling rejected</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| worker_id    | No        | String | ID of a labeling team member                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 28-137** Response body parameters

| Parameter        | Type                                         | Description                                                                                                                                                                                                                |
|------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| check_accept     | Boolean                                      | Whether the acceptance is passed, which is used for team labeling. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The acceptance is passed.</li><li>• <b>false</b>: The acceptance is not passed.</li></ul> |
| check_comment    | String                                       | Acceptance comment, which is used for team labeling.                                                                                                                                                                       |
| check_score      | String                                       | Acceptance score, which is used for team labeling.                                                                                                                                                                         |
| deletion_reasons | Array of strings                             | Reason for deleting a sample, which is used for healthcare.                                                                                                                                                                |
| hard_details     | Map<String, <a href="#">HardDetail</a> >     | Difficult problem details, including description, causes, and suggestions of difficult problems.                                                                                                                           |
| labelers         | Array of <a href="#">Worker</a> objects      | Labeling personnel list of sample allocation. The list records the team members receiving the samples, which is used for team labeling.                                                                                    |
| labels           | Array of <a href="#">SampleLabel</a> objects | List of sample labels                                                                                                                                                                                                      |
| metadata         | <a href="#">SampleMetadata</a> object        | Attribute key-value pair of the sample metadata                                                                                                                                                                            |
| review_accept    | Boolean                                      | Whether to accept the review, which is used for team labeling. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The review is accepted.</li><li>• <b>false</b>: The review is rejected.</li></ul>             |
| review_comment   | String                                       | Review comment, which is used for team labeling.                                                                                                                                                                           |
| review_score     | String                                       | Review score, which is used for team labeling.                                                                                                                                                                             |
| sample_data      | Array of strings                             | List of sample data                                                                                                                                                                                                        |
| sample_dir       | String                                       | Path for storing a sample                                                                                                                                                                                                  |
| sample_id        | String                                       | Sample ID                                                                                                                                                                                                                  |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_name    | String  | Sample name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| sample_size    | Long    | Sample size or text length, in bytes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| sample_status  | String  | Sample status. Options: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: unlabeled</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: accepted</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: reviewed</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: sampling pending check</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: sampling checked</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: sampling accepted</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: sampling rejected</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| sample_time    | Long    | Sample time, when OBS is last modified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| sample_type    | Integer | Sample type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image</li><li>• <b>1</b>: text</li><li>• <b>2</b>: audio</li><li>• <b>4</b>: table</li><li>• <b>6</b>: video</li><li>• <b>9</b>: free format</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| score          | String  | Comprehensive score, which is used for team labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| source         | String  | Source address of sample data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| sub_sample_url | String  | Subsample URL, which is used for healthcare.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| worker_id      | String  | ID of a labeling team member, which is used for team labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**Table 28-138** HardDetail

| Parameter  | Type    | Description         |
|------------|---------|---------------------|
| alo_name   | String  | Alias               |
| id         | Integer | Reason ID           |
| reason     | String  | Reason description  |
| suggestion | String  | Handling suggestion |

**Table 28-139** Worker

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                       |
|--------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time  | Long    | Worker creation time                                                                                                                                                                                                                                                                              |
| description  | String  | Labeling team member description. The value contains 0 to 256 characters. Special characters (^!<>=&"') are not allowed.                                                                                                                                                                          |
| email        | String  | Email address of a labeling team member                                                                                                                                                                                                                                                           |
| role         | Integer | Role. Options: <ul style="list-style-type: none"><li>● 0: marker</li><li>● 1: reviewer</li><li>● 2: team manager</li><li>● 3: dataset owner</li></ul>                                                                                                                                             |
| status       | Integer | Current login status of a labeled member. Options: <ul style="list-style-type: none"><li>● 0: No invitation email is sent.</li><li>● 1: The invitation email is sent but the member has not logged in.</li><li>● 2: The member has logged in.</li><li>● 3: The member has been deleted.</li></ul> |
| update_time  | Long    | Worker update time                                                                                                                                                                                                                                                                                |
| worker_id    | String  | ID of a labeling team member                                                                                                                                                                                                                                                                      |
| workforce_id | String  | ID of a labeling team                                                                                                                                                                                                                                                                             |

**Table 28-140** SampleLabel

| Parameter    | Type                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_by | String                                     | Video labeling method, which is used to determine whether a video is labeled manually or automatically. Options: <ul style="list-style-type: none"><li>• <b>human</b>: manual labeling</li><li>• <b>auto</b>: auto labeling</li></ul>                                                                                                                                                                                                                                                                                                     |
| id           | String                                     | Label ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| name         | String                                     | Label name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| property     | <a href="#">SampleLabelProperty</a> object | Attribute key-value pair of the sample label, such as the object shape and shape feature                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| score        | Float                                      | Confidence. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| type         | Integer                                    | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-141** SampleLabelProperty

| Parameter          | Type   | Description                                                                                                                                    |
|--------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:content | String | Speech text content, which is a default attribute dedicated to the speech label (including the speech content and speech start and end points) |

| Parameter            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:end_index | Integer | <p>End position of the text, which is a default attribute dedicated to the named entity label. The end position does not include the character corresponding to the value of <b>end_index</b>. Examples:</p> <ul style="list-style-type: none"><li>• If the text is "<b>Barack Hussein Obama II (born on August 4, 1961) is an attorney and politician.</b>", the <b>start_index</b> and <b>end_index</b> of <b>Barack Hussein Obama II</b> are <b>0</b> and <b>23</b>, respectively.</li><li>• If the text is "<b>Hope is the thing with feathers</b>", <b>start_index</b> and <b>end_index</b> of <b>Hope</b> are <b>0</b> and <b>4</b>, respectively.</li></ul> |
| @modelarts:end_time  | String  | <p>Speech end time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. (<b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)</p>                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter                   | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:feature          | Object | <p>Shape feature, which is a default attribute dedicated to the object detection label, with type of <b>List</b>. The upper left corner of an image is used as the coordinate origin <b>[0, 0]</b>. Each coordinate point is represented by <b>[x, y]</b>. <i>x</i> indicates the horizontal coordinate, and <i>y</i> indicates the vertical coordinate (both <i>x</i> and <i>y</i> are greater than or equal to 0). The format of each shape is as follows:</p> <ul style="list-style-type: none"><li>• <b>bndbox</b>: consists of two points, for example, <b>[[0,10],[50,95]]</b>. The upper left vertex of the rectangle is the first point, and the lower right vertex is the second point. That is, the <i>x</i>-coordinate of the first point must be less than the <i>x</i>-coordinate of the second point, and the <i>y</i>-coordinate of the first point must be less than the <i>y</i>-coordinate of the second point.</li><li>• <b>polygon</b>: consists of multiple points that are connected in sequence to form a polygon, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li><li>• <b>circle</b>: consists of the center and radius, for example, <b>[[100,100],[50]]</b>.</li><li>• <b>line</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>dashed</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>point</b>: consists of one point, for example, <b>[[0,100]]</b>.</li><li>• <b>polyline</b>: consists of multiple points, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li></ul> |
| @modelarts:from             | String | Start entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| @modelarts:hard             | String | Whether the sample is labeled as a hard example, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0/false</b>: The label is not a hard example.</li><li>• <b>1/true</b>: The label is a hard example.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| @modelarts:hard_coefficient | String | Coefficient of difficulty of each label level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Parameter               | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | String | <p>Reasons why the sample is a hard example, which is a default attribute. Use a hyphen (-) to separate every two hard example reason IDs, for example, <b>3-20-21-19</b>. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li></ul> |



| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on flplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |

| Parameter              | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:shape       | String  | Object shape, which is a default attribute dedicated to the object detection label and is left empty by default. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dashed line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:source      | String  | Speech source, which is a default attribute dedicated to the speech start/end point label and can be set to a speaker or narrator                                                                                                                                                                                                                                                                                  |
| @modelarts:start_index | Integer | Start position of the text, which is a default attribute dedicated to the named entity label. The start value begins from 0, including the character corresponding to the value of <b>start_index</b> .                                                                                                                                                                                                            |
| @modelarts:start_time  | String  | Speech start time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                           |
| @modelarts:triplet_id  | String  | Direction entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                    |

**Table 28-142** SampleMetadata

| Parameter                   | Type    | Description                                                                                                                                                                                                                          |
|-----------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:import_origin    | Integer | Sample source, which is a default attribute.                                                                                                                                                                                         |
| @modelarts:hard             | Double  | Whether the sample is labeled as a hard sample, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The label is not a hard example.</li><li>• <b>1</b>: The label is a hard example.</li></ul> |
| @modelarts:hard_coefficient | Double  | Coefficient of difficulty of each sample level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                           |

| Parameter               | Type              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | Array of integers | <p>ID of a hard example reason, which is a default attribute. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>• <b>15</b>: There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on fliplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |

| Parameter       | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:size | Array of objects | Default attribute: image size, including width, height, and depth. The type is List[/topic/body/section/table/tgroup/tbody/row/entry/p/br. {""}] (br]. In the list, the first number indicates the width (pixels), the second number indicates the height (pixels), and the third number indicates the depth (the depth can be left blank and the default value is 3). For example, [100,200,3] and [100,200] are both valid. Note: This parameter is mandatory only when the sample label list contains the object detection label. |

## Request Example

Run the following command to obtain details about a team labeling sample:

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/data-annotations/samples/{sample_id}
```

## Response Example

**Status code: 200**

OK

```
{
 "sample_id" : "26c6dd793d80d3274eb89349ec76d678",
 "sample_type" : 0,
 "labels" : [],
 "source" : "https://test-obs.obs.xxx.com:443/detect/data/dataset-car-and-person/IMG_kitti_0000_000016.png?AccessKeyId=4D34AYDTK93HUY79NSD7&Expires=1606300437&x-obs-security-token=gQpjb1ub3J0aC03jELficNKUP87aSTlhvsHQAvmcyVbXLYTrU2XJlc28F7kiXanJ3TyJV39iXl0yi5mzQ...",
 "metadata" : {
 "@modelarts:import_origin" : 0,
 "@modelarts:size" : [1242, 375, 3]
 },
 "sample_time" : 1598263639997,
 "sample_status" : "UN_ANNOTATION",
 "worker_id" : "8c15ad080d3eabad14037b4eb00d6a6f",
 "labelers" : [{
 "email" : "xxx@xxx.com",
 "worker_id" : "afdda13895bc66322ffbf36ae833bcf0",
 "role" : 0
 }]
}
```

## Status Code

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |

| Status Code | Description |
|-------------|-------------|
| 403         | Forbidden   |
| 404         | Not Found   |

## Error Code

For details, see [Error Codes](#).

## 28.1.19 Querying the Dataset Label List

### Function

This API is used to query all labels of a dataset.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/data-annotations/labels

**Table 28-143** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-144** Query Parameters

| Parameter  | Mandatory | Type    | Description                                                        |
|------------|-----------|---------|--------------------------------------------------------------------|
| version_id | No        | String  | Dataset version ID.                                                |
| offset     | No        | Integer | Start page for pagination display. The default value is <b>0</b> . |

| Parameter | Mandatory | Type    | Description                                                                                                              |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------|
| limit     | No        | Integer | Maximum number of records returned on each page. The value ranges from 1 to 100000. The default value is <b>100000</b> . |

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 28-145** Response body parameters

| Parameter    | Type                                   | Description      |
|--------------|----------------------------------------|------------------|
| labels       | Array of <a href="#">Label</a> objects | Label list.      |
| total_number | Integer                                | Number of labels |

**Table 28-146** Label

| Parameter  | Type                                            | Description                                                                                                                      |
|------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| attributes | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included. |
| name       | String                                          | Label name.                                                                                                                      |
| property   | <a href="#">LabelProperty</a> object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                      |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Integer | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-147** LabelAttribute

| Parameter     | Type                                                 | Description                                                                                                                                              |
|---------------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| default_value | String                                               | Default value of a label attribute.                                                                                                                      |
| id            | String                                               | Label attribute ID. You can query the tag by invoking the tag list.                                                                                      |
| name          | String                                               | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&'".                                            |
| type          | String                                               | Label attribute type. Options: <ul style="list-style-type: none"><li>• <b>text</b>: text</li><li>• <b>select</b>: single-choice drop-down list</li></ul> |
| values        | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values.                                                                                                                          |

**Table 28-148** LabelAttributeValue

| Parameter | Type   | Description               |
|-----------|--------|---------------------------|
| id        | String | Label attribute value ID. |
| value     | String | Label attribute value.    |



**Table 28-149** LabelProperty

| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> .                                                                                                                                                                                                                                                                                   |
| @modelarts:default_shape | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:from_type     | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |
| @modelarts:rename_to     | String | Default attribute: The new name of the label.                                                                                                                                                                                                                                                                                                                                                                                    |
| @modelarts:shortcut      | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                                                                                                                                                                                                                                         |
| @modelarts:to_type       | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |

## Example Requests

Querying All Labels of a Dataset

```
GET https://{endpoint}/v2/{project_id}/datasets/WxCREuCkBSAlQr9xrde/data-annotations/labels
```

## Example Responses

**Status code: 200**

OK

```
{
 "total_number" : 2,
 "labels" : [{
```

```
{
 "name" : "Rabbits",
 "type" : 1,
 "property" : {
 "@modelarts:color" : "#3399ff"
 }
}, {
 "name" : "Bees",
 "type" : 1,
 "property" : {
 "@modelarts:color" : "#3399ff"
 }
}]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.20 Creating a Dataset Label

### Function

This API is used to create a dataset label.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/data-annotations/labels

**Table 28-150** Path Parameters

| Parameter  | Mandatory | Type   | Description |
|------------|-----------|--------|-------------|
| dataset_id | Yes       | String | Dataset ID. |

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Parameters

**Table 28-151** Request body parameters

| Parameter | Mandatory | Type                                   | Description                   |
|-----------|-----------|----------------------------------------|-------------------------------|
| labels    | No        | Array of <a href="#">Label</a> objects | List of labels to be created. |

**Table 28-152** Label

| Parameter  | Mandatory | Type                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------|-----------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| attributes | No        | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included.                                                                                                                                                                                                                                                                                                                                                                                                          |
| name       | No        | String                                          | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property   | No        | <a href="#">LabelProperty</a> object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| type       | No        | Integer                                         | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-153** LabelAttribute

| Parameter     | Mandatory | Type                                                 | Description                                                                                                                                              |
|---------------|-----------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| default_value | No        | String                                               | Default value of a label attribute.                                                                                                                      |
| id            | No        | String                                               | Label attribute ID. You can query the tag by invoking the tag list.                                                                                      |
| name          | No        | String                                               | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&".                                             |
| type          | No        | String                                               | Label attribute type. Options: <ul style="list-style-type: none"><li>• <b>text</b>: text</li><li>• <b>select</b>: single-choice drop-down list</li></ul> |
| values        | No        | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values.                                                                                                                          |

**Table 28-154** LabelAttributeValue

| Parameter | Mandatory | Type   | Description               |
|-----------|-----------|--------|---------------------------|
| id        | No        | String | Label attribute value ID. |
| value     | No        | String | Label attribute value.    |

**Table 28-155** LabelProperty

| Parameter        | Mandatory | Type   | Description                                                                                                                                    |
|------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color | No        | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> . |

| Parameter                | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:default_shape | No        | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:from_type     | No        | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |
| @modelarts:rename_to     | No        | String | Default attribute: The new name of the label.                                                                                                                                                                                                                                                                                                                                                                                    |
| @modelarts:shortcut      | No        | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                                                                                                                                                                                                                                         |
| @modelarts:tail_type     | No        | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |

## Response Parameters

Status code: 200

Table 28-156 Response body parameters

| Parameter  | Type   | Description |
|------------|--------|-------------|
| error_code | String | Error code. |

| Parameter | Type                                           | Description                                                                                                                                                                                         |
|-----------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_msg | String                                         | Error message.                                                                                                                                                                                      |
| results   | Array of <a href="#">BatchResponse</a> objects | Response body for creating a label.                                                                                                                                                                 |
| success   | Boolean                                        | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

**Table 28-157** BatchResponse

| Parameter  | Type    | Description                                                                                                                                                                                         |
|------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String  | Error code.                                                                                                                                                                                         |
| error_msg  | String  | Error message.                                                                                                                                                                                      |
| success    | Boolean | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

## Example Requests

The following is an example of how to create a dataset label whose name is **Cat** and shape is **bndbox** for object detection by default.

```
{
 "labels": [{
 "name": "Cat",
 "property": {
 "@modelarts:color": "#3399ff",
 "@modelarts:default_shape": "bndbox"
 }
 }]
}
```

## Example Responses

**Status code: 200**

OK

```
{
 "success": true
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.21 Modifying Labels in Batches

### Function

This API is used to modify labels in batches.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

PUT /v2/{project\_id}/datasets/{dataset\_id}/data-annotations/labels

**Table 28-158** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Parameters

**Table 28-159** Request body parameters

| Parameter | Mandatory | Type                                   | Description                   |
|-----------|-----------|----------------------------------------|-------------------------------|
| labels    | No        | Array of <a href="#">Label</a> objects | List of labels to be updated. |

**Table 28-160** Label

| Parameter  | Mandatory | Type                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------|-----------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| attributes | No        | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included.                                                                                                                                                                                                                                                                                                                                                                                                          |
| name       | No        | String                                          | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property   | No        | <a href="#">LabelProperty</a> object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| type       | No        | Integer                                         | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-161** LabelAttribute

| Parameter     | Mandatory | Type   | Description                         |
|---------------|-----------|--------|-------------------------------------|
| default_value | No        | String | Default value of a label attribute. |



| Parameter | Mandatory | Type                                                 | Description                                                                                                                                              |
|-----------|-----------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | No        | String                                               | Label attribute ID. You can query the tag by invoking the tag list.                                                                                      |
| name      | No        | String                                               | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&"".                                            |
| type      | No        | String                                               | Label attribute type. Options: <ul style="list-style-type: none"><li>• <b>text</b>: text</li><li>• <b>select</b>: single-choice drop-down list</li></ul> |
| values    | No        | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values.                                                                                                                          |

**Table 28-162** LabelAttributeValue

| Parameter | Mandatory | Type   | Description               |
|-----------|-----------|--------|---------------------------|
| id        | No        | String | Label attribute value ID. |
| value     | No        | String | Label attribute value.    |

**Table 28-163** LabelProperty

| Parameter        | Mandatory | Type   | Description                                                                                                                                    |
|------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color | No        | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> . |

| Parameter                | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:default_shape | No        | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:from_type     | No        | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |
| @modelarts:rename_to     | No        | String | Default attribute: The new name of the label.                                                                                                                                                                                                                                                                                                                                                                                    |
| @modelarts:shortcut      | No        | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                                                                                                                                                                                                                                         |
| @modelarts:tail_type     | No        | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |

## Response Parameters

Status code: 200

Table 28-164 Response body parameters

| Parameter  | Type   | Description |
|------------|--------|-------------|
| error_code | String | Error code. |

| Parameter | Type                                           | Description                                                                                                                                            |
|-----------|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_msg | String                                         | Error message.                                                                                                                                         |
| results   | Array of <a href="#">BatchResponse</a> objects | Response body for updating labels.                                                                                                                     |
| success   | Boolean                                        | Whether the operation is successful. Options: <ul style="list-style-type: none"><li>• <b>true</b>: successful</li><li>• <b>false</b>: failed</li></ul> |

**Table 28-165** BatchResponse

| Parameter  | Type    | Description                                                                                                                                                                                      |
|------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String  | Error code.                                                                                                                                                                                      |
| error_msg  | String  | Error message.                                                                                                                                                                                   |
| success    | Boolean | Check whether the operation is successful. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

## Example Requests

### Modifying Labels in Batches

```
{
 "labels": [{
 "name": "Cat",
 "property": {
 "@modelarts:color": "#8a1524",
 "@modelarts:rename_to": "pussycat"
 }
 }]
}
```

## Example Responses

**Status code: 200**

OK

```
{
 "success": true
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.22 Deleting Labels in Batches

### Function

This API is used to delete labels in batches.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/data-annotations/labels/delete

**Table 28-166** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-167** Query Parameters

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                           |
|---------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| delete_policy | No        | Integer | Whether to delete a label and samples containing the label. Options: <ul style="list-style-type: none"><li>• <b>0</b>: Delete the label.</li><li>• <b>1</b>: Delete the label and the samples that only contain this label, but do not delete source files.</li><li>• <b>2</b>: Delete the label and the samples that only contain this label and also delete source files.</li></ul> |

## Request Parameters

**Table 28-168** Request body parameters

| Parameter | Mandatory | Type                                   | Description                   |
|-----------|-----------|----------------------------------------|-------------------------------|
| labels    | No        | Array of <a href="#">Label</a> objects | List of labels to be deleted. |

**Table 28-169** Label

| Parameter  | Mandatory | Type                                            | Description                                                                                                                      |
|------------|-----------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| attributes | No        | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included. |
| name       | No        | String                                          | Label name.                                                                                                                      |
| property   | No        | <a href="#">LabelProperty</a> object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                      |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | No        | Integer | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-170** LabelAttribute

| Parameter     | Mandatory | Type                                                 | Description                                                                                                                                              |
|---------------|-----------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| default_value | No        | String                                               | Default value of a label attribute.                                                                                                                      |
| id            | No        | String                                               | Label attribute ID. You can query the tag by invoking the tag list.                                                                                      |
| name          | No        | String                                               | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&".                                             |
| type          | No        | String                                               | Label attribute type. Options: <ul style="list-style-type: none"><li>• <b>text</b>: text</li><li>• <b>select</b>: single-choice drop-down list</li></ul> |
| values        | No        | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values.                                                                                                                          |

**Table 28-171** LabelAttributeValue

| Parameter | Mandatory | Type   | Description               |
|-----------|-----------|--------|---------------------------|
| id        | No        | String | Label attribute value ID. |
| value     | No        | String | Label attribute value.    |

**Table 28-172** LabelProperty

| Parameter                | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | No        | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> .                                                                                                                                                                                                                                                                                   |
| @modelarts:default_shape | No        | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:from_type     | No        | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |
| @modelarts:rename_to     | No        | String | Default attribute: The new name of the label.                                                                                                                                                                                                                                                                                                                                                                                    |
| @modelarts:shortcut      | No        | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                                                                                                                                                                                                                                         |

| Parameter                 | Mandatory | Type   | Description                                                                                                                                                                                                    |
|---------------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:tail<br>o_type | No        | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |

## Response Parameters

Status code: 200

Table 28-173 Response body parameters

| Parameter  | Type                                           | Description                                                                                                                                                                                         |
|------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String                                         | Error code.                                                                                                                                                                                         |
| error_msg  | String                                         | Error message.                                                                                                                                                                                      |
| results    | Array of <a href="#">BatchResponse</a> objects | Response body for deleting a label.                                                                                                                                                                 |
| success    | Boolean                                        | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

Table 28-174 BatchResponse

| Parameter  | Type    | Description                                                                                                                                                                                         |
|------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String  | Error code.                                                                                                                                                                                         |
| error_msg  | String  | Error message.                                                                                                                                                                                      |
| success    | Boolean | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

## Example Requests

The following is an example of how to delete the tag named **strawberry**.



```
{
 "labels": [{
 "name": "strawberry"
 }]
}
```

## Example Responses

**Status code: 200**

OK

```
{
 "success": true
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.23 Updating a Label by Label Names

### Function

This API is used to update a label by label names.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

PUT /v2/{project\_id}/datasets/{dataset\_id}/data-annotations/labels/{label\_name}

**Table 28-175** Path Parameters

| Parameter  | Mandatory | Type   | Description |
|------------|-----------|--------|-------------|
| dataset_id | Yes       | String | Dataset ID. |

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| label_name | Yes       | String | Label name.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-176** Query Parameters

| Parameter  | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| label_type | No        | Integer | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship label</li><li>• <b>103</b>: text triplet entity label</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

## Request Parameters

**Table 28-177** Request body parameters

| Parameter        | Mandatory | Type   | Description                                                                                                                                    |
|------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color | No        | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> . |

| Parameter                | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:default_shape | No        | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:from_type     | No        | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |
| @modelarts:rename_to     | No        | String | Default attribute: The new name of the label.                                                                                                                                                                                                                                                                                                                                                                                    |
| @modelarts:shortcut      | No        | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                                                                                                                                                                                                                                         |
| @modelarts:to_type       | No        | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |

## Response Parameters

Status code: 204

Table 28-178 Response body parameters

| Parameter  | Type   | Description |
|------------|--------|-------------|
| error_code | String | Error code. |

| Parameter | Type    | Description                                                                                                                                            |
|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_msg | String  | Error message.                                                                                                                                         |
| success   | Boolean | Whether the operation is successful. Options: <ul style="list-style-type: none"><li>• <b>true</b>: successful</li><li>• <b>false</b>: failed</li></ul> |

## Example Requests

Updating a Label by Label Names

```
{
 "@modelarts:color" : "#93c47d"
}
```

## Example Responses

Status code: 204

No Content

```
{}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 204         | No Content   |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.24 Deleting a Label and the Files that Only Contain the Label

### Function

This API is used to delete a label and the files that only contain this label.

## Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

## URI

DELETE /v2/{project\_id}/datasets/{dataset\_id}/data-annotations/labels/{label\_name}

**Table 28-179** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| label_name | Yes       | String | Label name.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-180** Query Parameters

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                       |
|---------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| delete_source | No        | Boolean | Whether to delete the sample source files. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Delete the sample source files.</li><li>• <b>false</b>: Do not delete the sample source files. (Default value)</li></ul> |

| Parameter  | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| label_type | No        | Integer | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship label</li><li>• <b>103</b>: text triplet entity label</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

## Request Parameters

None

## Response Parameters

Status code: 204

**Table 28-181** Response body parameters

| Parameter  | Type    | Description                                                                                                                                                                                      |
|------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String  | Error code.                                                                                                                                                                                      |
| error_msg  | String  | Error message.                                                                                                                                                                                   |
| success    | Boolean | Check whether the operation is successful. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

## Example Requests

Deleting a Label and the Files that Only Contain the Label

```
DELETE https://{endpoint}/v2/{project_id}/datasets/WxCREuCkBSAlQr9xrde/data-annotations/labels/
%E8%8D%89%E8%8E%93
```

## Example Responses

Status code: 204

No Content

```
{
 "success" : true
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 204         | No Content   |
| 401         | Unauthorized |
| 403         | Forbidden    |

## Error Codes

See [Error Codes](#).

## 28.1.25 Updating Sample Labels in Batches

### Function

This API is used to update sample labels in batches, including adding, modifying, and deleting sample labels. If the parameter **Labels** of a sample in the request body is not specified, the label of the sample is deleted.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

PUT /v2/{project\_id}/datasets/{dataset\_id}/data-annotations/samples

Table 28-182 Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Parameters

**Table 28-183** Request body parameters

| Parameter | Mandatory | Type                                          | Description                              |
|-----------|-----------|-----------------------------------------------|------------------------------------------|
| email     | No        | String                                        | Email address of a labeling team member. |
| samples   | No        | Array of <a href="#">SampleLabels</a> objects | Updated sample list.                     |

**Table 28-184** SampleLabels

| Parameter    | Mandatory | Type                                          | Description                                                                                                                                                                                                                       |
|--------------|-----------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| labels       | No        | Array of <a href="#">SampleLabels</a> objects | Sample label list. If this parameter is left blank, all sample labels are deleted.                                                                                                                                                |
| metadata     | No        | <a href="#">SampleMetadata</a> object         | Key-value pair of the sample <b>metadata</b> attribute.                                                                                                                                                                           |
| sample_id    | No        | String                                        | Sample ID.                                                                                                                                                                                                                        |
| sample_type  | No        | Integer                                       | Sample type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image</li><li>• <b>1</b>: text</li><li>• <b>2</b>: speech</li><li>• <b>4</b>: table</li><li>• <b>6</b>: video</li><li>• <b>9</b>: custom format</li></ul> |
| sample_usage | No        | String                                        | Sample usage. Options: <ul style="list-style-type: none"><li>• <b>TRAIN</b>: training</li><li>• <b>EVAL</b>: evaluation</li><li>• <b>TEST</b>: test</li><li>• <b>INFERENCE</b>: inference</li></ul>                               |
| source       | No        | String                                        | Source address of sample data, which is obtained by invoking the sample list interface.                                                                                                                                           |
| worker_id    | No        | String                                        | ID of a labeling team member.                                                                                                                                                                                                     |



**Table 28-185** SampleLabel

| Parameter    | Mandatory | Type                                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|-----------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_by | No        | String                                         | Video labeling method, which is used to distinguish whether a video is labeled manually or automatically. Options: <ul style="list-style-type: none"><li>• <b>human</b>: manual labeling</li><li>• <b>auto</b>: automatic labeling</li></ul>                                                                                                                                                                                                                                                                                              |
| id           | No        | String                                         | Label ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| name         | No        | String                                         | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property     | No        | <a href="#">SampleLabel Property</a><br>object | Attribute key-value pair of the sample label, such as the object shape and shape feature.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| score        | No        | Float                                          | Confidence. The value range is [0,1].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| type         | No        | Integer                                        | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-186** SampleLabelProperty

| Parameter          | Mandatory | Type   | Description                                                                                                                                     |
|--------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:content | No        | String | Speech text content, which is a default attribute dedicated to the speech label (including the speech content and speech start and end points). |

| Parameter            | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:end_index | No        | Integer | <p>End position of the text, which is a default attribute dedicated to the named entity label. The end position does not include the character corresponding to the value of <b>end_index</b>.</p> <p>Example:</p> <ul style="list-style-type: none"><li>• If the text is "<b>Barack Hussein Obama II (born August 4, 1961) is an attorney and politician.</b>", <b>start_index</b> and <b>end_index</b> of <b>Barack Hussein Obama II</b> are <b>0</b> and <b>23</b>, respectively.</li><li>• If the text is "<b>Hope is the thing with feathers</b>", <b>start_index</b> and <b>end_index</b> of <b>Hope</b> are <b>0</b> and <b>4</b>, respectively.</li></ul> |
| @modelarts:end_time  | No        | String  | <p>Speech end time, which is a default attribute dedicated to the speech start/end point label, in the format of <b>hh:mm:ss.SSS</b>. (<b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)</p>                                                                                                                                                                                                                                                                                                                                                                                               |

| Parameter          | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:feature | No        | Object | <p>Shape feature, which is a default attribute dedicated to the object detection label, with type of <b>List</b>. The upper left corner of the image is used as the coordinate origin [0, 0]. Each coordinate point is represented by [x, y], where x indicates the horizontal coordinate and y indicates the vertical coordinate (both x and y are <math>\geq 0</math>). The format of each shape is as follows:</p> <ul style="list-style-type: none"><li>• <b>bndbox</b> consists of two points, for example, <b>[[0,10],[50,95]]</b>. The upper left vertex of the rectangle is the first point, and the lower right vertex is the second point. That is, the x-coordinate of the first point must be less than the x-coordinate of the second point, and the y-coordinate of the first point must be less than the y-coordinate of the second point.</li><li>• <b>polygon</b>: consists of multiple points that are connected in sequence to form a polygon, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li><li>• <b>circle</b>: consists of the center and radius, for example, <b>[[100,100],[50]]</b>.</li><li>• <b>line</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>dashed</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li></ul> |

| Parameter                   | Mandatory | Type   | Description                                                                                                                                                                                                                            |
|-----------------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             |           |        | <ul style="list-style-type: none"><li>• <b>point</b>: consists of one point, for example, <b>[[0,100]]</b>.</li><li>• <b>polyline</b>: consists of multiple points, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li></ul> |
| @modelarts:from             | No        | String | ID of the head entity in the triplet relationship label, which is a default attribute dedicated to the triplet relationship label.                                                                                                     |
| @modelarts:hard             | No        | String | Sample labeled as a hard sample or not, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0/false</b>: not a hard example</li><li>• <b>1/true</b>: hard example</li></ul>                              |
| @modelarts:hard_coefficient | No        | String | Coefficient of difficulty of each label level, which is a default attribute. The value range is <b>[0,1]</b> .                                                                                                                         |

| Parameter               | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | No        | String | <p>Reasons that the sample is a hard sample, which is a default attribute. Use a hyphen (-) to separate every two hard sample reason IDs, for example, <b>3-20-21-19</b>.</p> <p>Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No target objects are identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>• <b>10:</b> There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11:</b> There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12:</b> There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13:</b> There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14:</b> There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>• <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>• <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>• <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>• <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>• <b>19:</b> The data enhancement result based on</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p>GaussianBlur is inconsistent with the prediction result of the original image.</p> <ul style="list-style-type: none"><li>● <b>20:</b> The data enhancement result based on fliplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data enhancement result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data enhancement result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data enhancement result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data enhancement result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data enhancement result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data enhancement result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data enhancement result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data enhancement result based on add is inconsistent with the prediction result of the original image.</li></ul> |

| Parameter                | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          |           |         | <ul style="list-style-type: none"><li>● <b>29</b>: The data enhancement result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30</b>: The data is predicted to be abnormal.</li></ul>                                                                                                                                                                                 |
| @modelarts:shape         | No        | String  | Object shape, which is a default attribute dedicated to the object detection label and is left empty by default.<br>Options: <ul style="list-style-type: none"><li>● <b>bndbox</b>: rectangle</li><li>● <b>polygon</b>: polygon</li><li>● <b>circle</b>: circle</li><li>● <b>line</b>: straight line</li><li>● <b>dashed</b>: dotted line</li><li>● <b>point</b>: point</li><li>● <b>polyline</b>: polyline</li></ul> |
| @modelarts:speech_source | No        | String  | Speech source, which is a default attribute dedicated to the speech start/end point label and can be set to a speaker or narrator.                                                                                                                                                                                                                                                                                    |
| @modelarts:start_index   | No        | Integer | Start position of the text, which is a default attribute dedicated to the named entity label. The start value begins from 0, including the character corresponding to the value of <b>start_index</b> .                                                                                                                                                                                                               |
| @modelarts:start_time    | No        | String  | Speech start time, which is a default attribute dedicated to the speech start/end point label, in the format of <b>hh:mm:ss.SSS</b> . ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                      |
| @modelarts:tail_id       | No        | String  | ID of the tail entity in the triplet relationship label, which is a default attribute dedicated to the triplet relationship label.                                                                                                                                                                                                                                                                                    |



Table 28-187 SampleMetadata

| Parameter                   | Mandatory | Type    | Description                                                                                                                                                                          |
|-----------------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:import_origin    | No        | Integer | Sample source, which is a built-in attribute.                                                                                                                                        |
| @modelarts:hard             | No        | Double  | Whether the sample is labeled as a hard sample, which is a default attribute. Options: <ul style="list-style-type: none"><li>• 0: non-hard sample</li><li>• 1: hard sample</li></ul> |
| @modelarts:hard_coefficient | No        | Double  | Coefficient of difficulty of each sample level, which is a default attribute. The value range is [0,1].                                                                              |

| Parameter               | Mandatory | Type              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|-----------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | No        | Array of integers | <p>ID of a hard sample reason, which is a default attribute. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>● <b>11:</b> There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>● <b>12:</b> There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>● <b>13:</b> There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>● <b>14:</b> There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>● <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data enhancement result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data enhancement result based on fliplr is</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p>inconsistent with the prediction result of the original image.</p> <ul style="list-style-type: none"><li>● <b>21:</b> The data enhancement result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data enhancement result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data enhancement result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data enhancement result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data enhancement result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data enhancement result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data enhancement result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data enhancement result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data enhancement result based on invert is inconsistent with the prediction result of the original image.</li></ul> |

| Parameter       | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |           |                  | <ul style="list-style-type: none"><li>• <b>30</b>: The data is predicted to be abnormal.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                              |
| @modelarts:size | No        | Array of objects | Image size (width, height, and depth of the image), which is a default attribute, with type of <b>List&lt;Integer&gt;</b> . In the list, the first number indicates the width (pixels), the second number indicates the height (pixels), and the third number indicates the depth (the depth can be left blank and the default value is <b>3</b> ). For example, <b>[100,200,3]</b> and <b>[100,200]</b> are both valid. Note: This parameter is mandatory only when the sample label list contains the object detection label. |

## Response Parameters

Status code: 200

**Table 28-188** Response body parameters

| Parameter  | Type                                  | Description                                                                                                                                            |
|------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String                                | Error code.                                                                                                                                            |
| error_msg  | String                                | Error message.                                                                                                                                         |
| results    | Array of <b>BatchResponse</b> objects | Response list for updating sample labels in batches.                                                                                                   |
| success    | Boolean                               | Whether the operation is successful. Options: <ul style="list-style-type: none"><li>• <b>true</b>: successful</li><li>• <b>false</b>: failed</li></ul> |

**Table 28-189** BatchResponse

| Parameter  | Type   | Description    |
|------------|--------|----------------|
| error_code | String | Error code.    |
| error_msg  | String | Error message. |

| Parameter | Type    | Description                                                                                                                                                                                         |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| success   | Boolean | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

## Example Requests

### Updating Sample Labels in Batches

```
{
 "samples": [{
 "sample_id": "8b583c44bf249f8ba43ea42c92920221",
 "labels": [{
 "name": "yunbao"
 }]
 }, {
 "sample_id": "b5fe3039879660a2e6bf18166e247f68",
 "labels": [{
 "name": "yunbao"
 }]
 }]
}
```

## Example Responses

Status code: 200

OK

```
{
 "success": true
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.26 Querying the Team Labeling Task List of a Dataset

### Function

This API is used to query the team labeling task list of a dataset.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks

**Table 28-190** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-191** Query Parameters

| Parameter | Mandatory | Type    | Description                                                                                                          |
|-----------|-----------|---------|----------------------------------------------------------------------------------------------------------------------|
| offset    | No        | Integer | Start page for pagination display. The default value is <b>0</b> .                                                   |
| limit     | No        | Integer | Maximum number of records returned on each page. The value ranges from 1 to 1000. The default value is <b>1000</b> . |

### Request Parameters

None

### Response Parameters

Status code: 200

**Table 28-192** Response body parameters

| Parameter | Type                                           | Description                              |
|-----------|------------------------------------------------|------------------------------------------|
| count     | Integer                                        | Total number of team labeling tasks.     |
| tasks     | Array of <a href="#">WorkforceTask</a> objects | Team labeling task list queried by page. |

**Table 28-193** WorkforceTask

| Parameter                | Type                                             | Description                                                                                                                                                                                                                                                                                                                                              |
|--------------------------|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| auto_sync_dataset        | Boolean                                          | Whether to automatically synchronize the result of a team labeling task to the dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Automatically synchronize the result of a team labeling task to the dataset.</li><li>• <b>false</b>: Do not automatically synchronize the result of a team labeling task to the dataset.</li></ul> |
| check_rate               | Double                                           | Acceptance ratio of a team labeling task.                                                                                                                                                                                                                                                                                                                |
| checking_task_desc       | <a href="#">WorkforceSamplingTaskDesc</a> object | Details about the current acceptance task of a team labeling task.                                                                                                                                                                                                                                                                                       |
| create_time              | Long                                             | Time when a labeling task is created.                                                                                                                                                                                                                                                                                                                    |
| dataset_id               | String                                           | Dataset ID.                                                                                                                                                                                                                                                                                                                                              |
| description              | String                                           | Description of a labeling task.                                                                                                                                                                                                                                                                                                                          |
| label_stats              | Array of <a href="#">LabelStats</a> objects      | Label statistics of a labeling task.                                                                                                                                                                                                                                                                                                                     |
| pass_rate                | Double                                           | Acceptance pass rate of a team labeling task.                                                                                                                                                                                                                                                                                                            |
| repetition               | Integer                                          | Number of persons who label each sample in a team labeling task. The minimum value is <b>1</b> .                                                                                                                                                                                                                                                         |
| sample_search_conditions | Array of <a href="#">SearchCondition</a> objects | Sample search criteria when creating a task.                                                                                                                                                                                                                                                                                                             |
| sample_stats             | <a href="#">SampleStats</a> object               | Sample statistics of a labeling task.                                                                                                                                                                                                                                                                                                                    |
| score                    | Double                                           | Average acceptance score of a team labeling task.                                                                                                                                                                                                                                                                                                        |



| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | Integer | <p>Status of a team labeling task. Options:</p> <ul style="list-style-type: none"><li>● <b>0</b>: Starting. The owner or manager is starting the task, and files to be labeled are still being allocated. The owner, manager, annotator, and reviewer can view the task list. Since the task allocation has not been completed, no other task can be started.</li><li>● <b>1</b>: Running. The annotator or reviewer performs labeling or reviews the task, and the owner performs acceptance. For example, new files need to be allocated again if auto labeling files are added or synchronized, or unlabeled files are imported.</li><li>● <b>2</b>: Accepting. The owner initiates an acceptance task, but the acceptance has not been completed. In this state, a new acceptance task can be started only after the current one is completed.</li><li>● <b>3</b>: Accepted. The team labeling task has been completed.</li><li>● <b>**4</b>: Rejected. The manager starts the task again. In this state, samples need to be labeled and the task must be reviewed again.</li><li>● <b>5</b>: Synchronizing acceptance result. This status is added when an acceptance task changes to be asynchronous. In this state, no new acceptance task can be initiated and the current acceptance task cannot be continued. In the task name area, the system displays a message indicating that the acceptance result is being synchronized.</li><li>● <b>6</b>: Created. The task has been created by the owner but has not been started. Only the owner and manager can view the task list.</li><li>● <b>7</b>: Acceptance sampling. This status is added when an acceptance task changes to be asynchronous. In this state, no new acceptance task can be initiated and the current acceptance task cannot be continued. In the task name area, the system displays a message indicating that acceptance sampling is in progress.</li></ul> |

| Parameter                      | Type                           | Description                                                                                                                                                                                                                                                                                                                     |
|--------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| synchronize_auto_labeling_data | Boolean                        | Whether to synchronize the auto labeling result of a team labeling task. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Synchronize the results to be confirmed to team members after auto labeling is complete.</li><li>• <b>false</b>: Do not synchronize the auto labeling results. (Default value)</li></ul> |
| synchronize_data               | Boolean                        | Whether to synchronize the added data of a team labeling task. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Synchronize uploaded files, data sources, and imported unlabeled files to team members.</li><li>• <b>false</b>: Do not synchronize the added data. (Default value)</li></ul>                       |
| task_id                        | String                         | ID of a labeling task.                                                                                                                                                                                                                                                                                                          |
| task_name                      | String                         | Name of a labeling task.                                                                                                                                                                                                                                                                                                        |
| update_time                    | Long                           | Time when a labeling task is updated.                                                                                                                                                                                                                                                                                           |
| version_id                     | String                         | Version ID of the dataset associated with a labeling task.                                                                                                                                                                                                                                                                      |
| workforce_stats                | <b>WorkforceStats</b> object   | Statistics on team labeling task members.                                                                                                                                                                                                                                                                                       |
| workforces_config              | <b>WorkforcesConfig</b> object | Team labeling task information: Tasks can be assigned by the team administrator or a specified team.                                                                                                                                                                                                                            |

**Table 28-194** WorkforceSamplingTaskDesc

| Parameter        | Type                         | Description                                                                                                                                                                                                                                                                                               |
|------------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| action           | Integer                      | Acceptance operations. Options: <ul style="list-style-type: none"><li>• <b>0</b>: Pass all samples.</li><li>• <b>1</b>: Reject all samples.</li><li>• <b>4</b>: Pass single-accepted samples and unaccepted samples.</li><li>• <b>5</b>: Reject single-rejected samples and unaccepted samples.</li></ul> |
| checking_stats   | <b>CheckTaskStats</b> object | Real-time report of acceptance tasks.                                                                                                                                                                                                                                                                     |
| checking_task_id | String                       | ID of the current acceptance task.                                                                                                                                                                                                                                                                        |

| Parameter             | Type                         | Description                                                                                                                                                                                                                                                                                             |
|-----------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| overwrite_last_result | Boolean                      | Whether to use the acceptance result to overwrite the labeled result if a sample has been labeled during acceptance. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Overwrite the labeled result.</li><li>• <b>false</b>: Do not overwrite the labeled result. (Default value)</li></ul> |
| total_stats           | <b>CheckTaskStats</b> object | Overall report of historical acceptance tasks.                                                                                                                                                                                                                                                          |

**Table 28-195** CheckTaskStats

| Parameter              | Type    | Description                          |
|------------------------|---------|--------------------------------------|
| accepted_sample_count  | Integer | Accepted samples.                    |
| checked_sample_count   | Integer | Checked samples.                     |
| pass_rate              | Double  | Pass rate of samples.                |
| rejected_sample_count  | Integer | Rejected samples.                    |
| sampled_sample_count   | Integer | Number of sampled samples.           |
| sampling_num           | Integer | Samples of an acceptance task.       |
| sampling_rate          | Double  | Sampling rate of an acceptance task. |
| score                  | String  | Acceptance score.                    |
| task_id                | String  | ID of an acceptance task.            |
| total_sample_count     | Integer | Total samples.                       |
| total_score            | Long    | Total acceptance score.              |
| unchecked_sample_count | Integer | Unchecked samples.                   |

**Table 28-196** LabelStats

| Parameter    | Type                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| attributes   | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included.                                                                                                                                                                                                                                                                                                                                                                                                          |
| count        | Integer                                         | Number of labels.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| name         | String                                          | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property     | <a href="#">LabelProperty</a> object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| sample_count | Integer                                         | Number of samples containing the label.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| type         | Integer                                         | Label type. Options: <ul style="list-style-type: none"><li>● <b>0</b>: image classification</li><li>● <b>1</b>: object detection</li><li>● <b>3</b>: image segmentation</li><li>● <b>100</b>: text classification</li><li>● <b>101</b>: named entity recognition</li><li>● <b>102</b>: text triplet relationship</li><li>● <b>103</b>: text triplet entity</li><li>● <b>200</b>: sound classification</li><li>● <b>201</b>: speech content</li><li>● <b>202</b>: speech paragraph labeling</li><li>● <b>600</b>: video labeling</li></ul> |

**Table 28-197** LabelAttribute

| Parameter     | Type   | Description                                                                                                                                              |
|---------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| default_value | String | Default value of a label attribute.                                                                                                                      |
| id            | String | Label attribute ID. You can query the tag by invoking the tag list.                                                                                      |
| name          | String | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&"".                                            |
| type          | String | Label attribute type. Options: <ul style="list-style-type: none"><li>● <b>text</b>: text</li><li>● <b>select</b>: single-choice drop-down list</li></ul> |

| Parameter | Type                                                 | Description                     |
|-----------|------------------------------------------------------|---------------------------------|
| values    | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values. |

**Table 28-198** LabelAttributeValue

| Parameter | Type   | Description               |
|-----------|--------|---------------------------|
| id        | String | Label attribute value ID. |
| value     | String | Label attribute value.    |

**Table 28-199** LabelProperty

| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> .                                                                                                                                                                                                                                                                                   |
| @modelarts:default_shape | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:from_type     | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |
| @modelarts:rename_to     | String | Default attribute: The new name of the label.                                                                                                                                                                                                                                                                                                                                                                                    |
| @modelarts:shortcut      | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                                                                                                                                                                                                                                         |

| Parameter            | Type   | Description                                                                                                                                                                                                    |
|----------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:tail_type | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |

**Table 28-200** SearchCondition

| Parameter        | Type                                | Description                                                                                                                                                                                    |
|------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| coefficient      | String                              | Filter by coefficient of difficulty.                                                                                                                                                           |
| frame_in_video   | Integer                             | A frame in the video.                                                                                                                                                                          |
| hard             | String                              | Whether a sample is a hard sample. Options: <ul style="list-style-type: none"><li>• 0: non-hard sample</li><li>• 1: hard sample</li></ul>                                                      |
| import_origin    | String                              | Filter by data source.                                                                                                                                                                         |
| kvp              | String                              | CT dosage, filtered by dosage.                                                                                                                                                                 |
| label_list       | <a href="#">SearchLabels</a> object | Label search criteria.                                                                                                                                                                         |
| labeler          | String                              | Labeler.                                                                                                                                                                                       |
| metadata         | <a href="#">SearchProp</a> object   | Search by sample attribute.                                                                                                                                                                    |
| parent_sample_id | String                              | Parent sample ID.                                                                                                                                                                              |
| sample_dir       | String                              | Directory where data samples are stored (the directory must end with a slash (/)). Only samples in the specified directory are searched for. Recursive search of directories is not supported. |
| sample_name      | String                              | Search by sample name, including the file name extension.                                                                                                                                      |

| Parameter       | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_time     | String | When a sample is added to the dataset, an index is created based on the last modification time (accurate to day) of the sample on OBS. You can search for the sample based on the time. Options: <ul style="list-style-type: none"><li>• <b>month</b>: Search for samples added from 30 days ago to the current day.</li><li>• <b>day</b>: Search for samples added from yesterday (one day ago) to the current day.</li><li>• <b>yyyyMMdd-yyyyMMdd</b>: Search for samples added in a specified period (at most 30 days), in the format of <b>Start date-End date</b>. For example, <b>20190901-2019091501</b> indicates that samples generated from September 1 to September 15, 2019 are searched.</li></ul> |
| score           | String | Search by confidence.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| slice_thickness | String | DICOM layer thickness. Samples are filtered by layer thickness.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| study_date      | String | DICOM scanning time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| time_in_video   | String | A time point in the video.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Table 28-201** SearchLabels

| Parameter | Type                                         | Description                                                                                                                                                                                                                                                   |
|-----------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| labels    | Array of <a href="#">SearchLabel</a> objects | List of label search criteria.                                                                                                                                                                                                                                |
| op        | String                                       | If you want to search for multiple labels, <b>op</b> must be specified. If you search for only one label, <b>op</b> can be left blank. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul> |

**Table 28-202** SearchLabel

| Parameter | Type   | Description |
|-----------|--------|-------------|
| name      | String | Label name. |

| Parameter | Type                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | String                    | Operation type between multiple attributes. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul>                                                                                                                                                                                                                                                                                                                                                                        |
| property  | Map<String,Array<String>> | Label attribute, which is in the Object format and stores any key-value pairs. <b>key</b> indicates the attribute name, and <b>value</b> indicates the value list. If <b>value</b> is <b>null</b> , the search is not performed by value. Otherwise, the search value can be any value in the list.                                                                                                                                                                                                                                       |
| type      | Integer                   | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-203** SearchProp

| Parameter | Type                      | Description                                                                                                                                                         |
|-----------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | String                    | Relationship between attribute values. Options: <ul style="list-style-type: none"><li>• <b>AND</b>: AND relationship</li><li>• <b>OR</b>: OR relationship</li></ul> |
| props     | Map<String,Array<String>> | Search criteria of an attribute. Multiple search criteria can be set.                                                                                               |

**Table 28-204** SampleStats

| Parameter             | Type    | Description                              |
|-----------------------|---------|------------------------------------------|
| accepted_sample_count | Integer | Number of samples accepted by the owner. |



| Parameter                    | Type    | Description                                                                                         |
|------------------------------|---------|-----------------------------------------------------------------------------------------------------|
| auto_annotation_sample_count | Integer | Number of samples to be confirmed after intelligent labeling.                                       |
| deleted_sample_count         | Integer | Number of deleted samples.                                                                          |
| rejected_sample_count        | Integer | Number of samples that failed to pass the owner acceptance.                                         |
| sampled_sample_count         | Integer | Number of samples that are to be accepted by the owner and sampled.                                 |
| total_sample_count           | Integer | Total number of samples.                                                                            |
| unannotated_sample_count     | Integer | Number of unlabeled samples.                                                                        |
| uncheck_sample_count         | Integer | Number of samples that have been approved by the reviewer and are to be accepted by the owner.      |
| unreviewed_sample_count      | Integer | Number of samples that have been labeled by the labeler but have not been reviewed by the reviewer. |

**Table 28-205** WorkforceStats

| Parameter       | Type    | Description                                        |
|-----------------|---------|----------------------------------------------------|
| labeler_count   | Integer | Number of annotators. The value cannot exceed 100. |
| reviewer_count  | Integer | Number of reviewers. The value cannot exceed 100.  |
| workforce_count | Integer | Number of teams.                                   |

**Table 28-206** WorkforcesConfig

| Parameter  | Type                                             | Description                                |
|------------|--------------------------------------------------|--------------------------------------------|
| agency     | String                                           | Administrator                              |
| workforces | Array of <a href="#">WorkforceConfig</a> objects | List of teams that execute labeling tasks. |

**Table 28-207** WorkforceConfig

| Parameter      | Type                                    | Description                                                                                                                     |
|----------------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| workers        | Array of <a href="#">Worker</a> objects | List of labeling team members.                                                                                                  |
| workforce_id   | String                                  | ID of a labeling team.                                                                                                          |
| workforce_name | String                                  | Name of a labeling team. The value contains 0 to 1024 characters and does not support the following special characters: !<>=&"" |

**Table 28-208** Worker

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                                                        |
|--------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time  | Long    | Creation time.                                                                                                                                                                                                                                                                                                                     |
| description  | String  | Labeling team member description. The value contains 0 to 256 characters and does not support the following special characters: ^!<>=&""                                                                                                                                                                                           |
| email        | String  | Email address of a labeling team member.                                                                                                                                                                                                                                                                                           |
| role         | Integer | Role. Options: <ul style="list-style-type: none"><li>● 0: labeling personnel</li><li>● 1: reviewer</li><li>● 2: team administrator</li><li>● 3: dataset owner</li></ul>                                                                                                                                                            |
| status       | Integer | Current login status of a labeling team member. Options: <ul style="list-style-type: none"><li>● 0: The invitation email has not been sent.</li><li>● 1: The invitation email has been sent but the user has not logged in.</li><li>● 2: The user has logged in.</li><li>● 3: The labeling team member has been deleted.</li></ul> |
| update_time  | Long    | Update time.                                                                                                                                                                                                                                                                                                                       |
| worker_id    | String  | ID of a labeling team member.                                                                                                                                                                                                                                                                                                      |
| workforce_id | String  | ID of a labeling team.                                                                                                                                                                                                                                                                                                             |

## Example Requests

Querying the Team Labeling Task List of a Dataset

GET https://{endpoint}/v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks

## Example Responses

**Status code: 200**

OK

```
{
 "count" : 2,
 "tasks" : [{
 "dataset_id" : "WxCREuCkBSAIQr9xrde",
 "task_id" : "tY330MHxV9dqIPVaTRM",
 "task_name" : "task-cd60",
 "status" : 1,
 "create_time" : 1606224714358,
 "update_time" : 1606224714358,
 "repetition" : 1,
 "workforces_config" : {
 "workforces" : [{
 "workforce_id" : "0PfqwXA8M59pppYBx4k",
 "workforce_name" : "team-123",
 "workers" : [{
 "email" : "xxx@xxx.com",
 "worker_id" : "6db04ae0afb54d7274a2982255516c29",
 "role" : 2
 }, {
 "email" : "xxx@xxx.com",
 "worker_id" : "8c15ad080d3eabad14037b4eb00d6a6f",
 "role" : 0
 }
]
 }
 }, {
 "dataset_id" : "WxCREuCkBSAIQr9xrde",
 "task_id" : "iYZx7gScPUozOXner9k",
 "task_name" : "task-e63f",
 "status" : 1,
 "create_time" : 1606184400278,
 "update_time" : 1606184400278,
 "repetition" : 1,
 "workforces_config" : {
 "workforces" : [{
 "workforce_id" : "q3ZFSwORu1ztKljDLYQ",
 "workforce_name" : "modelarts-team",
 "workers" : [{
 "email" : "xxx@xxx.com",
 "worker_id" : "afdda13895bc66322ffbf36ae833bcf0",
 "role" : 0
 }
]
 }
 }
],
 "synchronize_data" : true,
 "synchronize_auto_labeling_data" : true,
 "workforce_stats" : {
 "workforce_count" : 1,
 "labeler_count" : 1,
 "reviewer_count" : 0
 },
 "sample_stats" : {
 "total_sample_count" : 309,
 "unannotated_sample_count" : 308,
 "unreviewed_sample_count" : 0,
 "uncheck_sample_count" : 1,
 "sampled_sample_count" : 0,
 "rejected_sample_count" : 0,
 "accepted_sample_count" : 0,
 "auto_annotation_sample_count" : 0
 },
 "auto_sync_dataset" : true
}
```

```
},
"synchronize_data" : false,
"synchronize_auto_labeling_data" : false,
"workforce_stats" : {
 "workforce_count" : 1,
 "labeler_count" : 1,
 "reviewer_count" : 0
},
"sample_stats" : {
 "total_sample_count" : 317,
 "unannotated_sample_count" : 310,
 "unreviewed_sample_count" : 0,
 "uncheck_sample_count" : 0,
 "sampled_sample_count" : 0,
 "rejected_sample_count" : 0,
 "accepted_sample_count" : 7,
 "auto_annotation_sample_count" : 0
},
"checking_task_desc" : {
 "checking_task_id" : "onSbri2oqYOMdJDyW17",
 "action" : 0,
 "overwrite_last_result" : false
},
"auto_sync_dataset" : true
}]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.27 Creating a Team Labeling Task

### Function

This API is used to create a team labeling task.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks

**Table 28-209** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Parameters

**Table 28-210** Request body parameters

| Parameter         | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                              |
|-------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| auto_sync_dataset | No        | Boolean | Whether to automatically synchronize the result of a team labeling task to the dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Automatically synchronize the result of a team labeling task to the dataset. (Default value)</li><li>• <b>false</b>: Do not automatically synchronize the result of a team labeling task to the dataset.</li></ul> |
| data_sync_type    | No        | Integer | Synchronization type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: unsynchronization</li><li>• <b>1</b>: data synchronization</li><li>• <b>2</b>: label synchronization</li><li>• <b>3</b>: data and label synchronization</li></ul>                                                                                                                       |
| repetition        | No        | Integer | Number of persons who label each sample in a team labeling task. The minimum value is <b>1</b> .                                                                                                                                                                                                                                                                         |
| sample_conditions | No        | String  | Search conditions of dataset samples. Samples that meet the conditions are filtered for team labeling.                                                                                                                                                                                                                                                                   |

| Parameter                      | Mandatory | Type                           | Description                                                                                                                                                                                                                                                                                                                     |
|--------------------------------|-----------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| synchronize_auto_labeling_data | No        | Boolean                        | Whether to synchronize the auto labeling result of a team labeling task. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Synchronize the results to be confirmed to team members after auto labeling is complete.</li><li>• <b>false</b>: Do not synchronize the auto labeling results. (Default value)</li></ul> |
| workforces_config              | No        | <b>WorkforcesConfig</b> object | Team labeling task information: Tasks can be assigned by the team administrator or a specified team.                                                                                                                                                                                                                            |
| task_name                      | No        | String                         | Name of a team labeling task.                                                                                                                                                                                                                                                                                                   |
| synchronize_data               | No        | Boolean                        | Whether to synchronously update new data.                                                                                                                                                                                                                                                                                       |

**Table 28-211** WorkforcesConfig

| Parameter  | Mandatory | Type                                    | Description                                |
|------------|-----------|-----------------------------------------|--------------------------------------------|
| agency     | No        | String                                  | Administrator                              |
| workforces | No        | Array of <b>WorkforceConfig</b> objects | List of teams that execute labeling tasks. |

**Table 28-212** WorkforceConfig

| Parameter      | Mandatory | Type                           | Description                                                                                                                     |
|----------------|-----------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| workers        | No        | Array of <b>Worker</b> objects | List of labeling team members.                                                                                                  |
| workforce_id   | No        | String                         | ID of a labeling team.                                                                                                          |
| workforce_name | No        | String                         | Name of a labeling team. The value contains 0 to 1024 characters and does not support the following special characters: !<>=&"" |

**Table 28-213** Worker

| Parameter    | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                    |
|--------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time  | No        | Long    | Creation time.                                                                                                                                                                                                                                                                                                                                                 |
| description  | No        | String  | Labeling team member description. The value contains 0 to 256 characters and does not support the following special characters: ^!<>=&"                                                                                                                                                                                                                        |
| email        | No        | String  | Email address of a labeling team member.                                                                                                                                                                                                                                                                                                                       |
| role         | No        | Integer | Role. Options: <ul style="list-style-type: none"><li>• <b>0</b>: labeling personnel</li><li>• <b>1</b>: reviewer</li><li>• <b>2</b>: team administrator</li><li>• <b>3</b>: dataset owner</li></ul>                                                                                                                                                            |
| status       | No        | Integer | Current login status of a labeling team member. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The invitation email has not been sent.</li><li>• <b>1</b>: The invitation email has been sent but the user has not logged in.</li><li>• <b>2</b>: The user has logged in.</li><li>• <b>3</b>: The labeling team member has been deleted.</li></ul> |
| update_time  | No        | Long    | Update time.                                                                                                                                                                                                                                                                                                                                                   |
| worker_id    | No        | String  | ID of a labeling team member.                                                                                                                                                                                                                                                                                                                                  |
| workforce_id | No        | String  | ID of a labeling team.                                                                                                                                                                                                                                                                                                                                         |

## Response Parameters

**Status code: 200**

**Table 28-214** Response body parameters

| Parameter | Type   | Description                 |
|-----------|--------|-----------------------------|
| task_id   | String | ID of a team labeling task. |

## Example Requests

The following is an example of how to create a team labeling task. The task name has been set to **task-eb17**, **synchronize\_data** has been set to **false**, and **synchronize\_auto\_labeling\_data** has been set to **false**.

```
{
 "task_name" : "task-eb17",
 "synchronize_data" : false,
 "synchronize_auto_labeling_data" : false,
 "workforces_config" : {
 "workforces" : [{
 "workforce_id" : "feSUo5NUIUnQAQNNTiS",
 "workers" : [{
 "email" : "xxx@xxx.com"
 }, {
 "email" : "xxx@xxx.com"
 }, {
 "email" : "xxx@xxx.com"
 }]
 }]
 },
 "auto_sync_dataset" : false
}
```

## Example Responses

**Status code: 200**

OK

```
{
 "task_id" : "6phXEto29utpaMwbQkg"
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.28 Querying Details About a Team Labeling Task

### Function

This API is used to query the details about a team labeling task.



## Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

## URI

GET /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}

**Table 28-215** Path Parameters

| Parameter         | Mandatory | Type   | Description                                                                                                     |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id        | Yes       | String | Dataset ID.                                                                                                     |
| project_id        | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a team labeling task.                                                                                     |

**Table 28-216** Query Parameters

| Parameter       | Mandatory | Type    | Description                                                                                                                                                                                                              |
|-----------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| label_stats     | No        | Boolean | Whether to return label statistics. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Return label statistics.</li><li>• <b>false</b>: Do not return label statistics. (Default value)</li></ul>             |
| sample_stats    | No        | Boolean | Whether to return sample statistics. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Return sample statistics.</li><li>• <b>false</b>: Do not return sample statistics. (Default value)</li></ul>          |
| workforce_stats | No        | Boolean | Whether to return personnel statistics. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Return personnel statistics.</li><li>• <b>false</b>: Do not return personnel statistics. (Default value)</li></ul> |

## Request Parameters

None

## Response Parameters

Status code: 200

Table 28-217 Response body parameters

| Parameter                | Type                                             | Description                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| auto_sync_dataset        | Boolean                                          | Whether to automatically synchronize the result of a team labeling task to the dataset.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: Automatically synchronize the result of a team labeling task to the dataset.</li><li>• <b>false</b>: Do not automatically synchronize the result of a team labeling task to the dataset.</li></ul> |
| check_rate               | Double                                           | Acceptance ratio of a team labeling task.                                                                                                                                                                                                                                                                                                                   |
| checking_task_desc       | <a href="#">WorkforceSamplingTaskDesc</a> object | Details about the current acceptance task of a team labeling task.                                                                                                                                                                                                                                                                                          |
| create_time              | Long                                             | Time when a labeling task is created.                                                                                                                                                                                                                                                                                                                       |
| dataset_id               | String                                           | Dataset ID.                                                                                                                                                                                                                                                                                                                                                 |
| description              | String                                           | Description of a labeling task.                                                                                                                                                                                                                                                                                                                             |
| label_stats              | Array of <a href="#">LabelStats</a> objects      | Label statistics of a labeling task.                                                                                                                                                                                                                                                                                                                        |
| pass_rate                | Double                                           | Acceptance pass rate of a team labeling task.                                                                                                                                                                                                                                                                                                               |
| repetition               | Integer                                          | Number of persons who label each sample in a team labeling task. The minimum value is <b>1</b> .                                                                                                                                                                                                                                                            |
| sample_search_conditions | Array of <a href="#">SearchCondition</a> objects | Sample search conditions when creating a task.                                                                                                                                                                                                                                                                                                              |
| sample_stats             | <a href="#">SampleStats</a> object               | Sample statistics of a labeling task.                                                                                                                                                                                                                                                                                                                       |
| score                    | Double                                           | Average acceptance score of a team labeling task.                                                                                                                                                                                                                                                                                                           |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | Integer | <p>Status of a team labeling task. Options:</p> <ul style="list-style-type: none"><li>● <b>0</b>: Starting. The owner or manager is starting the task, and files to be labeled are still being allocated. The owner, manager, annotator, and reviewer can view the task list. Since the task allocation has not been completed, no other task can be started.</li><li>● <b>1</b>: Running. The annotator or reviewer performs labeling or reviews the task, and the owner performs acceptance. For example, new files need to be allocated again if auto labeling files are added or synchronized, or unlabeled files are imported.</li><li>● <b>2</b>: Accepting. The owner initiates an acceptance task, but the acceptance has not been completed. In this state, a new acceptance task can be started only after the current one is completed.</li><li>● <b>3</b>: Accepted. The team labeling task has been completed.</li><li>● <b>**4</b>: Rejected. The manager starts the task again. In this state, samples need to be labeled and the task must be reviewed again.</li><li>● <b>5</b>: Synchronizing acceptance result. This status is added when an acceptance task changes to be asynchronous. In this state, no new acceptance task can be initiated and the current acceptance task cannot be continued. In the task name area, the system displays a message indicating that the acceptance result is being synchronized.</li><li>● <b>6</b>: Created. The task has been created by the owner but has not been started. Only the owner and manager can view the task list.</li><li>● <b>7</b>: Acceptance sampling. This status is added when an acceptance task changes to be asynchronous. In this state, no new acceptance task can be initiated and the current acceptance task cannot be continued. In the task name area, the system displays a message indicating that acceptance sampling is in progress.</li></ul> |

| Parameter                      | Type                                        | Description                                                                                                                                                                                                                                                                                                                     |
|--------------------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| synchronize_auto_labeling_data | Boolean                                     | Whether to synchronize the auto labeling result of a team labeling task. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Synchronize the results to be confirmed to team members after auto labeling is complete.</li><li>• <b>false</b>: Do not synchronize the auto labeling results. (Default value)</li></ul> |
| synchronize_data               | Boolean                                     | Whether to synchronize the added data of a team labeling task. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Upload files, synchronize data sources, and synchronize imported unlabeled files to team members.</li><li>• <b>false</b>: Do not synchronize the added data. (Default value)</li></ul>             |
| task_id                        | String                                      | ID of a labeling task.                                                                                                                                                                                                                                                                                                          |
| task_name                      | String                                      | Name of a labeling task.                                                                                                                                                                                                                                                                                                        |
| update_time                    | Long                                        | Time when a labeling task is updated.                                                                                                                                                                                                                                                                                           |
| version_id                     | String                                      | Version ID of the dataset associated with a labeling task.                                                                                                                                                                                                                                                                      |
| worker_stats                   | Array of <a href="#">WorkerTask</a> objects | Labeling progress statistics on team labeling task members.                                                                                                                                                                                                                                                                     |
| workforce_stats                | <a href="#">WorkforceStats</a> object       | Statistics on team labeling task members.                                                                                                                                                                                                                                                                                       |
| workforces_config              | <a href="#">WorkforcesConfig</a> object     | Team labeling task information: Tasks can be assigned by the team administrator or a specified team.                                                                                                                                                                                                                            |

**Table 28-218** WorkforceSamplingTaskDesc

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                               |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| action    | Integer | Acceptance operations. Options: <ul style="list-style-type: none"><li>• <b>0</b>: Pass all samples.</li><li>• <b>1</b>: Reject all samples.</li><li>• <b>4</b>: Pass single-accepted samples and unaccepted samples.</li><li>• <b>5</b>: Reject single-rejected samples and unaccepted samples.</li></ul> |

| Parameter             | Type                                  | Description                                                                                                                                                                                                                                                                                             |
|-----------------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| checking_stats        | <a href="#">CheckTaskStats</a> object | Real-time report of acceptance tasks.                                                                                                                                                                                                                                                                   |
| checking_task_id      | String                                | ID of the current acceptance task.                                                                                                                                                                                                                                                                      |
| overwrite_last_result | Boolean                               | Whether to use the acceptance result to overwrite the labeled result if a sample has been labeled during acceptance. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Overwrite the labeled result.</li><li>• <b>false</b>: Do not overwrite the labeled result. (Default value)</li></ul> |
| total_stats           | <a href="#">CheckTaskStats</a> object | Overall report of historical acceptance tasks.                                                                                                                                                                                                                                                          |

**Table 28-219** CheckTaskStats

| Parameter              | Type    | Description                          |
|------------------------|---------|--------------------------------------|
| accepted_sample_count  | Integer | Accepted samples.                    |
| checked_sample_count   | Integer | Checked samples.                     |
| pass_rate              | Double  | Pass rate of samples.                |
| rejected_sample_count  | Integer | Rejected samples.                    |
| sampled_sample_count   | Integer | Number of sampled samples.           |
| sampling_num           | Integer | Samples of an acceptance task.       |
| sampling_rate          | Double  | Sampling rate of an acceptance task. |
| score                  | String  | Acceptance score.                    |
| task_id                | String  | ID of an acceptance task.            |
| total_sample_count     | Integer | Total samples.                       |
| total_score            | Long    | Total acceptance score.              |
| unchecked_sample_count | Integer | Unchecked samples.                   |

**Table 28-220** LabelStats

| Parameter    | Type                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| attributes   | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included.                                                                                                                                                                                                                                                                                                                                                                                                          |
| count        | Integer                                         | Number of labels.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| name         | String                                          | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property     | <a href="#">LabelProperty</a> object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| sample_count | Integer                                         | Number of samples containing the label.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| type         | Integer                                         | Label type. Options: <ul style="list-style-type: none"><li>● <b>0</b>: image classification</li><li>● <b>1</b>: object detection</li><li>● <b>3</b>: image segmentation</li><li>● <b>100</b>: text classification</li><li>● <b>101</b>: named entity recognition</li><li>● <b>102</b>: text triplet relationship</li><li>● <b>103</b>: text triplet entity</li><li>● <b>200</b>: sound classification</li><li>● <b>201</b>: speech content</li><li>● <b>202</b>: speech paragraph labeling</li><li>● <b>600</b>: video labeling</li></ul> |

**Table 28-221** LabelAttribute

| Parameter     | Type   | Description                                                                                                                                              |
|---------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| default_value | String | Default value of a label attribute.                                                                                                                      |
| id            | String | Label attribute ID. You can query the tag by invoking the tag list.                                                                                      |
| name          | String | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&"".                                            |
| type          | String | Label attribute type. Options: <ul style="list-style-type: none"><li>● <b>text</b>: text</li><li>● <b>select</b>: single-choice drop-down list</li></ul> |

| Parameter | Type                                                 | Description                     |
|-----------|------------------------------------------------------|---------------------------------|
| values    | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values. |

**Table 28-222** LabelAttributeValue

| Parameter | Type   | Description               |
|-----------|--------|---------------------------|
| id        | String | Label attribute value ID. |
| value     | String | Label attribute value.    |

**Table 28-223** LabelProperty

| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> .                                                                                                                                                                                                                                                                                   |
| @modelarts:default_shape | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:from_type     | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |
| @modelarts:rename_to     | String | Default attribute: The new name of the label.                                                                                                                                                                                                                                                                                                                                                                                    |
| @modelarts:shortcut      | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                                                                                                                                                                                                                                         |

| Parameter            | Type   | Description                                                                                                                                                                                                    |
|----------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:tail_type | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |

**Table 28-224** SearchCondition

| Parameter        | Type                                | Description                                                                                                                                                                                    |
|------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| coefficient      | String                              | Filter by coefficient of difficulty.                                                                                                                                                           |
| frame_in_video   | Integer                             | A frame in the video.                                                                                                                                                                          |
| hard             | String                              | Whether a sample is a hard sample. Options: <ul style="list-style-type: none"><li>• 0: non-hard sample</li><li>• 1: hard sample</li></ul>                                                      |
| import_origin    | String                              | Filter by data source.                                                                                                                                                                         |
| kvp              | String                              | CT dosage, filtered by dosage.                                                                                                                                                                 |
| label_list       | <a href="#">SearchLabels</a> object | Label search criteria.                                                                                                                                                                         |
| labeler          | String                              | Labeler.                                                                                                                                                                                       |
| metadata         | <a href="#">SearchProp</a> object   | Search by sample attribute.                                                                                                                                                                    |
| parent_sample_id | String                              | Parent sample ID.                                                                                                                                                                              |
| sample_dir       | String                              | Directory where data samples are stored (the directory must end with a slash (/)). Only samples in the specified directory are searched for. Recursive search of directories is not supported. |
| sample_name      | String                              | Search by sample name, including the file name extension.                                                                                                                                      |



| Parameter       | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_time     | String | When a sample is added to the dataset, an index is created based on the last modification time (accurate to day) of the sample on OBS. You can search for the sample based on the time. Options: <ul style="list-style-type: none"><li>• <b>month</b>: Search for samples added from 30 days ago to the current day.</li><li>• <b>day</b>: Search for samples added from yesterday (one day ago) to the current day.</li><li>• <b>yyyyMMdd-yyyyMMdd</b>: Search for samples added in a specified period (at most 30 days), in the format of <b>Start date-End date</b>. For example, <b>20190901-2019091501</b> indicates that samples generated from September 1 to September 15, 2019 are searched.</li></ul> |
| score           | String | Search by confidence.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| slice_thickness | String | DICOM layer thickness. Samples are filtered by layer thickness.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| study_date      | String | DICOM scanning time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| time_in_video   | String | A time point in the video.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Table 28-225** SearchLabels

| Parameter | Type                                         | Description                                                                                                                                                                                                                                                   |
|-----------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| labels    | Array of <a href="#">SearchLabel</a> objects | List of label search criteria.                                                                                                                                                                                                                                |
| op        | String                                       | If you want to search for multiple labels, <b>op</b> must be specified. If you search for only one label, <b>op</b> can be left blank. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul> |

**Table 28-226** SearchLabel

| Parameter | Type   | Description |
|-----------|--------|-------------|
| name      | String | Label name. |

| Parameter | Type                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | String                    | Operation type between multiple attributes. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul>                                                                                                                                                                                                                                                                                                                                                                        |
| property  | Map<String,Array<String>> | Label attribute, which is in the Object format and stores any key-value pairs. <b>key</b> indicates the attribute name, and <b>value</b> indicates the value list. If <b>value</b> is <b>null</b> , the search is not performed by value. Otherwise, the search value can be any value in the list.                                                                                                                                                                                                                                       |
| type      | Integer                   | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

Table 28-227 SearchProp

| Parameter | Type                      | Description                                                                                                                                                         |
|-----------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | String                    | Relationship between attribute values. Options: <ul style="list-style-type: none"><li>• <b>AND</b>: AND relationship</li><li>• <b>OR</b>: OR relationship</li></ul> |
| props     | Map<String,Array<String>> | Search criteria of an attribute. Multiple search criteria can be set.                                                                                               |

Table 28-228 WorkerTask

| Parameter   | Type | Description                                         |
|-------------|------|-----------------------------------------------------|
| create_time | Long | Time when a labeling team member's task is created. |

| Parameter           | Type                               | Description                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dataset_id          | String                             | ID of a dataset associated with a labeling team member's task.                                                                                                                                                                                                                                                                                                                              |
| dataset_type        | Integer                            | Labeling type of a team member's task.                                                                                                                                                                                                                                                                                                                                                      |
| email               | String                             | Email address of a labeling team member.                                                                                                                                                                                                                                                                                                                                                    |
| email_status        | Integer                            | Email notification status of a labeling team member's labeling task. Options: <ul style="list-style-type: none"><li>● <b>0</b>: The email has not been sent.</li><li>● <b>1</b>: The email format is incorrect.</li><li>● <b>2</b>: The email address is unreachable.</li><li>● <b>3</b>: The email has been sent.</li></ul>                                                                |
| last_notify_time    | Long                               | Timestamp of the latest notification email sent to a labeling team member.                                                                                                                                                                                                                                                                                                                  |
| pass_rate           | Double                             | Pass rate of task acceptance review for a labeling team member.                                                                                                                                                                                                                                                                                                                             |
| role                | Integer                            | Role of a labeling team member.                                                                                                                                                                                                                                                                                                                                                             |
| sample_stats        | <a href="#">SampleStats</a> object | Sample statistics of a labeling team member's task.                                                                                                                                                                                                                                                                                                                                         |
| score               | Double                             | Average acceptance score of labeling team members' task samples.                                                                                                                                                                                                                                                                                                                            |
| task_id             | String                             | Team labeling task ID associated with a member's task.                                                                                                                                                                                                                                                                                                                                      |
| task_status         | Integer                            | Task status of a labeling team member. Options: <ul style="list-style-type: none"><li>● <b>6</b>: created</li><li>● <b>0</b>: starting</li><li>● <b>1</b>: running</li><li>● <b>2</b>: under acceptance</li><li>● <b>3</b>: approved, indicating the team labeling task is complete</li><li>● <b>4</b>: rejected, indicating that the task needs to be labeled and reviewed again</li></ul> |
| update_time         | Long                               | Time when a labeling team member's task is updated.                                                                                                                                                                                                                                                                                                                                         |
| worker_id           | String                             | ID of a labeling team member.                                                                                                                                                                                                                                                                                                                                                               |
| workforce_task_name | String                             | Team labeling task name associated with a member's task.                                                                                                                                                                                                                                                                                                                                    |

**Table 28-229** SampleStats

| Parameter                    | Type    | Description                                                                                         |
|------------------------------|---------|-----------------------------------------------------------------------------------------------------|
| accepted_sample_count        | Integer | Number of samples accepted by the owner.                                                            |
| auto_annotation_sample_count | Integer | Number of samples to be confirmed after intelligent labeling.                                       |
| deleted_sample_count         | Integer | Number of deleted samples.                                                                          |
| rejected_sample_count        | Integer | Number of samples that failed to pass the owner acceptance.                                         |
| sampled_sample_count         | Integer | Number of samples that are to be accepted by the owner and sampled.                                 |
| total_sample_count           | Integer | Total number of samples.                                                                            |
| unannotated_sample_count     | Integer | Number of unlabeled samples.                                                                        |
| uncheck_sample_count         | Integer | Number of samples that have been approved by the reviewer and are to be accepted by the owner.      |
| unreviewed_sample_count      | Integer | Number of samples that have been labeled by the labeler but have not been reviewed by the reviewer. |

**Table 28-230** WorkforceStats

| Parameter       | Type    | Description                                        |
|-----------------|---------|----------------------------------------------------|
| labeler_count   | Integer | Number of annotators. The value cannot exceed 100. |
| reviewer_count  | Integer | Number of reviewers. The value cannot exceed 100.  |
| workforce_count | Integer | Number of teams.                                   |

**Table 28-231** WorkforcesConfig

| Parameter | Type   | Description   |
|-----------|--------|---------------|
| agency    | String | Administrator |

| Parameter  | Type                                             | Description                                |
|------------|--------------------------------------------------|--------------------------------------------|
| workforces | Array of <a href="#">WorkforceConfig</a> objects | List of teams that execute labeling tasks. |

**Table 28-232** WorkforceConfig

| Parameter      | Type                                    | Description                                                                                                                     |
|----------------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| workers        | Array of <a href="#">Worker</a> objects | List of labeling team members.                                                                                                  |
| workforce_id   | String                                  | ID of a labeling team.                                                                                                          |
| workforce_name | String                                  | Name of a labeling team. The value contains 0 to 1024 characters and does not support the following special characters: !<>=&"" |

**Table 28-233** Worker

| Parameter   | Type    | Description                                                                                                                                                                                                                                                                                                                                                    |
|-------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time | Long    | Creation time.                                                                                                                                                                                                                                                                                                                                                 |
| description | String  | Labeling team member description. The value contains 0 to 256 characters and does not support the following special characters: ^!<>=&""                                                                                                                                                                                                                       |
| email       | String  | Email address of a labeling team member.                                                                                                                                                                                                                                                                                                                       |
| role        | Integer | Role. Options: <ul style="list-style-type: none"><li>● <b>0</b>: labeling personnel</li><li>● <b>1</b>: reviewer</li><li>● <b>2</b>: team administrator</li><li>● <b>3</b>: dataset owner</li></ul>                                                                                                                                                            |
| status      | Integer | Current login status of a labeling team member. Options: <ul style="list-style-type: none"><li>● <b>0</b>: The invitation email has not been sent.</li><li>● <b>1</b>: The invitation email has been sent but the user has not logged in.</li><li>● <b>2</b>: The user has logged in.</li><li>● <b>3</b>: The labeling team member has been deleted.</li></ul> |
| update_time | Long    | Update time.                                                                                                                                                                                                                                                                                                                                                   |

| Parameter    | Type   | Description                   |
|--------------|--------|-------------------------------|
| worker_id    | String | ID of a labeling team member. |
| workforce_id | String | ID of a labeling team.        |

## Example Requests

Querying Details About a Team Labeling Task

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}
```

## Example Responses

Status code: 200

OK

```
{
 "dataset_id": "WxCREuCKBSAlQr9xrde",
 "task_id": "iYZx7gScPUozOXner9k",
 "task_name": "task-e63f",
 "status": 1,
 "create_time": 1606184400278,
 "update_time": 1606184400278,
 "repetition": 1,
 "workforces_config": {
 "workforces": [{
 "workforce_id": "q3ZFSwORu1ztKljDLYQ",
 "workers": [{
 "email": "xxx@xxx.com",
 "worker_id": "afdda13895bc66322ffbf36ae833bcf0",
 "role": 0
 }]
 }]
 },
 "synchronize_data": false,
 "synchronize_auto_labeling_data": false,
 "workforce_stats": {
 "workforce_count": 1,
 "labeler_count": 1,
 "reviewer_count": 0
 },
 "sample_stats": {
 "total_sample_count": 317,
 "unannotated_sample_count": 310,
 "unreviewed_sample_count": 0,
 "uncheck_sample_count": 0,
 "sampled_sample_count": 0,
 "rejected_sample_count": 0,
 "accepted_sample_count": 7,
 "auto_annotation_sample_count": 0
 },
 "checking_task_desc": {
 "checking_task_id": "onSbri2oqYOmDjDyW17",
 "action": 0,
 "overwrite_last_result": false
 },
 "auto_sync_dataset": true,
 "worker_stats": [{
 "email": "xxx@xxx.com",
 "worker_id": "afdda13895bc66322ffbf36ae833bcf0",
 "role": 0,
 "task_id": "iYZx7gScPUozOXner9k",
 }]
}
```

```
"workforce_task_name" : "task-e63f",
"dataset_id" : "WxCREuCkBSAlQr9xrde",
"sample_stats" : {
 "total_sample_count" : 317,
 "unannotated_sample_count" : 310,
 "unreviewed_sample_count" : 0,
 "uncheck_sample_count" : 0,
 "sampled_sample_count" : 0,
 "rejected_sample_count" : 0,
 "accepted_sample_count" : 7,
 "auto_annotation_sample_count" : 0
},
"create_time" : 1606184400278,
"update_time" : 1606184795050,
"email_status" : 3,
"last_notify_time" : 0
}]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.29 Starting a Team Labeling Task

### Function

This API is used to start a team labeling task.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}

**Table 28-234** Path Parameters

| Parameter  | Mandatory | Type   | Description |
|------------|-----------|--------|-------------|
| dataset_id | Yes       | String | Dataset ID. |

| Parameter         | Mandatory | Type   | Description                                                                                                     |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id        | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a team labeling task.                                                                                     |

## Request Parameters

**Table 28-235** Request body parameters

| Parameter         | Mandatory | Type                                    | Description                                                                                          |
|-------------------|-----------|-----------------------------------------|------------------------------------------------------------------------------------------------------|
| dataset_id        | No        | String                                  | Dataset ID.                                                                                          |
| task_id           | No        | String                                  | ID of a team labeling task.                                                                          |
| workforces_config | No        | <a href="#">WorkforcesConfig</a> object | Team labeling task information: Tasks can be assigned by the team administrator or a specified team. |

**Table 28-236** WorkforcesConfig

| Parameter  | Mandatory | Type                                             | Description                                |
|------------|-----------|--------------------------------------------------|--------------------------------------------|
| agency     | No        | String                                           | Administrator                              |
| workforces | No        | Array of <a href="#">WorkforceConfig</a> objects | List of teams that execute labeling tasks. |

**Table 28-237** WorkforceConfig

| Parameter    | Mandatory | Type                                    | Description                    |
|--------------|-----------|-----------------------------------------|--------------------------------|
| workers      | No        | Array of <a href="#">Worker</a> objects | List of labeling team members. |
| workforce_id | No        | String                                  | ID of a labeling team.         |



| Parameter      | Mandatory | Type   | Description                                                                                                                    |
|----------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------|
| workforce_name | No        | String | Name of a labeling team. The value contains 0 to 1024 characters and does not support the following special characters: !<>=&" |

**Table 28-238** Worker

| Parameter    | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                    |
|--------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time  | No        | Long    | Creation time.                                                                                                                                                                                                                                                                                                                                                 |
| description  | No        | String  | Labeling team member description. The value contains 0 to 256 characters and does not support the following special characters: ^!<>=&"                                                                                                                                                                                                                        |
| email        | No        | String  | Email address of a labeling team member.                                                                                                                                                                                                                                                                                                                       |
| role         | No        | Integer | Role. Options: <ul style="list-style-type: none"><li>● <b>0</b>: labeling personnel</li><li>● <b>1</b>: reviewer</li><li>● <b>2</b>: team administrator</li><li>● <b>3</b>: dataset owner</li></ul>                                                                                                                                                            |
| status       | No        | Integer | Current login status of a labeling team member. Options: <ul style="list-style-type: none"><li>● <b>0</b>: The invitation email has not been sent.</li><li>● <b>1</b>: The invitation email has been sent but the user has not logged in.</li><li>● <b>2</b>: The user has logged in.</li><li>● <b>3</b>: The labeling team member has been deleted.</li></ul> |
| update_time  | No        | Long    | Update time.                                                                                                                                                                                                                                                                                                                                                   |
| worker_id    | No        | String  | ID of a labeling team member.                                                                                                                                                                                                                                                                                                                                  |
| workforce_id | No        | String  | ID of a labeling team.                                                                                                                                                                                                                                                                                                                                         |

## Response Parameters

None

## Example Requests

Starting a Team Labeling Task

```
{
 "workforces_config": {
 "workforces": [{
 "workforce_id": "l4u9Hpz2JJ67DNN1Hg9",
 "workers": [{
 "email": "xiaozhang@163.com"
 }, {
 "email": "xiaoli@163.com"
 }]
 }]
 }
}
```

## Example Responses

Status code: 200

OK

```
{ }
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.30 Updating a Team Labeling Task

### Function

This API is used to update a team labeling task.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

PUT /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}

**Table 28-239** Path Parameters

| Parameter         | Mandatory | Type   | Description                                                                                                     |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id        | Yes       | String | Dataset ID.                                                                                                     |
| project_id        | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a team labeling task.                                                                                     |

## Request Parameters

**Table 28-240** Request body parameters

| Parameter         | Mandatory | Type                                    | Description                                                                                                                            |
|-------------------|-----------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| dataset_id        | No        | String                                  | Dataset ID.                                                                                                                            |
| description       | No        | String                                  | Team labeling task description. The value contains 0 to 256 characters and does not support the following special characters: ^!<>=&"" |
| task_id           | No        | String                                  | ID of a team labeling task.                                                                                                            |
| task_name         | No        | String                                  | Team labeling task name. The value contains 1 to 64 characters and only letters, digits, underscores (_), and hyphens (-) are allowed. |
| workforces_config | No        | <a href="#">WorkforcesConfig</a> object | Team labeling task information: Tasks can be assigned by the team administrator or a specified team.                                   |

**Table 28-241** WorkforcesConfig

| Parameter  | Mandatory | Type                                             | Description                                |
|------------|-----------|--------------------------------------------------|--------------------------------------------|
| agency     | No        | String                                           | Administrator                              |
| workforces | No        | Array of <a href="#">WorkforceConfig</a> objects | List of teams that execute labeling tasks. |

**Table 28-242** WorkforceConfig

| Parameter      | Mandatory | Type                                    | Description                                                                                                                     |
|----------------|-----------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| workers        | No        | Array of <a href="#">Worker</a> objects | List of labeling team members.                                                                                                  |
| workforce_id   | No        | String                                  | ID of a labeling team.                                                                                                          |
| workforce_name | No        | String                                  | Name of a labeling team. The value contains 0 to 1024 characters and does not support the following special characters: !<>=&"" |

**Table 28-243** Worker

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                    |
|-------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time | No        | Long    | Creation time.                                                                                                                                                                                                                                                                                                                                                 |
| description | No        | String  | Labeling team member description. The value contains 0 to 256 characters and does not support the following special characters: ^!<>=&""                                                                                                                                                                                                                       |
| email       | No        | String  | Email address of a labeling team member.                                                                                                                                                                                                                                                                                                                       |
| role        | No        | Integer | Role. Options: <ul style="list-style-type: none"><li>• <b>0</b>: labeling personnel</li><li>• <b>1</b>: reviewer</li><li>• <b>2</b>: team administrator</li><li>• <b>3</b>: dataset owner</li></ul>                                                                                                                                                            |
| status      | No        | Integer | Current login status of a labeling team member. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The invitation email has not been sent.</li><li>• <b>1</b>: The invitation email has been sent but the user has not logged in.</li><li>• <b>2</b>: The user has logged in.</li><li>• <b>3</b>: The labeling team member has been deleted.</li></ul> |
| update_time | No        | Long    | Update time.                                                                                                                                                                                                                                                                                                                                                   |

| Parameter    | Mandatory | Type   | Description                   |
|--------------|-----------|--------|-------------------------------|
| worker_id    | No        | String | ID of a labeling team member. |
| workforce_id | No        | String | ID of a labeling team.        |

## Response Parameters

None

## Example Requests

Updating a Team Labeling Task

```
{
 "workforces_config": {
 "workforces": [{
 "workforce_id": "3frbQ90hb8ZKksAhyR8",
 "workers": [{
 "email": "xxx@xxx.com"
 }, {
 "email": "xxx@xxx.com"
 }]
 }]
 }
}
```

## Example Responses

**Status code: 200**

OK

```
{ }
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.31 Deleting a Team Labeling Task

### Function

This API is used to delete a team labeling task.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

DELETE /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}

**Table 28-244** Path Parameters

| Parameter         | Mandatory | Type   | Description                                                                                                     |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id        | Yes       | String | Dataset ID.                                                                                                     |
| project_id        | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a team labeling task.                                                                                     |

### Request Parameters

None

### Response Parameters

None

### Example Requests

Deleting a Team Labeling Task

DELETE https://{endpoint}/v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}

### Example Responses

**Status code: 204**

No Content

{ }

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 204         | No Content   |
| 401         | Unauthorized |
| 403         | Forbidden    |

## Error Codes

See [Error Codes](#).

## 28.1.32 Creating a Team Labeling Acceptance Task

### Function

This API is used to create a team labeling acceptance task.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}/acceptance

**Table 28-245** Path Parameters

| Parameter         | Mandatory | Type   | Description                                                                                                     |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id        | Yes       | String | Dataset ID.                                                                                                     |
| project_id        | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a team labeling task.                                                                                     |

## Request Parameters

**Table 28-246** Request body parameters

| Parameter     | Mandatory | Type    | Description                                                                                                                   |
|---------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------|
| sampling_num  | No        | Integer | Number of samples for the acceptance task. Either this parameter or the sampling ratio is delivered.                          |
| sampling_rate | No        | Double  | Sampling ratio of the acceptance task. The value range is (0,1]. Either this parameter or the number of samples is delivered. |

## Response Parameters

**Status code: 200****Table 28-247** Response body parameters

| Parameter | Type   | Description                            |
|-----------|--------|----------------------------------------|
| task_id   | String | ID of an asynchronous acceptance task. |

## Example Requests

Creating a Team Labeling Acceptance Task and Setting the Sampling Percentage to 20%

```
{
 "sampling_rate" : 0.2
}
```

## Example Responses

**Status code: 200**

OK

```
{
 "task_id" : "nv6BbozxCJmZcHAE9hV"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |



| Status Code | Description  |
|-------------|--------------|
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.33 Querying the Report of a Team Labeling Acceptance Task

### Function

This API is used to query the report of a team labeling acceptance task.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}/acceptance/report

**Table 28-248** Path Parameters

| Parameter         | Mandatory | Type   | Description                                                                                                     |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id        | Yes       | String | Dataset ID.                                                                                                     |
| project_id        | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a team labeling task.                                                                                     |

**Table 28-249** Query Parameters

| Parameter        | Mandatory | Type   | Description                           |
|------------------|-----------|--------|---------------------------------------|
| checking_task_id | Yes       | String | ID of the task that is being checked. |

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 28-250** Response body parameters

| Parameter      | Type                                  | Description                      |
|----------------|---------------------------------------|----------------------------------|
| checking_stats | <a href="#">CheckTaskStats</a> object | Real-time acceptance statistics. |
| total_stats    | <a href="#">CheckTaskStats</a> object | Historical statistics.           |

**Table 28-251** CheckTaskStats

| Parameter             | Type    | Description                          |
|-----------------------|---------|--------------------------------------|
| accepted_sample_count | Integer | Accepted samples.                    |
| checked_sample_count  | Integer | Checked samples.                     |
| pass_rate             | Double  | Pass rate of samples.                |
| rejected_sample_count | Integer | Rejected samples.                    |
| sampled_sample_count  | Integer | Number of sampled samples.           |
| sampling_num          | Integer | Samples of an acceptance task.       |
| sampling_rate         | Double  | Sampling rate of an acceptance task. |
| score                 | String  | Acceptance score.                    |
| task_id               | String  | ID of an acceptance task.            |

| Parameter              | Type    | Description             |
|------------------------|---------|-------------------------|
| total_sample_count     | Integer | Total samples.          |
| total_score            | Long    | Total acceptance score. |
| unchecked_sample_count | Integer | Unchecked samples.      |

## Example Requests

Querying the Report of a Team Labeling Acceptance Task

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/workforce-tasks/{workforce_task_id}/acceptance/report
```

## Example Responses

**Status code: 200**

OK

```
{
 "total_stats" : {
 "sampling_rate" : 1.0,
 "sampling_num" : 3,
 "pass_rate" : 0.0,
 "score" : "E",
 "total_score" : 0,
 "total_sample_count" : 3,
 "sampled_sample_count" : 3,
 "unchecked_sample_count" : 3,
 "checked_sample_count" : 0,
 "accepted_sample_count" : 0,
 "rejected_sample_count" : 0
 }
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.34 Updating Status of a Team Labeling Acceptance Task

### Function

Determine the acceptance scope for a team labeling task, including all labeled data, and update the sample data accordingly.

### Debugging

You can debug this API in [API Explorer](#) which supports automatic authentication. API Explorer can automatically generate SDK code examples and provide the SDK code example debugging.

### URI

PUT /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}/acceptance/status

**Table 28-252** URI parameters

| Parameter         | Mandatory | Type   | Description                                                                    |
|-------------------|-----------|--------|--------------------------------------------------------------------------------|
| dataset_id        | Yes       | String | Dataset ID                                                                     |
| project_id        | Yes       | String | Project ID. For details, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a team labeling task.                                                    |

**Table 28-253** Query parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                 |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------|
| locale    | Yes       | String | Language . Options: <ul style="list-style-type: none"><li>• <b>zh-cn</b>: Chinese</li><li>• <b>en-us</b>: English (default value)</li></ul> |

## Request Parameters

**Table 28-254** Request body parameters

| Parameter             | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| action                | Yes       | Integer | Acceptance action. Options: <ul style="list-style-type: none"><li>• <b>0</b>: All samples are passed.</li><li>• <b>1</b>: All samples are rejected.</li><li>• <b>2</b>: The acceptance is canceled.</li><li>• <b>3</b>: The sample list of acceptance conflicts is obtained.</li><li>• <b>4</b>: Only the single-accepted samples and unprocessed samples are passed.</li><li>• <b>5</b>: Only the single-accepted samples are passed.</li></ul> |
| overwrite_last_result | No        | Boolean | Whether to overwrite labeled data. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The labeled data is overwritten.</li><li>• <b>false</b>: The labeled data is not overwritten. (default value)</li></ul>                                                                                                                                                                                                                         |

## Response Parameters

**Status code:** 200

**Table 28-255** Response body parameters

| Parameter    | Type                                                | Description                      |
|--------------|-----------------------------------------------------|----------------------------------|
| sample_count | Integer                                             | Total number of accepted samples |
| samples      | Array of <a href="#">DescribeSampleResp</a> objects | List of accepted samples         |

**Table 28-256** DescribeSampleResp

| Parameter        | Type                         | Description                                                                                                                                                                                                                |
|------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| check_accept     | Boolean                      | Whether the acceptance is passed, which is used for team labeling. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The acceptance is passed.</li><li>• <b>false</b>: The acceptance is not passed.</li></ul> |
| check_comment    | String                       | Acceptance comment, which is used for team labeling.                                                                                                                                                                       |
| check_score      | String                       | Acceptance score, which is used for team labeling.                                                                                                                                                                         |
| deletion_reasons | Array of strings             | Reason for deleting a sample, which is used for healthcare.                                                                                                                                                                |
| hard_details     | Map<String,HardDetail>       | Difficult problem details, including description, causes, and suggestions of difficult problems.                                                                                                                           |
| labelers         | Array of Worker objects      | Labeling personnel list of sample allocation. The list records the team members receiving the samples, which is used for team labeling.                                                                                    |
| labels           | Array of SampleLabel objects | List of sample labels                                                                                                                                                                                                      |
| metadata         | SampleMetadata object        | Attribute key-value pair of the sample metadata                                                                                                                                                                            |
| review_accept    | Boolean                      | Whether to accept the review, which is used for team labeling. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The review is accepted.</li><li>• <b>false</b>: The review is rejected.</li></ul>             |
| review_comment   | String                       | Review comment, which is used for team labeling.                                                                                                                                                                           |
| review_score     | String                       | Review score, which is used for team labeling.                                                                                                                                                                             |
| sample_data      | Array of strings             | List of sample data                                                                                                                                                                                                        |
| sample_dir       | String                       | Path for storing a sample                                                                                                                                                                                                  |
| sample_id        | String                       | Sample ID                                                                                                                                                                                                                  |
| sample_name      | String                       | Sample name                                                                                                                                                                                                                |
| sample_size      | Long                         | Sample size or text length, in bytes                                                                                                                                                                                       |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_status  | String  | Sample status. Options: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: unlabeled</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: accepted</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: reviewed</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: sampling pending check</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: sampling checked</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: sampling accepted</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: sampling rejected</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| sample_time    | Long    | Sample time, when OBS is last modified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| sample_type    | Integer | Sample type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image</li><li>• <b>1</b>: text</li><li>• <b>2</b>: audio</li><li>• <b>4</b>: table</li><li>• <b>6</b>: video</li><li>• <b>9</b>: free format</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| score          | String  | Comprehensive score, which is used for team labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| source         | String  | Source address of sample data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| sub_sample_url | String  | Subsample URL, which is used for healthcare.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| worker_id      | String  | ID of a labeling team member, which is used for team labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**Table 28-257** HardDetail

| Parameter | Type   | Description |
|-----------|--------|-------------|
| alo_name  | String | Alias       |

| Parameter  | Type    | Description         |
|------------|---------|---------------------|
| id         | Integer | Reason ID           |
| reason     | String  | Reason description  |
| suggestion | String  | Handling suggestion |

**Table 28-258** Worker

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                                                   |
|--------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time  | Long    | Worker creation time                                                                                                                                                                                                                                                                                                          |
| description  | String  | Labeling team member description. The value contains 0 to 256 characters. Special characters (^!<>=&"') are not allowed.                                                                                                                                                                                                      |
| email        | String  | Email address of a labeling team member                                                                                                                                                                                                                                                                                       |
| role         | Integer | Role. Options: <ul style="list-style-type: none"><li>● <b>0</b>: marker</li><li>● <b>1</b>: reviewer</li><li>● <b>2</b>: team manager</li><li>● <b>3</b>: dataset owner</li></ul>                                                                                                                                             |
| status       | Integer | Current login status of a labeled member. Options: <ul style="list-style-type: none"><li>● <b>0</b>: No invitation email is sent.</li><li>● <b>1</b>: The invitation email is sent but the member has not logged in.</li><li>● <b>2</b>: The member has logged in.</li><li>● <b>3</b>: The member has been deleted.</li></ul> |
| update_time  | Long    | Worker update time                                                                                                                                                                                                                                                                                                            |
| worker_id    | String  | ID of a labeling team member                                                                                                                                                                                                                                                                                                  |
| workforce_id | String  | ID of a labeling team                                                                                                                                                                                                                                                                                                         |

**Table 28-259** SampleLabel

| Parameter    | Type   | Description                                                                                                                                                                                                                           |
|--------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_by | String | Video labeling method, which is used to determine whether a video is labeled manually or automatically. Options: <ul style="list-style-type: none"><li>● <b>human</b>: manual labeling</li><li>● <b>auto</b>: auto labeling</li></ul> |



| Parameter | Type                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String                                     | Label ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| name      | String                                     | Label name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| property  | <a href="#">SampleLabelProperty</a> object | Attribute key-value pair of the sample label, such as the object shape and shape feature                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| score     | Float                                      | Confidence. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| type      | Integer                                    | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-260** SampleLabelProperty

| Parameter            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:content   | String  | Speech text content, which is a default attribute dedicated to the speech label (including the speech content and speech start and end points)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| @modelarts:end_index | Integer | End position of the text, which is a default attribute dedicated to the named entity label. The end position does not include the character corresponding to the value of <b>end_index</b> . Examples: <ul style="list-style-type: none"><li>• If the text is "<b>Barack Hussein Obama II (born on August 4, 1961) is an attorney and politician.</b>", the <b>start_index</b> and <b>end_index</b> of <b>Barack Hussein Obama II</b> are <b>0</b> and <b>23</b>, respectively.</li><li>• If the text is "<b>Hope is the thing with feathers</b>", <b>start_index</b> and <b>end_index</b> of <b>Hope</b> are <b>0</b> and <b>4</b>, respectively.</li></ul> |

| Parameter           | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:end_time | String | Speech end time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| @modelarts:feature  | Object | <p>Shape feature, which is a default attribute dedicated to the object detection label, with type of <b>List</b>. The upper left corner of an image is used as the coordinate origin <b>[0, 0]</b>. Each coordinate point is represented by <b>[x, y]</b>. <i>x</i> indicates the horizontal coordinate, and <i>y</i> indicates the vertical coordinate (both <i>x</i> and <i>y</i> are greater than or equal to 0). The format of each shape is as follows:</p> <ul style="list-style-type: none"><li>• <b>bndbox</b>: consists of two points, for example, <b>[[0,10],[50,95]]</b>. The upper left vertex of the rectangle is the first point, and the lower right vertex is the second point. That is, the x-coordinate of the first point must be less than the x-coordinate of the second point, and the y-coordinate of the first point must be less than the y-coordinate of the second point.</li><li>• <b>polygon</b>: consists of multiple points that are connected in sequence to form a polygon, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li><li>• <b>circle</b>: consists of the center and radius, for example, <b>[[100,100],[50]]</b>.</li><li>• <b>line</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>dashed</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>point</b>: consists of one point, for example, <b>[[0,100]]</b>.</li><li>• <b>polyline</b>: consists of multiple points, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li></ul> |
| @modelarts:from     | String | Start entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter                   | Type   | Description                                                                                                                                                                                                                                      |
|-----------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard             | String | Whether the sample is labeled as a hard example, which is a default attribute. Options: <ul style="list-style-type: none"><li>● <b>0/false</b>: The label is not a hard example.</li><li>● <b>1/true</b>: The label is a hard example.</li></ul> |
| @modelarts:hard_coefficient | String | Coefficient of difficulty of each label level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                        |

| Parameter               | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | String | <p>Reasons why the sample is a hard example, which is a default attribute. Use a hyphen (-) to separate every two hard example reason IDs, for example, <b>3-20-21-19</b>. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on flplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |

| Parameter                | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:shape         | String  | Object shape, which is a default attribute dedicated to the object detection label and is left empty by default. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dashed line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:speech_source | String  | Speech source, which is a default attribute dedicated to the speech start/end point label and can be set to a speaker or narrator                                                                                                                                                                                                                                                                                  |
| @modelarts:start_index   | Integer | Start position of the text, which is a default attribute dedicated to the named entity label. The start value begins from 0, including the character corresponding to the value of <b>start_index</b> .                                                                                                                                                                                                            |
| @modelarts:start_time    | String  | Speech start time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                           |
| @modelarts:triplet_id    | String  | Direction entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                    |

**Table 28-261** SampleMetadata

| Parameter                   | Type    | Description                                                                                                                                                                                                                           |
|-----------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:import_origin    | Integer | Sample source, which is a default attribute.                                                                                                                                                                                          |
| @modelarts:hard             | Double  | Whether the sample is labeled as a hard example, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The label is not a hard example.</li><li>• <b>1</b>: The label is a hard example.</li></ul> |
| @modelarts:hard_coefficient | Double  | Coefficient of difficulty of each sample level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                            |

| Parameter               | Type              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | Array of integers | <p>ID of a hard example reason, which is a default attribute. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>• <b>15</b>: There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on fliplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |



| Parameter       | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:size | Array of objects | image size, including width, height, and depth. The type is List[/topic/body/section/table/tgroup/tbody/row/entry/p/br. {""}] (br]. In the list, the first number indicates the width (pixels), the second number indicates the height (pixels), and the third number indicates the depth (the depth can be left blank and the default value is 3). For example, <b>[100,200,3]</b> and <b>[100,200]</b> are both valid. Note: This parameter is mandatory only when the sample label list contains the object detection label. |

## Request Example

The following shows an example indicating that all tasks are accepted.

```
{
 "action" : 0
}
```

## Response Example

**Status code: 200**

OK

```
{ }
```

## Status Code

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Code

For details, see [Error Codes](#).

## 28.1.35 Querying Details About Team Labeling Task Statistics

### Function

This API is used to query details about team labeling task statistics.

## Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

## URI

GET /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}/data-annotations/stats

**Table 28-262** Path Parameters

| Parameter         | Mandatory | Type   | Description                                                                                                     |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id        | Yes       | String | Dataset ID.                                                                                                     |
| project_id        | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a team labeling task.                                                                                     |

Table 28-263 Query Parameters

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_state | No        | String | Statistics on the specified sample state. The options are as follows: <ul style="list-style-type: none"><li>• __ALL__: labeled</li><li>• __NONE__: not marked</li><li>• __UNCHECK__: to be accepted</li><li>• __ACCEPTED__: The acceptance is passed.</li><li>• __REJECTED__: rejected</li><li>• __UNREVIEWED__: to be reviewed</li><li>• __REVIEWED__: approved</li><li>• __WORKFORCE_SAMPLED__: sampled</li><li>• __WORKFORCE_SAMPLED_UNCHECK__: Sampling is to be accepted.</li><li>• __WORKFORCE_SAMPLED_CHECKED__: Sampling has been accepted.</li><li>• __WORKFORCE_SAMPLED_ACCEPTED__: The sampling is passed.</li><li>• __WORKFORCE_SAMPLED_REJECTED__: The sampling has been rejected.</li><li>• __AUTO_ANNOTATION__: to be confirmed</li></ul> |

Request Parameters

None

Response Parameters

Status code: 200

Table 28-264 Response body parameters

| Parameter | Type   | Description                         |
|-----------|--------|-------------------------------------|
| data_path | String | Path for storing data of a dataset. |

| Parameter             | Type                               | Description                                                                                                                                                                                                                                                                                                                                     |
|-----------------------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_splitting_enable | Boolean                            | Whether the dataset can be split into training set and validation set based on the sample labeling statistics. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The dataset can be split into training set and validation set.</li><li>• <b>false</b>: The dataset cannot be split into training set and validation set.</li></ul> |
| grouped_label_stats   | Map<String,Array<LabelStats>>      | Label statistics grouped by labeling type.                                                                                                                                                                                                                                                                                                      |
| hard_detail_stats     | Map<String,PairOfIntAndHardDetail> | Statistics on hard example reasons. The type is <b>Map&lt;Integer, Pair&lt;Integer, HardDetail&gt;&gt;</b> . The <b>key</b> of Map indicates the ID of the hard example reason, the <b>key</b> of Pair indicates the number of times that the hard example reason occurs, and the <b>value</b> of Pair indicates the hard example reason.       |
| key_sample_stats      | Map<String,Integer>                | Statistics on hard examples.                                                                                                                                                                                                                                                                                                                    |
| label_stats           | Array of LabelStats objects        | List of label statistics.                                                                                                                                                                                                                                                                                                                       |
| metadata_stats        | Map<String,Object>                 | Statistics on sample metadata, in JSON format.                                                                                                                                                                                                                                                                                                  |
| sample_stats          | Map<String,Integer>                | Statistics on sample status.                                                                                                                                                                                                                                                                                                                    |

**Table 28-265** LabelStats

| Parameter    | Type                            | Description                                                                                                                      |
|--------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| attributes   | Array of LabelAttribute objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included. |
| count        | Integer                         | Number of labels.                                                                                                                |
| name         | String                          | Label name.                                                                                                                      |
| property     | LabelProperty object            | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                      |
| sample_count | Integer                         | Number of samples containing the label.                                                                                          |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Integer | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-266** PairOfIntAndHardDetail

| Parameter | Type                              | Description                                        |
|-----------|-----------------------------------|----------------------------------------------------|
| key       | Integer                           | Number of times that a hard example reason occurs. |
| value     | <a href="#">HardDetail</a> object | Reason for a hard example.                         |

**Table 28-267** HardDetail

| Parameter  | Type    | Description          |
|------------|---------|----------------------|
| alo_name   | String  | Alias.               |
| id         | Integer | Reason ID.           |
| reason     | String  | Reason description.  |
| suggestion | String  | Handling suggestion. |

**Table 28-268** LabelAttribute

| Parameter     | Type   | Description                                                         |
|---------------|--------|---------------------------------------------------------------------|
| default_value | String | Default value of a label attribute.                                 |
| id            | String | Label attribute ID. You can query the tag by invoking the tag list. |

| Parameter | Type                                                 | Description                                                                                                                                              |
|-----------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | String                                               | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&''.                                            |
| type      | String                                               | Label attribute type. Options: <ul style="list-style-type: none"><li>• <b>text</b>: text</li><li>• <b>select</b>: single-choice drop-down list</li></ul> |
| values    | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values.                                                                                                                          |

**Table 28-269** LabelAttributeValue

| Parameter | Type   | Description               |
|-----------|--------|---------------------------|
| id        | String | Label attribute value ID. |
| value     | String | Label attribute value.    |

**Table 28-270** LabelProperty

| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> .                                                                                                                                                                                                                                                                                   |
| @modelarts:default_shape | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:from_type     | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |

| Parameter            | Type   | Description                                                                                                                                                                                                    |
|----------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:rename_to | String | Default attribute: The new name of the label.                                                                                                                                                                  |
| @modelarts:shortcut  | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                       |
| @modelarts:tail_type | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |

## Example Requests

### Querying Statistics on Unapproved Samples of a Team Labeling Task

```
GET https://{endpoint}/v2/{project_id}/datasets/WxCREuCkBSAlQr9xrde/workforce-tasks/tY330MHxV9dqlPVaTRM/data-annotations/stats?sample_state=__unreviewed__
```

## Example Responses

**Status code: 200**

OK

```
{
 "label_stats" : [{
 "name" : "Rabbits",
 "type" : 1,
 "property" : {
 "@modelarts:color" : "#3399ff"
 },
 "count" : 0,
 "sample_count" : 0
 }, {
 "name" : "Bees",
 "type" : 1,
 "property" : {
 "@modelarts:color" : "#3399ff"
 },
 "count" : 1,
 "sample_count" : 1
 }],
 "sample_stats" : {
 "un_annotation" : 308,
 "total" : 309,
 "rejected" : 0,
 "unreviewed" : 1,
 "accepted" : 0,
 "auto_annotation" : 0,
 "uncheck" : 0
 },
 "key_sample_stats" : {
 "total" : 309,
 "non_key_sample" : 309,
 "key_sample" : 0
 },
 "metadata_stats" : { },
}
```

```
"data_splitting_enable" : false
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.36 Querying Details About the Progress of a Team Labeling Task Member

### Function

This API is used to query details about the progress of a team labeling task member.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}/metrics

**Table 28-271** Path Parameters

| Parameter         | Mandatory | Type   | Description                                                                                                     |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id        | Yes       | String | Dataset ID.                                                                                                     |
| project_id        | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a team labeling task.                                                                                     |



## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 28-272** Response body parameters

| Parameter    | Type                            | Description                               |
|--------------|---------------------------------|-------------------------------------------|
| sample_stats | Map<String,Map<String,Integer>> | Statistics on team labeling task members. |

## Example Requests

Querying Details About the Progress of a Team Labeling Task Member

GET https://{endpoint}/v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}/metrics

## Example Responses

**Status code: 200**

OK

```
{
 "sample_stats": {
 "xxx@xxx.com": {
 "un_annotation": 51,
 "rejected": 0,
 "unreviewed": 0,
 "accepted": 0,
 "auto_annotation": 0,
 "uncheck": 0
 }
 }
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.37 Querying the Team Labeling Task List by a Team Member

### Function

This API is used to query the team labeling task list by a team member.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/workforces/worker-tasks

**Table 28-273** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-274** Query Parameters

| Parameter      | Mandatory | Type    | Description                                                                                                                                                    |
|----------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit          | No        | Integer | Maximum number of records returned on each page. The value ranges from 1 to 100. The default value is <b>10</b> .                                              |
| offset         | No        | Integer | Start page of the paging list. The default value is <b>0</b> .                                                                                                 |
| order          | No        | String  | Sorting method. Options: <ul style="list-style-type: none"><li>• <b>asc</b>: ascending order</li><li>• <b>desc</b>: descending order (default value)</li></ul> |
| search_content | No        | String  | Fuzzy search keyword. By default, this parameter is left blank.                                                                                                |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                  |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sort_by   | No        | String | Sorting mode of the query.<br>Options: <ul style="list-style-type: none"><li>• <b>create_time</b>: Sort by creation time. (Default value)</li><li>• <b>workforce_task_name</b>: Sort by task name.</li></ul> |

## Request Parameters

None

## Response Parameters

Status code: 200

Table 28-275 Response body parameters

| Parameter    | Type                                        | Description                              |
|--------------|---------------------------------------------|------------------------------------------|
| count        | Integer                                     | Total number of team labeling tasks.     |
| worker_tasks | Array of <a href="#">WorkerTask</a> objects | Team labeling task list queried by page. |

Table 28-276 WorkerTask

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                                                  |
|--------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time  | Long    | Time when a labeling team member's task is created.                                                                                                                                                                                                                                                                          |
| dataset_id   | String  | ID of a dataset associated with a labeling team member's task.                                                                                                                                                                                                                                                               |
| dataset_type | Integer | Labeling type of a team member's task.                                                                                                                                                                                                                                                                                       |
| email        | String  | Email address of a labeling team member.                                                                                                                                                                                                                                                                                     |
| email_status | Integer | Email notification status of a labeling team member's labeling task. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The email has not been sent.</li><li>• <b>1</b>: The email format is incorrect.</li><li>• <b>2</b>: The email address is unreachable.</li><li>• <b>3</b>: The email has been sent.</li></ul> |

| Parameter           | Type                               | Description                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| last_notify_time    | Long                               | Timestamp of the latest notification email sent to a labeling team member.                                                                                                                                                                                                                                                                                                                     |
| pass_rate           | Double                             | Pass rate of task acceptance review for a labeling team member.                                                                                                                                                                                                                                                                                                                                |
| role                | Integer                            | Role of a labeling team member.                                                                                                                                                                                                                                                                                                                                                                |
| sample_stats        | <a href="#">SampleStats</a> object | Sample statistics of a labeling team member's task.                                                                                                                                                                                                                                                                                                                                            |
| score               | Double                             | Average acceptance score of labeling team members' task samples.                                                                                                                                                                                                                                                                                                                               |
| task_id             | String                             | Team labeling task ID associated with a member's task.                                                                                                                                                                                                                                                                                                                                         |
| task_status         | Integer                            | Task status of a labeling team member.<br>Options: <ul style="list-style-type: none"><li>• <b>6</b>: created</li><li>• <b>0</b>: starting</li><li>• <b>1</b>: running</li><li>• <b>2</b>: under acceptance</li><li>• <b>3</b>: approved, indicating the team labeling task is complete</li><li>• <b>4</b>: rejected, indicating that the task needs to be labeled and reviewed again</li></ul> |
| update_time         | Long                               | Time when a labeling team member's task is updated.                                                                                                                                                                                                                                                                                                                                            |
| worker_id           | String                             | ID of a labeling team member.                                                                                                                                                                                                                                                                                                                                                                  |
| workforce_task_name | String                             | Team labeling task name associated with a member's task.                                                                                                                                                                                                                                                                                                                                       |

**Table 28-277** SampleStats

| Parameter                    | Type    | Description                                                   |
|------------------------------|---------|---------------------------------------------------------------|
| accepted_sample_count        | Integer | Number of samples accepted by the owner.                      |
| auto_annotation_sample_count | Integer | Number of samples to be confirmed after intelligent labeling. |
| deleted_sample_count         | Integer | Number of deleted samples.                                    |

| Parameter                | Type    | Description                                                                                         |
|--------------------------|---------|-----------------------------------------------------------------------------------------------------|
| rejected_sample_count    | Integer | Number of samples that failed to pass the owner acceptance.                                         |
| sampled_sample_count     | Integer | Number of samples that are to be accepted by the owner and sampled.                                 |
| total_sample_count       | Integer | Total number of samples.                                                                            |
| unannotated_sample_count | Integer | Number of unlabeled samples.                                                                        |
| uncheck_sample_count     | Integer | Number of samples that have been approved by the reviewer and are to be accepted by the owner.      |
| unreviewed_sample_count  | Integer | Number of samples that have been labeled by the labeler but have not been reviewed by the reviewer. |

## Example Requests

Querying the Team Labeling Task List by a Team Member

```
GET https://{endpoint}/v2/{project_id}/workforces/worker-tasks?
offset=0&limit=10&sort_by=create_time&order=desc&filePreview=false
```

## Example Responses

**Status code: 200**

OK

```
{
 "count" : 2,
 "worker_tasks" : [{
 "email" : "xxx@xxx.com",
 "worker_id" : "8c15ad080d3eabad14037b4eb00d6a6f",
 "role" : 0,
 "task_id" : "tY330MHxV9dqIPVaTRM",
 "workforce_task_name" : "task-cd60",
 "dataset_id" : "WxCREuCkBSAlQr9xrde",
 "sample_stats" : {
 "total_sample_count" : 309,
 "unannotated_sample_count" : 308,
 "unreviewed_sample_count" : 0,
 "uncheck_sample_count" : 1,
 "sampled_sample_count" : 0,
 "rejected_sample_count" : 0,
 "accepted_sample_count" : 0,
 "auto_annotation_sample_count" : 0
 },
 "create_time" : 1606224714358,
 "update_time" : 1606224878490,
 "email_status" : 3,
 "last_notify_time" : 0,
 "dataset_type" : 1,
 "task_status" : 1
 }
]
```

```
}, {
 "email" : "xxx@xxx.com",
 "worker_id" : "8c15ad080d3eabad14037b4eb00d6a6f",
 "role" : 0,
 "task_id" : "MJVjCQDMso95a8dvUm4",
 "workforce_task_name" : "task-2720",
 "dataset_id" : "OY82gjEHxt9w1efgrhS",
 "sample_stats" : {
 "total_sample_count" : 50005,
 "unannotated_sample_count" : 50005,
 "unreviewed_sample_count" : 0,
 "uncheck_sample_count" : 0,
 "sampled_sample_count" : 0,
 "rejected_sample_count" : 0,
 "accepted_sample_count" : 0,
 "auto_annotation_sample_count" : 0
 },
 "create_time" : 1605949737134,
 "update_time" : 1605949737134,
 "email_status" : 3,
 "last_notify_time" : 0,
 "dataset_type" : 0,
 "task_status" : 2
}]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.38 Submitting Sample Review Comments of an Acceptance Task

### Function

This API is used to submit sample review comments of an acceptance task.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

## URI

POST /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}/acceptance/batch-comment

**Table 28-278** Path Parameters

| Parameter         | Mandatory | Type   | Description                                                                                                     |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id        | Yes       | String | Dataset ID.                                                                                                     |
| project_id        | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a labeling task.                                                                                          |

## Request Parameters

**Table 28-279** Request body parameters

| Parameter | Mandatory | Type                                           | Description          |
|-----------|-----------|------------------------------------------------|----------------------|
| comments  | Yes       | Array of <a href="#">SampleComment</a> objects | Review comment list. |

**Table 28-280** SampleComment

| Parameter | Mandatory | Type    | Description                                                                                                                                                                |
|-----------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| accept    | Yes       | Boolean | Whether the submitted sample review comments are passed. Options: <ul style="list-style-type: none"><li>• <b>true</b>: passed</li><li>• <b>false</b>: not passed</li></ul> |
| comment   | No        | String  | Review comment, which contains 0 to 256 characters, excluding special characters (!<>=&'").                                                                                |
| sample_id | No        | String  | Sample ID, which can be obtained by invoking the API for querying the sample list.                                                                                         |

| Parameter | Mandatory | Type   | Description                                                                                          |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------|
| score     | No        | String | Review score, whose value can be <b>A</b> , <b>B</b> , <b>C</b> , or <b>D</b> , in descending order. |
| worker_id | No        | String | Annotation member ID, which can be obtained by invoking the annotation member list interface.        |

## Response Parameters

None

## Example Requests

The following is an example of how to submit sample review comments of an acceptance task. **accept** has been set to **true** and **score** has been set to **A**.

```
{
 "comments": [{
 "worker_id": "8c15ad080d3eabad14037b4eb00d6a6f",
 "sample_id": "09ac49d5b06385849c8769fdcf0f6d60",
 "accept": true,
 "comment": "",
 "score": "A"
 }]
}
```

## Example Responses

**Status code: 200**

OK

```
{}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).



## 28.1.39 Reviewing Team Labeling Results

### Function

This API is used to review team labeling results.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}/data-annotations/review

**Table 28-281** Path Parameters

| Parameter         | Mandatory | Type   | Description                                                                                                     |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id        | Yes       | String | Dataset ID.                                                                                                     |
| project_id        | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a labeling task.                                                                                          |

### Request Parameters

**Table 28-282** Request body parameters

| Parameter | Mandatory | Type                                           | Description          |
|-----------|-----------|------------------------------------------------|----------------------|
| comments  | No        | Array of <a href="#">SampleComment</a> objects | Review comment list. |

**Table 28-283** SampleComment

| Parameter | Mandatory | Type    | Description                                                                                                                                                                |
|-----------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| accept    | Yes       | Boolean | Whether the submitted sample review comments are passed. Options: <ul style="list-style-type: none"><li>• <b>true</b>: passed</li><li>• <b>false</b>: not passed</li></ul> |
| comment   | No        | String  | Review comment, which contains 0 to 256 characters, excluding special characters (!<>=&'").                                                                                |
| sample_id | No        | String  | Sample ID, which can be obtained by invoking the API for querying the sample list.                                                                                         |
| score     | No        | String  | Review score, whose value can be <b>A</b> , <b>B</b> , <b>C</b> , or <b>D</b> , in descending order.                                                                       |
| worker_id | No        | String  | Annotation member ID, which can be obtained by invoking the annotation member list interface.                                                                              |

## Response Parameters

None

## Example Requests

The following is an example of how to review team labeling results. **accept** has been set to **true** and **score** has been set to **A**.

```
{
 "comments": [{
 "worker_id": "8c15ad080d3eabad14037b4eb00d6a6f",
 "sample_id": "0d43f9811d3808a3146c673257d4a1dbhh",
 "accept": true,
 "comment": "",
 "score": "A"
 }]
}
```

## Example Responses

**Status code: 200**

OK

```
{ }
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

# 28.1.40 Updating Labels of Team Labeling Samples in Batches

## Function

This API is used to update labels of team labeling samples in batches.

## Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

## URI

PUT /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}/data-annotations/samples

**Table 28-284** Path Parameters

| Parameter         | Mandatory | Type   | Description                                                                                                     |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id        | Yes       | String | Dataset ID.                                                                                                     |
| project_id        | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a labeling task.                                                                                          |

## Request Parameters

**Table 28-285** Request body parameters

| Parameter | Mandatory | Type                                          | Description                              |
|-----------|-----------|-----------------------------------------------|------------------------------------------|
| email     | No        | String                                        | Email address of a labeling team member. |
| samples   | No        | Array of <a href="#">SampleLabels</a> objects | Updated sample list.                     |

**Table 28-286** SampleLabels

| Parameter    | Mandatory | Type                                          | Description                                                                                                                                                                                                                       |
|--------------|-----------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| labels       | No        | Array of <a href="#">SampleLabels</a> objects | Sample label list. If this parameter is left blank, all sample labels are deleted.                                                                                                                                                |
| metadata     | No        | <a href="#">SampleMetadata</a> object         | Key-value pair of the sample <b>metadata</b> attribute.                                                                                                                                                                           |
| sample_id    | No        | String                                        | Sample ID.                                                                                                                                                                                                                        |
| sample_type  | No        | Integer                                       | Sample type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image</li><li>• <b>1</b>: text</li><li>• <b>2</b>: speech</li><li>• <b>4</b>: table</li><li>• <b>6</b>: video</li><li>• <b>9</b>: custom format</li></ul> |
| sample_usage | No        | String                                        | Sample usage. Options: <ul style="list-style-type: none"><li>• <b>TRAIN</b>: training</li><li>• <b>EVAL</b>: evaluation</li><li>• <b>TEST</b>: test</li><li>• <b>INFERENCE</b>: inference</li></ul>                               |
| source       | No        | String                                        | Source address of sample data, which is obtained by invoking the sample list interface.                                                                                                                                           |
| worker_id    | No        | String                                        | ID of a labeling team member.                                                                                                                                                                                                     |

**Table 28-287** SampleLabel

| Parameter    | Mandatory | Type                                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|-----------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_by | No        | String                                         | Video labeling method, which is used to distinguish whether a video is labeled manually or automatically. Options: <ul style="list-style-type: none"><li>• <b>human</b>: manual labeling</li><li>• <b>auto</b>: automatic labeling</li></ul>                                                                                                                                                                                                                                                                                              |
| id           | No        | String                                         | Label ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| name         | No        | String                                         | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property     | No        | <a href="#">SampleLabel Property</a><br>object | Attribute key-value pair of the sample label, such as the object shape and shape feature.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| score        | No        | Float                                          | Confidence. The value range is [0,1].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| type         | No        | Integer                                        | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-288** SampleLabelProperty

| Parameter          | Mandatory | Type   | Description                                                                                                                                     |
|--------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:content | No        | String | Speech text content, which is a default attribute dedicated to the speech label (including the speech content and speech start and end points). |

| Parameter            | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:end_index | No        | Integer | <p>End position of the text, which is a default attribute dedicated to the named entity label. The end position does not include the character corresponding to the value of <b>end_index</b>.</p> <p>Example:</p> <ul style="list-style-type: none"><li>• If the text is "<b>Barack Hussein Obama II (born August 4, 1961) is an attorney and politician.</b>", <b>start_index</b> and <b>end_index</b> of <b>Barack Hussein Obama II</b> are <b>0</b> and <b>23</b>, respectively.</li><li>• If the text is "<b>Hope is the thing with feathers</b>", <b>start_index</b> and <b>end_index</b> of <b>Hope</b> are <b>0</b> and <b>4</b>, respectively.</li></ul> |
| @modelarts:end_time  | No        | String  | <p>Speech end time, which is a default attribute dedicated to the speech start/end point label, in the format of <b>hh:mm:ss.SSS</b>. (<b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)</p>                                                                                                                                                                                                                                                                                                                                                                                               |

| Parameter          | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:feature | No        | Object | <p>Shape feature, which is a default attribute dedicated to the object detection label, with type of <b>List</b>. The upper left corner of the image is used as the coordinate origin [0, 0]. Each coordinate point is represented by [x, y], where x indicates the horizontal coordinate and y indicates the vertical coordinate (both x and y are <math>\geq 0</math>). The format of each shape is as follows:</p> <ul style="list-style-type: none"><li>• <b>bndbox</b> consists of two points, for example, <b>[[0,10],[50,95]]</b>. The upper left vertex of the rectangle is the first point, and the lower right vertex is the second point. That is, the x-coordinate of the first point must be less than the x-coordinate of the second point, and the y-coordinate of the first point must be less than the y-coordinate of the second point.</li><li>• <b>polygon</b>: consists of multiple points that are connected in sequence to form a polygon, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li><li>• <b>circle</b>: consists of the center and radius, for example, <b>[[100,100],[50]]</b>.</li><li>• <b>line</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>dashed</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li></ul> |

| Parameter                   | Mandatory | Type   | Description                                                                                                                                                                                                                               |
|-----------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             |           |        | <ul style="list-style-type: none"> <li>• <b>point</b>: consists of one point, for example, <b>[[0,100]]</b>.</li> <li>• <b>polyline</b>: consists of multiple points, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li> </ul> |
| @modelarts:from             | No        | String | ID of the head entity in the triplet relationship label, which is a default attribute dedicated to the triplet relationship label.                                                                                                        |
| @modelarts:hard             | No        | String | Sample labeled as a hard sample or not, which is a default attribute. Options: <ul style="list-style-type: none"> <li>• <b>0/false</b>: not a hard example</li> <li>• <b>1/true</b>: hard example</li> </ul>                              |
| @modelarts:hard_coefficient | No        | String | Coefficient of difficulty of each label level, which is a default attribute. The value range is <b>[0,1]</b> .                                                                                                                            |



| Parameter               | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | No        | String | <p>Reasons that the sample is a hard sample, which is a default attribute. Use a hyphen (-) to separate every two hard sample reason IDs, for example, <b>3-20-21-19</b>.</p> <p>Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No target objects are identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>● <b>10:</b> There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>● <b>11:</b> There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>● <b>12:</b> There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>● <b>13:</b> There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>● <b>14:</b> There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>● <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data enhancement result based on</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p>GaussianBlur is inconsistent with the prediction result of the original image.</p> <ul style="list-style-type: none"><li>● <b>20:</b> The data enhancement result based on fliplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data enhancement result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data enhancement result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data enhancement result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data enhancement result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data enhancement result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data enhancement result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data enhancement result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data enhancement result based on add is inconsistent with the prediction result of the original image.</li></ul> |

| Parameter                | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          |           |         | <ul style="list-style-type: none"><li>● <b>29</b>: The data enhancement result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30</b>: The data is predicted to be abnormal.</li></ul>                                                                                                                                                                                 |
| @modelarts:shape         | No        | String  | Object shape, which is a default attribute dedicated to the object detection label and is left empty by default.<br>Options: <ul style="list-style-type: none"><li>● <b>bndbox</b>: rectangle</li><li>● <b>polygon</b>: polygon</li><li>● <b>circle</b>: circle</li><li>● <b>line</b>: straight line</li><li>● <b>dashed</b>: dotted line</li><li>● <b>point</b>: point</li><li>● <b>polyline</b>: polyline</li></ul> |
| @modelarts:speech_source | No        | String  | Speech source, which is a default attribute dedicated to the speech start/end point label and can be set to a speaker or narrator.                                                                                                                                                                                                                                                                                    |
| @modelarts:start_index   | No        | Integer | Start position of the text, which is a default attribute dedicated to the named entity label. The start value begins from 0, including the character corresponding to the value of <b>start_index</b> .                                                                                                                                                                                                               |
| @modelarts:start_time    | No        | String  | Speech start time, which is a default attribute dedicated to the speech start/end point label, in the format of <b>hh:mm:ss.SSS</b> . ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                      |
| @modelarts:tail_id       | No        | String  | ID of the tail entity in the triplet relationship label, which is a default attribute dedicated to the triplet relationship label.                                                                                                                                                                                                                                                                                    |

**Table 28-289** SampleMetadata

| Parameter                   | Mandatory | Type    | Description                                                                                                                                                                                        |
|-----------------------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:import_origin    | No        | Integer | Sample source, which is a built-in attribute.                                                                                                                                                      |
| @modelarts:hard             | No        | Double  | Whether the sample is labeled as a hard sample, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0</b>: non-hard sample</li><li>• <b>1</b>: hard sample</li></ul> |
| @modelarts:hard_coefficient | No        | Double  | Coefficient of difficulty of each sample level, which is a default attribute. The value range is <b>[0,1]</b> .                                                                                    |

| Parameter               | Mandatory | Type              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|-----------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | No        | Array of integers | <p>ID of a hard sample reason, which is a default attribute. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>• <b>11:</b> There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12:</b> There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13:</b> There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14:</b> There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>• <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>• <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>• <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>• <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>• <b>19:</b> The data enhancement result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>• <b>20:</b> The data enhancement result based on fliplr is</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p>inconsistent with the prediction result of the original image.</p> <ul style="list-style-type: none"><li>• <b>21:</b> The data enhancement result based on Crop is inconsistent with the prediction result of the original image.</li><li>• <b>22:</b> The data enhancement result based on flipud is inconsistent with the prediction result of the original image.</li><li>• <b>23:</b> The data enhancement result based on scale is inconsistent with the prediction result of the original image.</li><li>• <b>24:</b> The data enhancement result based on translate is inconsistent with the prediction result of the original image.</li><li>• <b>25:</b> The data enhancement result based on shear is inconsistent with the prediction result of the original image.</li><li>• <b>26:</b> The data enhancement result based on superpixels is inconsistent with the prediction result of the original image.</li><li>• <b>27:</b> The data enhancement result based on sharpen is inconsistent with the prediction result of the original image.</li><li>• <b>28:</b> The data enhancement result based on add is inconsistent with the prediction result of the original image.</li><li>• <b>29:</b> The data enhancement result based on invert is inconsistent with the prediction result of the original image.</li></ul> |



| Parameter       | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |           |                  | <ul style="list-style-type: none"><li>• <b>30</b>: The data is predicted to be abnormal.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                              |
| @modelarts:size | No        | Array of objects | Image size (width, height, and depth of the image), which is a default attribute, with type of <b>List&lt;Integer&gt;</b> . In the list, the first number indicates the width (pixels), the second number indicates the height (pixels), and the third number indicates the depth (the depth can be left blank and the default value is <b>3</b> ). For example, <b>[100,200,3]</b> and <b>[100,200]</b> are both valid. Note: This parameter is mandatory only when the sample label list contains the object detection label. |

## Response Parameters

Status code: 200

**Table 28-290** Response body parameters

| Parameter  | Type                                  | Description                                                                                                                                            |
|------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String                                | Error code.                                                                                                                                            |
| error_msg  | String                                | Error message.                                                                                                                                         |
| results    | Array of <b>BatchResponse</b> objects | Response list for updating sample labels in batches.                                                                                                   |
| success    | Boolean                               | Whether the operation is successful. Options: <ul style="list-style-type: none"><li>• <b>true</b>: successful</li><li>• <b>false</b>: failed</li></ul> |

**Table 28-291** BatchResponse

| Parameter  | Type   | Description    |
|------------|--------|----------------|
| error_code | String | Error code.    |
| error_msg  | String | Error message. |

| Parameter | Type    | Description                                                                                                                                                                                         |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| success   | Boolean | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

## Example Requests

Updating Labels of Team Labeling Samples in Batches

```
{
 "samples": [{
 "sample_id": "0a0939d6d3c48a3d2a2619245943ac21",
 "worker_id": "8c15ad080d3eabad14037b4eb00d6a6f",
 "labels": [{
 "name": "tulips"
 }]
 }, {
 "sample_id": "0e1b5a16a5a577ee53aeb34278a4b3e7",
 "worker_id": "8c15ad080d3eabad14037b4eb00d6a6f",
 "labels": [{
 "name": "tulips"
 }]
 }]
}
```

## Example Responses

Status code: 200

OK

```
{
 "success": true
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.41 Querying the Labeling Team List

### Function

This API is used to query the labeling team list.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/workforces

**Table 28-292** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-293** Query Parameters

| Parameter      | Mandatory | Type    | Description                                                                                                                                                                   |
|----------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit          | No        | Integer | Maximum number of records returned on each page. The value ranges from 1 to 100. The default value is <b>10</b> .                                                             |
| offset         | No        | Integer | Start page of the paging list. The default value is <b>0</b> .                                                                                                                |
| order          | No        | String  | Sorting sequence of the query. Options: <ul style="list-style-type: none"><li>• <b>asc</b>: ascending order</li><li>• <b>desc</b>: descending order (default value)</li></ul> |
| search_content | No        | String  | Fuzzy search keyword. By default, this parameter is left blank.                                                                                                               |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                      |
|-------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sort_by           | No        | String | Sorting mode of the query.<br>Options: <ul style="list-style-type: none"><li>• <b>create_time</b>: Sort by creation time. (Default value)</li><li>• <b>workforce_name</b>: Sort by labeling team name.</li></ul> |
| workforce_task_id | No        | String | ID of a team labeling task.                                                                                                                                                                                      |

## Request Parameters

None

## Response Parameters

Status code: 200

Table 28-294 Response body parameters

| Parameter    | Type                                       | Description                         |
|--------------|--------------------------------------------|-------------------------------------|
| total_number | Integer                                    | Total number of labeling teams.     |
| workforces   | Array of <a href="#">Workforce</a> objects | Labeling team list queried by page. |

Table 28-295 Workforce

| Parameter      | Type    | Description                                                                                                                         |
|----------------|---------|-------------------------------------------------------------------------------------------------------------------------------------|
| create_time    | Long    | Time when a labeling team is created.                                                                                               |
| description    | String  | Description of a labeling team.                                                                                                     |
| update_time    | Long    | Time when a labeling team is updated.                                                                                               |
| worker_count   | Integer | Total number of labeling team members.                                                                                              |
| workforce_id   | String  | ID of a labeling team.                                                                                                              |
| workforce_name | String  | Name of a labeling team.                                                                                                            |
| workspace_id   | String  | Workspace ID. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value. |

## Example Requests

Querying the Labeling Team List

```
GET https://{endpoint}/v2/{project_id}/workforces
```

## Example Responses

**Status code: 200**

OK

```
{
 "total_number" : 2,
 "workforces" : [{
 "workforce_id" : "ZUH8gqkjuaib8pxkDdz",
 "workforce_name" : "team-123",
 "description" : "my team",
 "worker_count" : 0,
 "create_time" : 1606354772548,
 "update_time" : 1606354772548
 }, {
 "workforce_id" : "3Ry04NsqvEybuWYLDvC",
 "workforce_name" : "team-170a",
 "description" : "",
 "worker_count" : 1,
 "create_time" : 1604644946891,
 "update_time" : 1606238678626
 }]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.42 Creating a Labeling Team

### Function

This API is used to create a labeling team.

## Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

## URI

POST /v2/{project\_id}/workforces

**Table 28-296** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Parameters

**Table 28-297** Request body parameters

| Parameter      | Mandatory | Type   | Description                                                                                                                       |
|----------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------|
| description    | No        | String | Labeling team description. The value contains 0 to 256 characters and does not support the following special characters: ^!<>=&"" |
| workforce_name | Yes       | String | Labeling team name. The value contains 1 to 64 characters, including only letters, digits, underscores (_), and hyphens (-).      |

## Response Parameters

**Status code: 201**

**Table 28-298** Response body parameters

| Parameter    | Type   | Description            |
|--------------|--------|------------------------|
| workforce_id | String | ID of a labeling team. |

## Example Requests

The following is an example of how to create a labeling team. The labeling team name has been set to **team-123**.

```
{
 "workforce_name" : "team-123",
 "description" : "my team"
}
```

## Example Responses

**Status code: 201**

Created

```
{
 "workforce_id" : "ZUH8gqkjaib8pxkDdz"
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 201         | Created      |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.43 Querying Details About a Labeling Team

### Function

This API is used to query the details about a labeling team.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/workforces/{workforce\_id}

**Table 28-299** Path Parameters

| Parameter    | Mandatory | Type   | Description                                                                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id   | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_id | Yes       | String | ID of a labeling team.                                                                                          |

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 28-300** Response body parameters

| Parameter      | Type    | Description                                                                                                                         |
|----------------|---------|-------------------------------------------------------------------------------------------------------------------------------------|
| create_time    | Long    | Time when a labeling team is created.                                                                                               |
| description    | String  | Description of a labeling team.                                                                                                     |
| update_time    | Long    | Time when a labeling team is updated.                                                                                               |
| worker_count   | Integer | Total number of labeling team members.                                                                                              |
| workforce_id   | String  | ID of a labeling team.                                                                                                              |
| workforce_name | String  | Name of a labeling team.                                                                                                            |
| workspace_id   | String  | Workspace ID. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value. |

## Example Requests

Querying Details About a Labeling Team

```
GET https://{endpoint}/v2/{project_id}/workforces/{workforce_id}
```

## Example Responses

**Status code: 200**

OK

```
{
 "workforce_id" : "gyb7laAvkLc5lhEY2dv",
}
```



```
"workforce_name" : "team-aed7",
"description" : "",
"worker_count" : 2,
"create_time" : 1575104620882,
"update_time" : 1575104620882
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.44 Updating a Labeling Team

### Function

This API is used to update a labeling team.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

PUT /v2/{project\_id}/workforces/{workforce\_id}

**Table 28-301** Path Parameters

| Parameter    | Mandatory | Type   | Description                                                                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id   | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_id | Yes       | String | ID of a labeling team.                                                                                          |

## Request Parameters

**Table 28-302** Request body parameters

| Parameter      | Mandatory | Type   | Description                                                                                                                            |
|----------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| description    | No        | String | Labeling team description. The value contains 0 to 256 characters and does not support the following special characters: ^!<>=&"'      |
| workforce_name | No        | String | Name of a labeling team. The value contains 1 to 64 characters and only letters, digits, hyphens (-), and underscores (_) are allowed. |

## Response Parameters

None

## Example Requests

Updating a Labeling Team

```
{
 "description" : "my team"
}
```

## Example Responses

**Status code: 200**

OK

```
{}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.45 Deleting a Labeling Team

### Function

This API is used to delete a labeling team.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

DELETE /v2/{project\_id}/workforces/{workforce\_id}

**Table 28-303** Path Parameters

| Parameter    | Mandatory | Type   | Description                                                                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id   | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_id | Yes       | String | ID of a labeling team.                                                                                          |

### Request Parameters

None

### Response Parameters

**Status code: 204**

**Table 28-304** Response body parameters

| Parameter  | Type                                           | Description                                 |
|------------|------------------------------------------------|---------------------------------------------|
| error_code | String                                         | Error code.                                 |
| error_msg  | String                                         | Error message.                              |
| results    | Array of <a href="#">BatchResponse</a> objects | Result of deleting team members in batches. |

| Parameter | Type    | Description                                                                                                                                                                                         |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| success   | Boolean | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

**Table 28-305** BatchResponse

| Parameter  | Type    | Description                                                                                                                                                                                         |
|------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String  | Error code.                                                                                                                                                                                         |
| error_msg  | String  | Error message.                                                                                                                                                                                      |
| success    | Boolean | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

## Example Requests

Deleting a Labeling Team

```
DELETE https://{endpoint}/v2/{project_id}/workforces/{workforce_id}
```

## Example Responses

**Status code: 204**

No Content

```
{ }
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 204         | No Content   |
| 401         | Unauthorized |
| 403         | Forbidden    |

## Error Codes

See [Error Codes](#).

## 28.1.46 Sending an Email to a Labeling Team Member

### Function

This API is used to send an email to a labeling team member.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/workforce-tasks/{workforce\_task\_id}/notify

**Table 28-306** Path Parameters

| Parameter         | Mandatory | Type   | Description                                                                                                     |
|-------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id        | Yes       | String | Dataset ID.                                                                                                     |
| project_id        | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_task_id | Yes       | String | ID of a team labeling task.                                                                                     |

### Request Parameters

**Table 28-307** Request body parameters

| Parameter | Mandatory | Type             | Description                           |
|-----------|-----------|------------------|---------------------------------------|
| emails    | Yes       | Array of strings | Email list of a labeling team member. |

### Response Parameters

**Status code: 200**

**Table 28-308** Response body parameters

| Parameter  | Type   | Description |
|------------|--------|-------------|
| error_code | String | Error code. |

| Parameter | Type                                           | Description                                                                                                                                                                                         |
|-----------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_msg | String                                         | Error message.                                                                                                                                                                                      |
| results   | Array of <a href="#">BatchResponse</a> objects | Result of sending an email to a labeling team member.                                                                                                                                               |
| success   | Boolean                                        | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

**Table 28-309** BatchResponse

| Parameter  | Type    | Description                                                                                                                                                                                         |
|------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String  | Error code.                                                                                                                                                                                         |
| error_msg  | String  | Error message.                                                                                                                                                                                      |
| success    | Boolean | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

## Example Requests

Sending an Email to a Labeling Team Member

```
{
 "emails" : ["xxx@xxx.com", "xxx@xxx.com"]
}
```

## Example Responses

**Status code: 200**

OK

```
{
 "success" : true
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |

| Status Code | Description |
|-------------|-------------|
| 403         | Forbidden   |
| 404         | Not Found   |

## Error Codes

See [Error Codes](#).

## 28.1.47 Querying the List of All Labeling Team Members

### Function

This API is used to query the list of all labeling team members.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/workforces/workers

**Table 28-310** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-311** Query Parameters

| Parameter | Mandatory | Type    | Description                                                                                                       |
|-----------|-----------|---------|-------------------------------------------------------------------------------------------------------------------|
| limit     | No        | Integer | Maximum number of records returned on each page. The value ranges from 1 to 100. The default value is <b>10</b> . |
| offset    | No        | Integer | Start page of the paging list. The default value is <b>0</b> .                                                    |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                           |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| order     | No        | String  | Sorting sequence of the query.<br>Options: <ul style="list-style-type: none"><li>• <b>asc</b>: ascending order</li><li>• <b>desc</b>: descending order (default value)</li></ul>                                      |
| role      | No        | Integer | Filtering query based on the member role. Options: <ul style="list-style-type: none"><li>• <b>0</b>: labeling personnel (default value)</li><li>• <b>1</b>: reviewer</li><li>• <b>2</b>: team administrator</li></ul> |
| sort_by   | No        | String  | Sorting mode of the query.<br>Options: <ul style="list-style-type: none"><li>• <b>create_time</b>: Sort by creation time. (Default value)</li><li>• <b>email</b>: Sort by email.</li></ul>                            |

## Request Parameters

None

## Response Parameters

Status code: 200

Table 28-312 Response body parameters

| Parameter    | Type                                    | Description                                 |
|--------------|-----------------------------------------|---------------------------------------------|
| total_number | Integer                                 | Total number of labeling team members.      |
| workers      | Array of <a href="#">Worker</a> objects | Labeling team members list queried by page. |

Table 28-313 Worker

| Parameter   | Type | Description    |
|-------------|------|----------------|
| create_time | Long | Creation time. |



| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                                                        |
|--------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| description  | String  | Labeling team member description. The value contains 0 to 256 characters and does not support the following special characters: ^! <>=&'"                                                                                                                                                                                          |
| email        | String  | Email address of a labeling team member.                                                                                                                                                                                                                                                                                           |
| role         | Integer | Role. Options: <ul style="list-style-type: none"><li>● 0: labeling personnel</li><li>● 1: reviewer</li><li>● 2: team administrator</li><li>● 3: dataset owner</li></ul>                                                                                                                                                            |
| status       | Integer | Current login status of a labeling team member. Options: <ul style="list-style-type: none"><li>● 0: The invitation email has not been sent.</li><li>● 1: The invitation email has been sent but the user has not logged in.</li><li>● 2: The user has logged in.</li><li>● 3: The labeling team member has been deleted.</li></ul> |
| update_time  | Long    | Update time.                                                                                                                                                                                                                                                                                                                       |
| worker_id    | String  | ID of a labeling team member.                                                                                                                                                                                                                                                                                                      |
| workforce_id | String  | ID of a labeling team.                                                                                                                                                                                                                                                                                                             |

## Example Requests

Querying All Labeling Team Administrators

```
GET https://{endpoint}/v2/{project_id}/workforces/workers??role=2
```

## Example Responses

**Status code: 200**

OK

```
{
 "total_number" : 2,
 "workers" : [{
 "email" : "xxx@xxx.com",
 "worker_id" : "df40e4afcb793d13f01f6c9022341e6f",
 "workforce_id" : "feSUo5NUIUnQAQNNTiS",
 "status" : 0,
 "role" : 2,
 "description" : "",
 "create_time" : 1595927749772,
 "update_time" : 1595927749772
 }, {
 "email" : "xxx@xxx.com",
```

```
"worker_id" : "27906df1d06c0827b7c24f761d618541",
"workforce_id" : "XiL5RcHmxylt3aYlOtl",
"status" : 0,
"role" : 2,
"description" : "",
"create_time" : 1590027298717,
"update_time" : 1590027298717
}]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.48 Querying the List of Labeling Team Members

### Function

This API is used to query the list of labeling team members.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/workforces/{workforce\_id}/workers

**Table 28-314** Path Parameters

| Parameter    | Mandatory | Type   | Description                                                                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id   | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_id | Yes       | String | ID of a labeling team.                                                                                          |

**Table 28-315** Query Parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                             |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit     | No        | Integer | Maximum number of records returned on each page. The value ranges from 1 to 100. The default value is <b>10</b> .                                                                       |
| offset    | No        | Integer | Start page of the paging list. The default value is <b>0</b> .                                                                                                                          |
| order     | No        | String  | Sorting sequence. Options: <ul style="list-style-type: none"><li>• <b>asc</b>: ascending order</li><li>• <b>desc</b>: descending order (default value)</li></ul>                        |
| sort_by   | No        | String  | Sorting mode of the query. Options: <ul style="list-style-type: none"><li>• <b>create_time</b>: Sort by creation time. (Default value)</li><li>• <b>email</b>: Sort by email.</li></ul> |

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 28-316** Response body parameters

| Parameter    | Type                           | Description                                 |
|--------------|--------------------------------|---------------------------------------------|
| total_number | Integer                        | Total number of labeling team members.      |
| workers      | Array of <b>Worker</b> objects | Labeling team members list queried by page. |

**Table 28-317** Worker

| Parameter   | Type | Description    |
|-------------|------|----------------|
| create_time | Long | Creation time. |

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                                                        |
|--------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| description  | String  | Labeling team member description. The value contains 0 to 256 characters and does not support the following special characters: ^! <>=&'"                                                                                                                                                                                          |
| email        | String  | Email address of a labeling team member.                                                                                                                                                                                                                                                                                           |
| role         | Integer | Role. Options: <ul style="list-style-type: none"><li>● 0: labeling personnel</li><li>● 1: reviewer</li><li>● 2: team administrator</li><li>● 3: dataset owner</li></ul>                                                                                                                                                            |
| status       | Integer | Current login status of a labeling team member. Options: <ul style="list-style-type: none"><li>● 0: The invitation email has not been sent.</li><li>● 1: The invitation email has been sent but the user has not logged in.</li><li>● 2: The user has logged in.</li><li>● 3: The labeling team member has been deleted.</li></ul> |
| update_time  | Long    | Update time.                                                                                                                                                                                                                                                                                                                       |
| worker_id    | String  | ID of a labeling team member.                                                                                                                                                                                                                                                                                                      |
| workforce_id | String  | ID of a labeling team.                                                                                                                                                                                                                                                                                                             |

## Example Requests

Querying the List of Labeling Team Members

```
GET https://{endpoint}/v2/{project_id}/workforces/{workforce_id}/workers
```

## Example Responses

**Status code: 200**

OK

```
{
 "total_number" : 3,
 "workers" : [{
 "email" : "xxx@xxx.com",
 "worker_id" : "b1e4054407ecb36a7bcde70f52ba37f2",
 "workforce_id" : "gyb7IaAvkLc5IhEY2dv",
 "status" : 0,
 "role" : 2,
 "description" : "",
 "create_time" : 1606356324223,
 "update_time" : 1606356324223
 }, {
 "email" : "xxx@xxx.com",
```

```
"worker_id" : "8c15ad080d3eabad14037b4eb00d6a6f",
"workforce_id" : "gyb7IaAvkLc5IhEY2dv",
"status" : 0,
"role" : 0,
"description" : "",
"create_time" : 1591783804629,
"update_time" : 1591783804629
}, {
 "email" : "xxx@xxx.com",
 "worker_id" : "2880f38d660dd68ca6ab578b5a1d9558",
 "workforce_id" : "gyb7IaAvkLc5IhEY2dv",
 "status" : 0,
 "role" : 0,
 "description" : "",
 "create_time" : 1575104629439,
 "update_time" : 1575104629439
}]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.49 Creating a Labeling Team Member

### Function

This API is used to create a labeling team member.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/workforces/{workforce\_id}/workers

**Table 28-318** Path Parameters

| Parameter    | Mandatory | Type   | Description                                                                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id   | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_id | Yes       | String | ID of a labeling team.                                                                                          |

## Request Parameters

**Table 28-319** Request body parameters

| Parameter   | Mandatory | Type    | Description                                                                                                                                                              |
|-------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| description | No        | String  | Member description. The description contains 0 to 256 characters and does not support the following special characters: ^!<>=&""                                         |
| emails      | Yes       | String  | Email address of a labeling team member.                                                                                                                                 |
| role        | Yes       | Integer | Member role. Options: <ul style="list-style-type: none"><li>• <b>0</b>: labeling personnel</li><li>• <b>1</b>: reviewer</li><li>• <b>2</b>: team administrator</li></ul> |

## Response Parameters

None

## Example Requests

The following is an example of how to create a labeling team member. The member role has been set to **2**, which is the team administrator.

```
{
 "emails": "xxx@xxx.com",
 "description": "",
 "role": "2"
}
```

## Example Responses

**Status code: 201**

Created

```
{}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 201         | Created      |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.50 Deleting Labeling Team Members in Batches

### Function

This API is used to delete labeling team members in batches.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/workforces/{workforce\_id}/workers/batch-delete

**Table 28-320** Path Parameters

| Parameter    | Mandatory | Type   | Description                                                                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id   | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| workforce_id | Yes       | String | ID of a labeling team.                                                                                          |

## Request Parameters

**Table 28-321** Request body parameters

| Parameter | Mandatory | Type             | Description          |
|-----------|-----------|------------------|----------------------|
| workers   | Yes       | Array of strings | Team member ID list. |

## Response Parameters

**Status code: 200****Table 28-322** Response body parameters

| Parameter  | Type                                           | Description                                                                                                                                                                                         |
|------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String                                         | Error code.                                                                                                                                                                                         |
| error_msg  | String                                         | Error message.                                                                                                                                                                                      |
| results    | Array of <a href="#">BatchResponse</a> objects | Result of deleting team members in batches.                                                                                                                                                         |
| success    | Boolean                                        | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

**Table 28-323** BatchResponse

| Parameter  | Type    | Description                                                                                                                                                                                         |
|------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| error_code | String  | Error code.                                                                                                                                                                                         |
| error_msg  | String  | Error message.                                                                                                                                                                                      |
| success    | Boolean | Check whether the operation is successful.<br>Options: <ul style="list-style-type: none"><li>• <b>true</b>: The operation is successful.</li><li>• <b>false</b>: The operation is failed.</li></ul> |

## Example Requests

Deleting Labeling Team Members in Batches

```
{
 "workers": ["89d4ae38431b8905449821605abdc3a9", "a2abd3f27b4e92c593c15282f8b6bd29"]
}
```



## Example Responses

**Status code: 200**

OK

```
{
 "success" : true,
 "results" : [{
 "success" : true
 }, {
 "success" : true
 }]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.51 Querying Details About Labeling Team Members

### Function

This API is used to query details about labeling team members.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/workforces/{workforce\_id}/workers/{worker\_id}

**Table 28-324** Path Parameters

| Parameter    | Mandatory | Type   | Description                                                                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id   | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| worker_id    | Yes       | String | ID of a labeling team member.                                                                                   |
| workforce_id | Yes       | String | ID of a labeling team.                                                                                          |

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 28-325** Response body parameters

| Parameter   | Type    | Description                                                                                                                                                                                                                                                                                                                                                    |
|-------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time | Long    | Creation time.                                                                                                                                                                                                                                                                                                                                                 |
| description | String  | Labeling team member description. The value contains 0 to 256 characters and does not support the following special characters: ^! <>=&"'                                                                                                                                                                                                                      |
| email       | String  | Email address of a labeling team member.                                                                                                                                                                                                                                                                                                                       |
| role        | Integer | Role. The options are as follows: <ul style="list-style-type: none"><li>• 0: annotator</li><li>• 1: reviewer</li><li>• 2: team manager</li><li>• 3: dataset owner</li></ul>                                                                                                                                                                                    |
| status      | Integer | Current login status of a labeling team member. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The invitation email has not been sent.</li><li>• <b>1</b>: The invitation email has been sent but the user has not logged in.</li><li>• <b>2</b>: The user has logged in.</li><li>• <b>3</b>: The labeling team member has been deleted.</li></ul> |
| update_time | Long    | Update time.                                                                                                                                                                                                                                                                                                                                                   |

| Parameter    | Type   | Description                   |
|--------------|--------|-------------------------------|
| worker_id    | String | ID of a labeling team member. |
| workforce_id | String | ID of a labeling team.        |

## Example Requests

Querying Details About Labeling Team Members

GET https://{endpoint}/v2/{project\_id}/workforces/{workforce\_id}/workers/{worker\_id}

## Example Responses

Status code: 200

OK

```
{
 "email" : "xxx@xxx.com",
 "worker_id" : "b1e4054407ecb36a7bcde70f52ba37f2",
 "workforce_id" : "gyb7laAvkLc5lhEY2dv",
 "status" : 0,
 "role" : 2,
 "description" : "",
 "create_time" : 1606356324223,
 "update_time" : 1606356324223
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.52 Updating a Labeling Team Member

### Function

This API is used to update a labeling team member.

## Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

## URI

PUT /v2/{project\_id}/workforces/{workforce\_id}/workers/{worker\_id}

**Table 28-326** Path Parameters

| Parameter    | Mandatory | Type   | Description                                                                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id   | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| worker_id    | Yes       | String | ID of a labeling team member.                                                                                   |
| workforce_id | Yes       | String | ID of a labeling team.                                                                                          |

## Request Parameters

**Table 28-327** Request body parameters

| Parameter   | Mandatory | Type    | Description                                                                                                                                                             |
|-------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| description | No        | String  | Labeling team member description. The value contains 0 to 256 characters and does not support the following special characters: ^!<>=&""                                |
| role        | No        | Integer | Role. Options: <ul style="list-style-type: none"><li>• 0: labeling personnel</li><li>• 1: reviewer</li><li>• 2: team administrator</li><li>• 3: dataset owner</li></ul> |

## Response Parameters

None

## Example Requests

Updating a Labeling Team Member

```
{
 "description" : "My name is Tom",
}
```

```
"role" : 2
}
```

## Example Responses

Status code: 200

OK

```
{}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.53 Deleting a Labeling Team Member

### Function

This API is used to delete a labeling team member.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

DELETE /v2/{project\_id}/workforces/{workforce\_id}/workers/{worker\_id}

**Table 28-328** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| worker_id  | Yes       | String | ID of a labeling team member.                                                                                   |

| Parameter    | Mandatory | Type   | Description            |
|--------------|-----------|--------|------------------------|
| workforce_id | Yes       | String | ID of a labeling team. |

## Request Parameters

None

## Response Parameters

None

## Example Requests

Deleting a Labeling Team Member

```
DELETE https://{endpoint}/v2/{project_id}/workforces/{workforce_id}/workers/{worker_id}
```

## Example Responses

**Status code: 204**

No Content

```
{}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 204         | No Content   |
| 401         | Unauthorized |
| 403         | Forbidden    |

## Error Codes

See [Error Codes](#).

# 28.1.54 Querying the Dataset Import Task List

## Function

This API is used to query the dataset import task list by page.

## Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

## URI

GET /v2/{project\_id}/datasets/{dataset\_id}/import-tasks

**Table 28-329** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-330** Query Parameters

| Parameter | Mandatory | Type    | Description                                                                                                       |
|-----------|-----------|---------|-------------------------------------------------------------------------------------------------------------------|
| limit     | No        | Integer | Maximum number of records returned on each page. The value ranges from 1 to 100. The default value is <b>10</b> . |
| offset    | No        | Integer | Start page of the paging list. The default value is <b>0</b> .                                                    |

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 28-331** Response body parameters

| Parameter    | Type                                                  | Description             |
|--------------|-------------------------------------------------------|-------------------------|
| import_tasks | Array of <a href="#">ImportTaskStatusResp</a> objects | List of import tasks.   |
| total_count  | Integer                                               | Number of import tasks. |

**Table 28-332** ImportTaskStatusResp

| Parameter                 | Type                                    | Description                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_sample_count    | Long                                    | Number of labeled samples.                                                                                                                                                                                                                                                                                                                                      |
| create_time               | Long                                    | Time when a task is created.                                                                                                                                                                                                                                                                                                                                    |
| data_source               | <a href="#">DataSource</a> object       | Data source.                                                                                                                                                                                                                                                                                                                                                    |
| dataset_id                | String                                  | Dataset ID.                                                                                                                                                                                                                                                                                                                                                     |
| elapsed_time              | Long                                    | Task running time, in seconds.                                                                                                                                                                                                                                                                                                                                  |
| error_code                | String                                  | Error code.                                                                                                                                                                                                                                                                                                                                                     |
| error_msg                 | String                                  | Error message.                                                                                                                                                                                                                                                                                                                                                  |
| file_statistics           | <a href="#">FileCopyProgress</a> object | File replication progress                                                                                                                                                                                                                                                                                                                                       |
| finished_file_count       | Long                                    | Number of files that have been transferred.                                                                                                                                                                                                                                                                                                                     |
| finished_file_size        | Long                                    | Size of the file that has been transferred, in bytes.                                                                                                                                                                                                                                                                                                           |
| import_path               | String                                  | OBS path or <b>manifest</b> path to be imported. <ul style="list-style-type: none"><li>When importing a manifest file, ensure that the path is accurate to the manifest file.</li><li>When a path is imported as a directory, the dataset type can only support image classification, object detection, text classification, or sound classification.</li></ul> |
| import_type               | Integer                                 | Import mode. Options: <ul style="list-style-type: none"><li><b>0</b>: Import by directory.</li><li><b>1</b>: Import by manifest file.</li></ul>                                                                                                                                                                                                                 |
| imported_sample_count     | Long                                    | Number of imported samples.                                                                                                                                                                                                                                                                                                                                     |
| imported_sub_sample_count | Long                                    | Number of imported subsamples.                                                                                                                                                                                                                                                                                                                                  |
| processor_task_id         | String                                  | ID of a preprocessing task.                                                                                                                                                                                                                                                                                                                                     |
| processor_task_status     | Integer                                 | Status of a preprocessing task.                                                                                                                                                                                                                                                                                                                                 |



| Parameter                | Type   | Description                                                                                                                                                                                                                                                                                             |
|--------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status                   | String | Status of an import task. Options: <ul style="list-style-type: none"><li>• <b>QUEUING</b>: queuing</li><li>• <b>STARTING</b>: execution started</li><li>• <b>RUNNING</b>: running</li><li>• <b>COMPLETED</b>: completed</li><li>• <b>FAILED</b>: failed</li><li>• <b>NOT_EXIST</b>: not found</li></ul> |
| task_id                  | String | Task ID.                                                                                                                                                                                                                                                                                                |
| total_file_count         | Long   | Total number of files.                                                                                                                                                                                                                                                                                  |
| total_file_size          | Long   | Total file size, in bytes.                                                                                                                                                                                                                                                                              |
| total_sample_count       | Long   | Total number of samples.                                                                                                                                                                                                                                                                                |
| total_sub_sample_count   | Long   | Total number of subsamples generated from the parent samples.                                                                                                                                                                                                                                           |
| unconfirmed_sample_count | Long   | Number of samples to be confirmed.                                                                                                                                                                                                                                                                      |
| update_ms                | Long   | Time when a task is updated.                                                                                                                                                                                                                                                                            |

**Table 28-333** DataSource

| Parameter   | Type                                       | Description                                                                                                                                                                                                                                                                              |
|-------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_path   | String                                     | Data source path.                                                                                                                                                                                                                                                                        |
| data_type   | Integer                                    | Data type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: OBS bucket (default value)</li><li>• <b>1</b>: GaussDB(DWS)</li><li>• <b>2</b>: DLI</li><li>• <b>3</b>: RDS</li><li>• <b>4</b>: MRS</li><li>• <b>5</b>: AI Gallery</li><li>• <b>6</b>: Inference service</li></ul> |
| schema_maps | Array of <a href="#">SchemaMap</a> objects | Schema mapping information corresponding to the table data.                                                                                                                                                                                                                              |
| source_info | <a href="#">SourceInfo</a> object          | Information required for importing a table data source.                                                                                                                                                                                                                                  |

| Parameter          | Type    | Description                                                                                                                                                                                                                                                                                    |
|--------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| with_column_header | Boolean | Whether the first row in the file is a column name. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The first row in the file is the column name.</li><li>• <b>false</b>: The first row in the file is not the column name.</li></ul> |

**Table 28-334** SchemaMap

| Parameter | Type   | Description                     |
|-----------|--------|---------------------------------|
| dest_name | String | Name of the destination column. |
| src_name  | String | Name of the source column.      |

**Table 28-335** SourceInfo

| Parameter     | Type   | Description                                                                                                                                              |
|---------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| cluster_id    | String | MRS cluster ID. You can log in to the MRS console to view the information.                                                                               |
| cluster_mode  | String | Running mode of an MRS cluster. Options: <ul style="list-style-type: none"><li>• <b>0</b>: normal cluster</li><li>• <b>1</b>: security cluster</li></ul> |
| cluster_name  | String | MRS cluster name You can log in to the MRS console to view the information.                                                                              |
| database_name | String | Name of the database to which the table dataset is imported.                                                                                             |
| input         | String | HDFS path of the table data set. For example, / datasets/demo.                                                                                           |
| ip            | String | IP address of your GaussDB(DWS) cluster.                                                                                                                 |
| port          | String | Port number of your GaussDB(DWS) cluster.                                                                                                                |
| queue_name    | String | DLI queue name of a table dataset.                                                                                                                       |
| subnet_id     | String | Subnet ID of an MRS cluster.                                                                                                                             |
| table_name    | String | Name of the table to which a table dataset is imported.                                                                                                  |
| user_name     | String | Username, which is mandatory for GaussDB(DWS) data.                                                                                                      |

| Parameter     | Type   | Description                                              |
|---------------|--------|----------------------------------------------------------|
| user_password | String | User password, which is mandatory for GaussDB(DWS) data. |
| vpc_id        | String | ID of the VPC where an MRS cluster resides.              |

**Table 28-336** FileCopyProgress

| Parameter          | Type | Description                                           |
|--------------------|------|-------------------------------------------------------|
| file_num_finished  | Long | Number of files that have been transferred.           |
| file_num_total     | Long | Total number of files.                                |
| file_size_finished | Long | Size of the file that has been transferred, in bytes. |
| file_size_total    | Long | Total file size, in bytes.                            |

## Example Requests

Obtaining the Dataset Import Task List

GET https://{endpoint}/v2/{project\_id}/datasets/{dataset\_id}/import-tasks

## Example Responses

**Status code: 200**

OK

```
{
 "total_count": 1,
 "import_tasks": [{
 "status": "COMPLETED",
 "task_id": "gfgHHSokody6AJigS5A_RHJ1zOkIol3Nzwxj8nh",
 "dataset_id": "gfgHHSokody6AJigS5A",
 "import_path": "obs://test-obs/daoLu_images/animals/",
 "import_type": 0,
 "total_sample_count": 20,
 "imported_sample_count": 20,
 "annotated_sample_count": 20,
 "total_sub_sample_count": 0,
 "imported_sub_sample_count": 0,
 "total_file_size": 0,
 "finished_file_count": 0,
 "finished_file_size": 0,
 "total_file_count": 0,
 "create_time": 1606114833874,
 "elapsed_time": 2
 }]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.55 Creating an Import Task

### Function

This API is used to create a dataset import task to import samples and labels from the storage system to the dataset.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/import-tasks

**Table 28-337** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Parameters

**Table 28-338** Request body parameters

| Parameter          | Mandatory | Type                                   | Description                                                                                                                                                                                                                                                                   |
|--------------------|-----------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_source        | No        | <a href="#">DataSource</a> object      | Data source.                                                                                                                                                                                                                                                                  |
| difficult_only     | No        | Boolean                                | Whether to import only hard examples. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Only difficult samples are imported.</li><li>• <b>false</b>: All samples are imported. (Default value)</li></ul>                                                          |
| excluded_labels    | No        | Array of <a href="#">Label</a> objects | Do not import samples containing the specified label.                                                                                                                                                                                                                         |
| final_annotation   | No        | Boolean                                | Whether to import data to the final state. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Import data to the final state. (Default value)</li><li>• <b>false</b>: Do not import data to the final state.</li></ul>                                             |
| import_annotations | No        | Boolean                                | Whether to import labels. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Import labels. (Default value)</li><li>• <b>false</b>: Do not import labels.</li></ul>                                                                                                |
| import_folder      | No        | String                                 | Name of the subdirectory in the dataset storage directory after import. You can specify the same subdirectory for multiple import tasks to avoid repeated import of the same samples. This field is invalid for table datasets.                                               |
| import_origin      | No        | String                                 | Data source. Options: <ul style="list-style-type: none"><li>• <b>obs</b>: OBS bucket (default value)</li><li>• <b>dws</b>: GaussDB(DWS)</li><li>• <b>dli</b>: DLI</li><li>• <b>rds</b>: RDS</li><li>• <b>mrs</b>: MRS</li><li>• <b>inference</b>: Inference service</li></ul> |

| Parameter          | Mandatory | Type                                   | Description                                                                                                                                                                                                                                                                                                                                                         |
|--------------------|-----------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| import_path        | Yes       | String                                 | OBS path or <b>manifest</b> path to be imported. <ul style="list-style-type: none"><li>• When importing a manifest file, ensure that the path is accurate to the manifest file.</li><li>• When a path is imported as a directory, the dataset type can only support image classification, object detection, text classification, or sound classification.</li></ul> |
| import_samples     | No        | Boolean                                | Whether to import samples. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Import samples. (Default value)</li><li>• <b>false</b>: Do not import samples.</li></ul>                                                                                                                                                                                   |
| import_type        | No        | String                                 | Import mode. Options: <ul style="list-style-type: none"><li>• <b>dir</b>: Import datasets through an OBS path.</li><li>• <b>manifest</b>: Import datasets through a manifest file.</li></ul>                                                                                                                                                                        |
| included_labels    | No        | Array of <a href="#">Label</a> objects | Import samples containing the specified label.                                                                                                                                                                                                                                                                                                                      |
| label_format       | No        | <a href="#">LabelFormat</a> object     | Label format. This parameter is used only for text datasets.                                                                                                                                                                                                                                                                                                        |
| with_column_header | No        | Boolean                                | Whether the first row in the file is a column name. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The first row in the file is the column name.</li><li>• <b>false</b>: The first row in the file is not the column name. (Default value)</li></ul>                                                      |

Table 28-339 DataSource

| Parameter | Mandatory | Type   | Description       |
|-----------|-----------|--------|-------------------|
| data_path | No        | String | Data source path. |

| Parameter          | Mandatory | Type                                       | Description                                                                                                                                                                                                                                                                                    |
|--------------------|-----------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_type          | No        | Integer                                    | Data type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: OBS bucket (default value)</li><li>• <b>1</b>: GaussDB(DWS)</li><li>• <b>2</b>: DLI</li><li>• <b>3</b>: RDS</li><li>• <b>4</b>: MRS</li><li>• <b>5</b>: AI Gallery</li><li>• <b>6</b>: Inference service</li></ul>       |
| schema_maps        | No        | Array of <a href="#">SchemaMap</a> objects | Schema mapping information corresponding to the table data.                                                                                                                                                                                                                                    |
| source_info        | No        | <a href="#">SourceInfo</a> object          | Information required for importing a table data source.                                                                                                                                                                                                                                        |
| with_column_header | No        | Boolean                                    | Whether the first row in the file is a column name. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The first row in the file is the column name.</li><li>• <b>false</b>: The first row in the file is not the column name.</li></ul> |

**Table 28-340** SchemaMap

| Parameter | Mandatory | Type   | Description                     |
|-----------|-----------|--------|---------------------------------|
| dest_name | No        | String | Name of the destination column. |
| src_name  | No        | String | Name of the source column.      |

**Table 28-341** SourceInfo

| Parameter  | Mandatory | Type   | Description                                                                |
|------------|-----------|--------|----------------------------------------------------------------------------|
| cluster_id | No        | String | MRS cluster ID. You can log in to the MRS console to view the information. |

| Parameter     | Mandatory | Type   | Description                                                                                                                                              |
|---------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| cluster_mode  | No        | String | Running mode of an MRS cluster. Options: <ul style="list-style-type: none"><li>• <b>0</b>: normal cluster</li><li>• <b>1</b>: security cluster</li></ul> |
| cluster_name  | No        | String | MRS cluster name You can log in to the MRS console to view the information.                                                                              |
| database_name | No        | String | Name of the database to which the table dataset is imported.                                                                                             |
| input         | No        | String | HDFS path of the table data set. For example, /datasets/demo.                                                                                            |
| ip            | No        | String | IP address of your GaussDB(DWS) cluster.                                                                                                                 |
| port          | No        | String | Port number of your GaussDB(DWS) cluster.                                                                                                                |
| queue_name    | No        | String | DLI queue name of a table dataset.                                                                                                                       |
| subnet_id     | No        | String | Subnet ID of an MRS cluster.                                                                                                                             |
| table_name    | No        | String | Name of the table to which a table dataset is imported.                                                                                                  |
| user_name     | No        | String | Username, which is mandatory for GaussDB(DWS) data.                                                                                                      |
| user_password | No        | String | User password, which is mandatory for GaussDB(DWS) data.                                                                                                 |
| vpc_id        | No        | String | ID of the VPC where an MRS cluster resides.                                                                                                              |

**Table 28-342** Label

| Parameter  | Mandatory | Type                                            | Description                                                                                                                      |
|------------|-----------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| attributes | No        | Array of <a href="#">LabelAttribute</a> objects | Multi-dimensional attribute of a label. For example, if the label is music, attributes such as style and artist may be included. |



| Parameter | Mandatory | Type                                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | No        | String                               | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property  | No        | <a href="#">LabelProperty</a> object | Basic attribute key-value pair of a label, such as color and shortcut keys.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| type      | No        | Integer                              | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-343** LabelAttribute

| Parameter     | Mandatory | Type                                                 | Description                                                                                                                                              |
|---------------|-----------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| default_value | No        | String                                               | Default value of a label attribute.                                                                                                                      |
| id            | No        | String                                               | Label attribute ID. You can query the tag by invoking the tag list.                                                                                      |
| name          | No        | String                                               | Label attribute name. The value contains a maximum of 64 characters and cannot contain the character. <>=&"".                                            |
| type          | No        | String                                               | Label attribute type. Options: <ul style="list-style-type: none"><li>• <b>text</b>: text</li><li>• <b>select</b>: single-choice drop-down list</li></ul> |
| values        | No        | Array of <a href="#">LabelAttributeValue</a> objects | List of label attribute values.                                                                                                                          |

**Table 28-344** LabelAttributeValue

| Parameter | Mandatory | Type   | Description               |
|-----------|-----------|--------|---------------------------|
| id        | No        | String | Label attribute value ID. |
| value     | No        | String | Label attribute value.    |

**Table 28-345** LabelProperty

| Parameter                | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:color         | No        | String | Default attribute: Label color, which is a hexadecimal code of the color. By default, this parameter is left blank. Example: <b>#FFFFFF0</b> .                                                                                                                                                                                                                                                                                   |
| @modelarts:default_shape | No        | String | Default attribute: Default shape of an object detection label (dedicated attribute). By default, this parameter is left blank. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:from_type     | No        | String | Default attribute: Type of the head entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset.                                                                                                                                                                                                                   |
| @modelarts:rename_to     | No        | String | Default attribute: The new name of the label.                                                                                                                                                                                                                                                                                                                                                                                    |
| @modelarts:shortcut      | No        | String | Default attribute: Label shortcut key. By default, this parameter is left blank. For example: <b>D</b> .                                                                                                                                                                                                                                                                                                                         |

| Parameter            | Mandatory | Type   | Description                                                                                                                                                                                                    |
|----------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:tail_type | No        | String | Default attribute: Type of the tail entity in the triplet relationship label. This attribute must be specified when a relationship label is created. This parameter is used only for the text triplet dataset. |

**Table 28-346** LabelFormat

| Parameter            | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| label_type           | No        | String | Label type of text classification. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The label is separated from the text, and they are distinguished by the fixed suffix <b>_result</b>. For example, the text file is <b>abc.txt</b>, and the label file is <b>abc_result.txt</b>.</li><li>• <b>1</b>: Default value. Labels and texts are stored in the same file and separated by separators. You can use <b>text_sample_separator</b> to specify the separator between the text and label and <b>text_label_separator</b> to specify the separator between labels.</li></ul> |
| text_label_separator | No        | String | Separator between labels. By default, a comma (,) is used as the separator. The separator needs to be escaped. The separator can contain only one character, such as a letter, a digit, or any of the following special characters: ! @#\$%^&* _= ?/'.:;,,                                                                                                                                                                                                                                                                                                                                 |

| Parameter             | Mandatory | Type   | Description                                                                                                                                                                                                                                                                 |
|-----------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| text_sample_separator | No        | String | Separator between the text and label. By default, the <b>Tab</b> key is used as the separator. The separator needs to be escaped. The separator can contain only one character, such as a letter, a digit, or any of the following special characters: !@#\$%^&* _= ?/'.:,; |

## Response Parameters

Status code: 200

Table 28-347 Response body parameters

| Parameter | Type   | Description           |
|-----------|--------|-----------------------|
| task_id   | String | ID of an import task. |

## Example Requests

- Creating an Import Task (Importing Data from OBS)

```
{
 "import_type": "dir",
 "import_path": "s3://test-obs/daoLu_images/animals/",
 "included_labels": [],
 "import_annotations": false,
 "difficult_only": false
}
```

- Creating an Import Task (Importing Data from Manifest)

```
{
 "import_type": "manifest",
 "import_path": "s3://test-obs/classify/output/dataset-f9e8-gfghHSokody6AJigS5A/annotation/V002/V002.manifest",
 "included_labels": ["rabbits", "bees", "Rabbits", "Bees"],
 "import_annotations": true,
 "difficult_only": false
}
```

## Example Responses

Status code: 200

OK

```
{
 "task_id": "gfghHSokody6AJigS5A_m1dYqOw8vWCAznw1V28"
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.56 Querying Details About a Dataset Import Task

### Function

This API is used to query details about a dataset import task.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/import-tasks/{task\_id}

**Table 28-348** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| task_id    | Yes       | String | Task ID.                                                                                                        |

### Request Parameters

None

## Response Parameters

Status code: 200

**Table 28-349** Response body parameters

| Parameter                 | Type                                    | Description                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_sample_count    | Long                                    | Number of labeled samples.                                                                                                                                                                                                                                                                                                                                      |
| create_time               | Long                                    | Time when a task is created.                                                                                                                                                                                                                                                                                                                                    |
| data_source               | <a href="#">DataSource</a> object       | Data source.                                                                                                                                                                                                                                                                                                                                                    |
| dataset_id                | String                                  | Dataset ID.                                                                                                                                                                                                                                                                                                                                                     |
| elapsed_time              | Long                                    | Task running time, in seconds.                                                                                                                                                                                                                                                                                                                                  |
| error_code                | String                                  | Error code.                                                                                                                                                                                                                                                                                                                                                     |
| error_msg                 | String                                  | Error message.                                                                                                                                                                                                                                                                                                                                                  |
| file_statistics           | <a href="#">FileCopyProgress</a> object | File replication progress                                                                                                                                                                                                                                                                                                                                       |
| finished_file_count       | Long                                    | Number of files that have been transferred.                                                                                                                                                                                                                                                                                                                     |
| finished_file_size        | Long                                    | Size of the file that has been transferred, in bytes.                                                                                                                                                                                                                                                                                                           |
| import_path               | String                                  | OBS path or <b>manifest</b> path to be imported. <ul style="list-style-type: none"><li>When importing a manifest file, ensure that the path is accurate to the manifest file.</li><li>When a path is imported as a directory, the dataset type can only support image classification, object detection, text classification, or sound classification.</li></ul> |
| import_type               | Integer                                 | Import mode. Options: <ul style="list-style-type: none"><li><b>0</b>: Import by directory.</li><li><b>1</b>: Import by manifest file.</li></ul>                                                                                                                                                                                                                 |
| imported_sample_count     | Long                                    | Number of imported samples.                                                                                                                                                                                                                                                                                                                                     |
| imported_sub_sample_count | Long                                    | Number of imported subsamples.                                                                                                                                                                                                                                                                                                                                  |
| processor_task_id         | String                                  | ID of a preprocessing task.                                                                                                                                                                                                                                                                                                                                     |

| Parameter                | Type    | Description                                                                                                                                                                                                                                                                                             |
|--------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| processor_task_status    | Integer | Status of a preprocessing task.                                                                                                                                                                                                                                                                         |
| status                   | String  | Status of an import task. Options: <ul style="list-style-type: none"><li>• <b>QUEUING</b>: queuing</li><li>• <b>STARTING</b>: execution started</li><li>• <b>RUNNING</b>: running</li><li>• <b>COMPLETED</b>: completed</li><li>• <b>FAILED</b>: failed</li><li>• <b>NOT_EXIST</b>: not found</li></ul> |
| task_id                  | String  | Task ID.                                                                                                                                                                                                                                                                                                |
| total_file_count         | Long    | Total number of files.                                                                                                                                                                                                                                                                                  |
| total_file_size          | Long    | Total file size, in bytes.                                                                                                                                                                                                                                                                              |
| total_sample_count       | Long    | Total number of samples.                                                                                                                                                                                                                                                                                |
| total_sub_sample_count   | Long    | Total number of subsamples generated from the parent samples.                                                                                                                                                                                                                                           |
| unconfirmed_sample_count | Long    | Number of samples to be confirmed.                                                                                                                                                                                                                                                                      |
| update_ms                | Long    | Time when a task is updated.                                                                                                                                                                                                                                                                            |

**Table 28-350** DataSource

| Parameter   | Type                                       | Description                                                                                                                                                                                                                                                                              |
|-------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_path   | String                                     | Data source path.                                                                                                                                                                                                                                                                        |
| data_type   | Integer                                    | Data type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: OBS bucket (default value)</li><li>• <b>1</b>: GaussDB(DWS)</li><li>• <b>2</b>: DLI</li><li>• <b>3</b>: RDS</li><li>• <b>4</b>: MRS</li><li>• <b>5</b>: AI Gallery</li><li>• <b>6</b>: Inference service</li></ul> |
| schema_maps | Array of <a href="#">SchemaMap</a> objects | Schema mapping information corresponding to the table data.                                                                                                                                                                                                                              |

| Parameter          | Type                              | Description                                                                                                                                                                                                                                                                                    |
|--------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| source_info        | <a href="#">SourceInfo</a> object | Information required for importing a table data source.                                                                                                                                                                                                                                        |
| with_column_header | Boolean                           | Whether the first row in the file is a column name. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The first row in the file is the column name.</li><li>• <b>false</b>: The first row in the file is not the column name.</li></ul> |

**Table 28-351** SchemaMap

| Parameter | Type   | Description                     |
|-----------|--------|---------------------------------|
| dest_name | String | Name of the destination column. |
| src_name  | String | Name of the source column.      |

**Table 28-352** SourceInfo

| Parameter     | Type   | Description                                                                                                                                              |
|---------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| cluster_id    | String | MRS cluster ID. You can log in to the MRS console to view the information.                                                                               |
| cluster_mode  | String | Running mode of an MRS cluster. Options: <ul style="list-style-type: none"><li>• <b>0</b>: normal cluster</li><li>• <b>1</b>: security cluster</li></ul> |
| cluster_name  | String | MRS cluster name You can log in to the MRS console to view the information.                                                                              |
| database_name | String | Name of the database to which the table dataset is imported.                                                                                             |
| input         | String | HDFS path of the table data set. For example, /datasets/demo.                                                                                            |
| ip            | String | IP address of your GaussDB(DWS) cluster.                                                                                                                 |
| port          | String | Port number of your GaussDB(DWS) cluster.                                                                                                                |
| queue_name    | String | DLI queue name of a table dataset.                                                                                                                       |
| subnet_id     | String | Subnet ID of an MRS cluster.                                                                                                                             |
| table_name    | String | Name of the table to which a table dataset is imported.                                                                                                  |



| Parameter     | Type   | Description                                              |
|---------------|--------|----------------------------------------------------------|
| user_name     | String | Username, which is mandatory for GaussDB(DWS) data.      |
| user_password | String | User password, which is mandatory for GaussDB(DWS) data. |
| vpc_id        | String | ID of the VPC where an MRS cluster resides.              |

**Table 28-353** FileCopyProgress

| Parameter          | Type | Description                                           |
|--------------------|------|-------------------------------------------------------|
| file_num_finished  | Long | Number of files that have been transferred.           |
| file_num_total     | Long | Total number of files.                                |
| file_size_finished | Long | Size of the file that has been transferred, in bytes. |
| file_size_total    | Long | Total file size, in bytes.                            |

## Example Requests

Querying Details About an Import Task

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/import-tasks/{task_id}
```

## Example Responses

**Status code: 200**

OK

```
{
 "status": "COMPLETED",
 "task_id": "gfghHSokody6AJigS5A_RHJ1zOkIol3Nzwxj8nh",
 "dataset_id": "gfghHSokody6AJigS5A",
 "import_path": "obs://test-obs/daoLu_images/animals/",
 "import_type": 0,
 "total_sample_count": 20,
 "imported_sample_count": 20,
 "annotated_sample_count": 20,
 "total_sub_sample_count": 0,
 "imported_sub_sample_count": 0,
 "total_file_size": 0,
 "finished_file_count": 0,
 "finished_file_size": 0,
 "total_file_count": 0,
 "update_ms": 1606114833955,
 "create_time": 1606114833874,
 "elapsed_time": 2
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.57 Querying the Dataset Export Task List

### Function

This API is used to query the dataset export task list by page.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/export-tasks

**Table 28-354** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

Table 28-355 Query Parameters

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                      |
|-------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| export_type | No        | Integer | Export type. If this parameter is not specified, all types of export tasks are queried by default. Options: <ul style="list-style-type: none"><li>• 0: labeled</li><li>• 1: unlabeled</li><li>• 2: all</li><li>• 3: conditional search</li></ul> |
| limit       | No        | Integer | Maximum number of records returned on each page. The value ranges from 1 to 100. The default value is 10.                                                                                                                                        |
| offset      | No        | Integer | Start page of the paging list. The default value is 0.                                                                                                                                                                                           |

Request Parameters

None

Response Parameters

Status code: 200

Table 28-356 Response body parameters

| Parameter     | Type                                  | Description                                                                                                                                                                                                         |
|---------------|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time   | Long                                  | Time when a task is created.                                                                                                                                                                                        |
| error_code    | String                                | Error code.                                                                                                                                                                                                         |
| error_msg     | String                                | Error message.                                                                                                                                                                                                      |
| export_format | Integer                               | Format of the exported directory. Options: <ul style="list-style-type: none"><li>• 1: tree structure. Example: rabbits/1.jpg,bees/2.jpg.</li><li>• 2: tile structure. Example: 1.jpg, 1.txt; 2.jpg,2.txt.</li></ul> |
| export_params | ExportParams object                   | Parameters of a dataset export task.                                                                                                                                                                                |
| export_tasks  | Array of ExportTaskStatusResp objects | Export task list                                                                                                                                                                                                    |

| Parameter             | Type    | Description                                                                                                                                                                                                                 |
|-----------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| export_type           | Integer | Export type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: labeled</li><li>• <b>1</b>: unlabeled</li><li>• <b>2</b>: all</li><li>• <b>3</b>: conditional search</li></ul>                                      |
| finished_sample_count | Integer | Number of completed samples.                                                                                                                                                                                                |
| path                  | String  | Export output path.                                                                                                                                                                                                         |
| progress              | Float   | Percentage of current task progress.                                                                                                                                                                                        |
| status                | String  | Task status.                                                                                                                                                                                                                |
| task_id               | String  | Task ID.                                                                                                                                                                                                                    |
| total_count           | Integer | Total number of export tasks                                                                                                                                                                                                |
| total_sample_count    | Integer | Total number of samples.                                                                                                                                                                                                    |
| update_time           | Long    | Time when a task is updated.                                                                                                                                                                                                |
| version_format        | String  | Format of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>Default</b>: default format</li><li>• <b>CarbonData</b>: CarbonData (supported only by table datasets)</li><li>• <b>CSV</b>: CSV</li></ul> |
| version_id            | String  | Dataset version ID.                                                                                                                                                                                                         |

**Table 28-357** ExportTaskStatusResp

| Parameter     | Type                                | Description                                                                                                                                                                                                                              |
|---------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time   | Long                                | Time when a task is created.                                                                                                                                                                                                             |
| error_code    | String                              | Error code.                                                                                                                                                                                                                              |
| error_msg     | String                              | Error message.                                                                                                                                                                                                                           |
| export_format | Integer                             | Format of the exported directory. Options: <ul style="list-style-type: none"><li>• <b>1</b>: tree structure. Example: <b>rabbits/1.jpg,bees/2.jpg</b>.</li><li>• <b>2</b>: tile structure. Example: 1.jpg, 1.txt; 2.jpg,2.txt.</li></ul> |
| export_params | <a href="#">ExportParams</a> object | Parameters of a dataset export task.                                                                                                                                                                                                     |

| Parameter             | Type    | Description                                                                                                                                                                                                                 |
|-----------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| export_type           | Integer | Export type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: labeled</li><li>• <b>1</b>: unlabeled</li><li>• <b>2</b>: all</li><li>• <b>3</b>: conditional search</li></ul>                                      |
| finished_sample_count | Integer | Number of completed samples.                                                                                                                                                                                                |
| path                  | String  | Export output path.                                                                                                                                                                                                         |
| progress              | Float   | Percentage of current task progress.                                                                                                                                                                                        |
| status                | String  | Task status.                                                                                                                                                                                                                |
| task_id               | String  | Task ID.                                                                                                                                                                                                                    |
| total_sample_count    | Integer | Total number of samples.                                                                                                                                                                                                    |
| update_time           | Long    | Time when a task is updated.                                                                                                                                                                                                |
| version_format        | String  | Format of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>Default</b>: default format</li><li>• <b>CarbonData</b>: CarbonData (supported only by table datasets)</li><li>• <b>CSV</b>: CSV</li></ul> |
| version_id            | String  | Dataset version ID.                                                                                                                                                                                                         |

**Table 28-358** ExportParams

| Parameter                     | Type    | Description                                                                                                                                                                                                                    |
|-------------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| clear_hard_property           | Boolean | Whether to clear hard example attributes. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Clear hard example attributes. (Default value)</li><li>• <b>false</b>: Do not clear hard example attributes.</li></ul> |
| export_dataset_version_format | String  | Format of the dataset version to which data is exported.                                                                                                                                                                       |
| export_dataset_version_name   | String  | Name of the dataset version to which data is exported.                                                                                                                                                                         |

| Parameter                    | Type                                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| export_dest                  | String                                  | Dataset export type. The options are as follows: <ul style="list-style-type: none"><li>• DIR: Data is exported to OBS (default value).</li><li>• NEW_DATASET: Export data to a new dataset.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| export_new_dataset_name      | String                                  | Name of the new dataset to which data is exported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| export_new_dataset_work_path | String                                  | Working directory of the new dataset to which data is exported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| ratio_sample_usage           | Boolean                                 | Whether to randomly allocate the training set and validation set based on the specified ratio. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Allocate the training set and validation set.</li><li>• <b>false</b>: Do not allocate the training set and validation set. (Default value)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| sample_state                 | String                                  | Sample status. The options are as follows: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: not marked</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: The acceptance is passed.</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: approved</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: Sampling is to be accepted.</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: Sampling has been accepted.</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: The sampling is passed.</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: The sampling has been rejected.</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| samples                      | Array of strings                        | ID list of exported samples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| search_conditions            | Array of <b>SearchCondition</b> objects | Exported search conditions. The relationship between multiple search conditions is OR.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| Parameter          | Type   | Description                                                                                                                                                                    |
|--------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| train_sample_ratio | String | Split ratio of training set and verification set during specified version release. The default value is <b>1.00</b> , indicating that all released versions are training sets. |

**Table 28-359** SearchCondition

| Parameter        | Type                                | Description                                                                                                                                                                                    |
|------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| coefficient      | String                              | Filter by coefficient of difficulty.                                                                                                                                                           |
| frame_in_video   | Integer                             | A frame in the video.                                                                                                                                                                          |
| hard             | String                              | Whether a sample is a hard sample. Options: <ul style="list-style-type: none"><li>• <b>0</b>: non-hard sample</li><li>• <b>1</b>: hard sample</li></ul>                                        |
| import_origin    | String                              | Filter by data source.                                                                                                                                                                         |
| kvp              | String                              | CT dosage, filtered by dosage.                                                                                                                                                                 |
| label_list       | <a href="#">SearchLabels</a> object | Label search criteria.                                                                                                                                                                         |
| labeler          | String                              | Labeler.                                                                                                                                                                                       |
| metadata         | <a href="#">SearchProp</a> object   | Search by sample attribute.                                                                                                                                                                    |
| parent_sample_id | String                              | Parent sample ID.                                                                                                                                                                              |
| sample_dir       | String                              | Directory where data samples are stored (the directory must end with a slash (/)). Only samples in the specified directory are searched for. Recursive search of directories is not supported. |
| sample_name      | String                              | Search by sample name, including the file name extension.                                                                                                                                      |

| Parameter       | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_time     | String | When a sample is added to the dataset, an index is created based on the last modification time (accurate to day) of the sample on OBS. You can search for the sample based on the time. Options: <ul style="list-style-type: none"><li>• <b>month</b>: Search for samples added from 30 days ago to the current day.</li><li>• <b>day</b>: Search for samples added from yesterday (one day ago) to the current day.</li><li>• <b>yyyyMMdd-yyyyMMdd</b>: Search for samples added in a specified period (at most 30 days), in the format of <b>Start date-End date</b>. For example, <b>20190901-2019091501</b> indicates that samples generated from September 1 to September 15, 2019 are searched.</li></ul> |
| score           | String | Search by confidence.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| slice_thickness | String | DICOM layer thickness. Samples are filtered by layer thickness.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| study_date      | String | DICOM scanning time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| time_in_video   | String | A time point in the video.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Table 28-360** SearchLabels

| Parameter | Type                                         | Description                                                                                                                                                                                                                                                   |
|-----------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| labels    | Array of <a href="#">SearchLabel</a> objects | List of label search criteria.                                                                                                                                                                                                                                |
| op        | String                                       | If you want to search for multiple labels, <b>op</b> must be specified. If you search for only one label, <b>op</b> can be left blank. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul> |

**Table 28-361** SearchLabel

| Parameter | Type   | Description |
|-----------|--------|-------------|
| name      | String | Label name. |



| Parameter | Type                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | String                    | Operation type between multiple attributes. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul>                                                                                                                                                                                                                                                                                                                                                                        |
| property  | Map<String,Array<String>> | Label attribute, which is in the Object format and stores any key-value pairs. <b>key</b> indicates the attribute name, and <b>value</b> indicates the value list. If <b>value</b> is <b>null</b> , the search is not performed by value. Otherwise, the search value can be any value in the list.                                                                                                                                                                                                                                       |
| type      | Integer                   | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

Table 28-362 SearchProp

| Parameter | Type                      | Description                                                                                                                                                         |
|-----------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | String                    | Relationship between attribute values. Options: <ul style="list-style-type: none"><li>• <b>AND</b>: AND relationship</li><li>• <b>OR</b>: OR relationship</li></ul> |
| props     | Map<String,Array<String>> | Search criteria of an attribute. Multiple search criteria can be set.                                                                                               |

## Example Requests

Querying the Export Task List by Page

GET https://{endpoint}/v2/{project\_id}/datasets/{dataset\_id}/export-tasks

## Example Responses

Status code: 200

OK

```
{
 "total_count" : 2,
 "export_tasks" : [{
 "task_id" : "rF9NNNoB56k5rtYKg2Y7",
 "path" : "/test-obs/classify/input/",
 "export_type" : 3,
 "version_format" : "Default",
 "export_format" : 2,
 "export_params" : {
 "sample_state" : "",
 "export_dest" : "NEW_DATASET",
 "export_new_dataset_name" : "dataset-export-test",
 "export_new_dataset_work_path" : "/test-obs/classify/output/",
 "clear_hard_property" : true,
 "train_sample_ratio" : 1.0,
 "ratio_sample_usage" : false
 },
 "status" : "SUCCEEDED",
 "progress" : 100.0,
 "total_sample_count" : 20,
 "finished_sample_count" : 20,
 "create_time" : 1606103820120,
 "update_time" : 1606103824823
 }, {
 "task_id" : "TZMuy7OKbClkGCAC3gb",
 "path" : "/test-obs/daoChu/",
 "export_type" : 3,
 "version_format" : "Default",
 "export_format" : 2,
 "export_params" : {
 "sample_state" : "",
 "export_dest" : "DIR",
 "clear_hard_property" : true,
 "clear_difficult" : false,
 "train_sample_ratio" : 1.0,
 "ratio_sample_usage" : false
 },
 "status" : "SUCCEEDED",
 "progress" : 100.0,
 "total_sample_count" : 20,
 "finished_sample_count" : 20,
 "create_time" : 1606103424662,
 "update_time" : 1606103497519
 }]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.58 Creating a Dataset Export Task

### Function

This API is used to create a dataset export task to export a dataset to OBS or new datasets.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/export-tasks

**Table 28-363** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

### Request Parameters

**Table 28-364** Request body parameters

| Parameter         | Mandatory | Type                                | Description                                                                                                                                                                                                                              |
|-------------------|-----------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotation_format | No        | String                              | Labeling format. Options: <ul style="list-style-type: none"><li>• <b>VOC</b>: VOC</li><li>• <b>COCO</b>: COCO</li></ul>                                                                                                                  |
| export_format     | No        | Integer                             | Format of the exported directory. Options: <ul style="list-style-type: none"><li>• <b>1</b>: tree structure. Example: <b>rabbits/1.jpg,bees/2.jpg</b>.</li><li>• <b>2</b>: tile structure. Example: 1.jpg, 1.txt; 2.jpg,2.txt.</li></ul> |
| export_params     | No        | <a href="#">ExportParams</a> object | Parameters of a dataset export task.                                                                                                                                                                                                     |

| Parameter    | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| export_type  | No        | Integer | Export type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: labeled</li><li>• <b>1</b>: unlabeled</li><li>• <b>2</b>: all</li><li>• <b>3</b>: conditional search</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| path         | No        | String  | Output path for exporting data to OBS. This parameter is mandatory when data is exported to OBS or a new dataset.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| sample_state | No        | String  | Sample status. The options are as follows: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: not marked</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: The acceptance is passed.</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: approved</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: Sampling is to be accepted.</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: Sampling has been accepted.</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: The sampling is passed.</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: The sampling has been rejected.</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |

| Parameter          | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                           |
|--------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| source_type_header | No        | String  | Prefix of the OBS path in the exported labeling file. The default value is <b>obs://</b> . You can set it to <b>s3://</b> . The image path starting with <b>obs</b> cannot be parsed during training. Set the path prefix in the exported <b>manifest</b> file to <b>s3://</b> .                                                                                      |
| status             | No        | Integer | Task status.                                                                                                                                                                                                                                                                                                                                                          |
| task_id            | No        | String  | Task ID.                                                                                                                                                                                                                                                                                                                                                              |
| version_format     | No        | String  | Format of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>Default</b>: default format</li><li>• <b>CarbonData</b>: CarbonData (supported only by table datasets)</li><li>• <b>CSV</b>: CSV</li></ul>                                                                                                                                           |
| version_id         | No        | String  | Dataset version ID, which must be specified when data of a dataset version is exported.                                                                                                                                                                                                                                                                               |
| with_column_header | No        | Boolean | Whether to write the column name in the first line of the CSV file during export. This field is valid for the table dataset. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Write the column name in the first line of the CSV file. (Default value)</li><li>• <b>false</b>: Do not write the column name in the first line of the CSV file.</li></ul> |

**Table 28-365** ExportParams

| Parameter           | Mandatory | Type    | Description                                                                                                                                                                                                                    |
|---------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| clear_hard_property | No        | Boolean | Whether to clear hard example attributes. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Clear hard example attributes. (Default value)</li><li>• <b>false</b>: Do not clear hard example attributes.</li></ul> |

| Parameter                     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                       |
|-------------------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| export_dataset_version_format | No        | String  | Format of the dataset version to which data is exported.                                                                                                                                                                                                                                                          |
| export_dataset_version_name   | No        | String  | Name of the dataset version to which data is exported.                                                                                                                                                                                                                                                            |
| export_dest                   | No        | String  | Dataset export type. The options are as follows: <ul style="list-style-type: none"><li>• DIR: Data is exported to OBS (default value).</li><li>• NEW_DATASET: Export data to a new dataset.</li></ul>                                                                                                             |
| export_new_dataset_name       | No        | String  | Name of the new dataset to which data is exported.                                                                                                                                                                                                                                                                |
| export_new_dataset_work_path  | No        | String  | Working directory of the new dataset to which data is exported.                                                                                                                                                                                                                                                   |
| ratio_sample_usage            | No        | Boolean | Whether to randomly allocate the training set and validation set based on the specified ratio. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Allocate the training set and validation set.</li><li>• <b>false</b>: Do not allocate the training set and validation set. (Default value)</li></ul> |

| Parameter          | Mandatory | Type                                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------|-----------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_state       | No        | String                                           | Sample status. The options are as follows: <ul style="list-style-type: none"><li>• <code>__ALL__</code>: labeled</li><li>• <code>__NONE__</code>: not marked</li><li>• <code>__UNCHECK__</code>: to be accepted</li><li>• <code>__ACCEPTED__</code>: The acceptance is passed.</li><li>• <code>__REJECTED__</code>: rejected</li><li>• <code>__UNREVIEWED__</code>: to be reviewed</li><li>• <code>__REVIEWED__</code>: approved</li><li>• <code>__WORKFORCE_SAMPLED__</code>: sampled</li><li>• <code>__WORKFORCE_SAMPLED_UNCHECK__</code>: Sampling is to be accepted.</li><li>• <code>__WORKFORCE_SAMPLED_CHECKED__</code>: Sampling has been accepted.</li><li>• <code>__WORKFORCE_SAMPLED_ACCEPTED__</code>: The sampling is passed.</li><li>• <code>__WORKFORCE_SAMPLED_REJECTED__</code>: The sampling has been rejected.</li><li>• <code>__AUTO_ANNOTATION__</code>: to be confirmed</li></ul> |
| samples            | No        | Array of strings                                 | ID list of exported samples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| search_conditions  | No        | Array of <a href="#">SearchCondition</a> objects | Exported search conditions. The relationship between multiple search conditions is OR.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| train_sample_ratio | No        | String                                           | Split ratio of training set and verification set during specified version release. The default value is <b>1.00</b> , indicating that all released versions are training sets.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

**Table 28-366** SearchCondition

| Parameter        | Mandatory | Type                                | Description                                                                                                                                                                                    |
|------------------|-----------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| coefficient      | No        | String                              | Filter by coefficient of difficulty.                                                                                                                                                           |
| frame_in_video   | No        | Integer                             | A frame in the video.                                                                                                                                                                          |
| hard             | No        | String                              | Whether a sample is a hard sample. Options: <ul style="list-style-type: none"><li>• <b>0</b>: non-hard sample</li><li>• <b>1</b>: hard sample</li></ul>                                        |
| import_origin    | No        | String                              | Filter by data source.                                                                                                                                                                         |
| kvp              | No        | String                              | CT dosage, filtered by dosage.                                                                                                                                                                 |
| label_list       | No        | <a href="#">SearchLabels</a> object | Label search criteria.                                                                                                                                                                         |
| labeler          | No        | String                              | Labeler.                                                                                                                                                                                       |
| metadata         | No        | <a href="#">SearchProp</a> object   | Search by sample attribute.                                                                                                                                                                    |
| parent_sample_id | No        | String                              | Parent sample ID.                                                                                                                                                                              |
| sample_dir       | No        | String                              | Directory where data samples are stored (the directory must end with a slash (/)). Only samples in the specified directory are searched for. Recursive search of directories is not supported. |
| sample_name      | No        | String                              | Search by sample name, including the file name extension.                                                                                                                                      |



| Parameter       | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_time     | No        | String | When a sample is added to the dataset, an index is created based on the last modification time (accurate to day) of the sample on OBS. You can search for the sample based on the time. Options: <ul style="list-style-type: none"><li>• <b>month</b>: Search for samples added from 30 days ago to the current day.</li><li>• <b>day</b>: Search for samples added from yesterday (one day ago) to the current day.</li><li>• <b>yyyyMMdd-yyyyMMdd</b>: Search for samples added in a specified period (at most 30 days), in the format of <b>Start date-End date</b>. For example, <b>20190901-2019091501</b> indicates that samples generated from September 1 to September 15, 2019 are searched.</li></ul> |
| score           | No        | String | Search by confidence.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| slice_thickness | No        | String | DICOM layer thickness. Samples are filtered by layer thickness.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| study_date      | No        | String | DICOM scanning time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| time_in_video   | No        | String | A time point in the video.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Table 28-367** SearchLabels

| Parameter | Mandatory | Type                                         | Description                    |
|-----------|-----------|----------------------------------------------|--------------------------------|
| labels    | No        | Array of <a href="#">SearchLabel</a> objects | List of label search criteria. |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | No        | String | If you want to search for multiple labels, <b>op</b> must be specified. If you search for only one label, <b>op</b> can be left blank. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul> |

**Table 28-368** SearchLabel

| Parameter | Mandatory | Type                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | No        | String                    | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| op        | No        | String                    | Operation type between multiple attributes. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul>                                                                                                                                                                                                                                                                                                                                                                        |
| property  | No        | Map<String,Array<String>> | Label attribute, which is in the Object format and stores any key-value pairs. <b>key</b> indicates the attribute name, and <b>value</b> indicates the value list. If <b>value</b> is <b>null</b> , the search is not performed by value. Otherwise, the search value can be any value in the list.                                                                                                                                                                                                                                       |
| type      | No        | Integer                   | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-369** SearchProp

| Parameter | Mandatory | Type                      | Description                                                                                                                                                         |
|-----------|-----------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | No        | String                    | Relationship between attribute values. Options: <ul style="list-style-type: none"><li>• <b>AND</b>: AND relationship</li><li>• <b>OR</b>: OR relationship</li></ul> |
| props     | No        | Map<String,Array<String>> | Search criteria of an attribute. Multiple search criteria can be set.                                                                                               |

## Response Parameters

Status code: 200

**Table 28-370** Response body parameters

| Parameter             | Type                                | Description                                                                                                                                                                                                                              |
|-----------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time           | Long                                | Time when a task is created.                                                                                                                                                                                                             |
| error_code            | String                              | Error code.                                                                                                                                                                                                                              |
| error_msg             | String                              | Error message.                                                                                                                                                                                                                           |
| export_format         | Integer                             | Format of the exported directory. Options: <ul style="list-style-type: none"><li>• <b>1</b>: tree structure. Example: <b>rabbits/1.jpg,bees/2.jpg</b>.</li><li>• <b>2</b>: tile structure. Example: 1.jpg, 1.txt; 2.jpg,2.txt.</li></ul> |
| export_params         | <a href="#">ExportParams</a> object | Parameters of a dataset export task.                                                                                                                                                                                                     |
| export_type           | Integer                             | Export type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: labeled</li><li>• <b>1</b>: unlabeled</li><li>• <b>2</b>: all</li><li>• <b>3</b>: conditional search</li></ul>                                                   |
| finished_sample_count | Integer                             | Number of completed samples.                                                                                                                                                                                                             |
| path                  | String                              | Export output path.                                                                                                                                                                                                                      |
| progress              | Float                               | Percentage of current task progress.                                                                                                                                                                                                     |

| Parameter          | Type    | Description                                                                                                                                                                                                                 |
|--------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status             | String  | Task status. Options: <ul style="list-style-type: none"><li>• <b>INIT</b>: initialized</li><li>• <b>RUNNING</b>: running</li><li>• <b>FAILED</b>: failed</li><li>• <b>SUCCEEDED</b>: completed</li></ul>                    |
| task_id            | String  | Task ID.                                                                                                                                                                                                                    |
| total_sample_count | Integer | Total number of samples.                                                                                                                                                                                                    |
| update_time        | Long    | Time when a task is updated.                                                                                                                                                                                                |
| version_format     | String  | Format of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>Default</b>: default format</li><li>• <b>CarbonData</b>: CarbonData (supported only by table datasets)</li><li>• <b>CSV</b>: CSV</li></ul> |
| version_id         | String  | Dataset version ID.                                                                                                                                                                                                         |

**Table 28-371** ExportParams

| Parameter                     | Type    | Description                                                                                                                                                                                                                    |
|-------------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| clear_hard_property           | Boolean | Whether to clear hard example attributes. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Clear hard example attributes. (Default value)</li><li>• <b>false</b>: Do not clear hard example attributes.</li></ul> |
| export_dataset_version_format | String  | Format of the dataset version to which data is exported.                                                                                                                                                                       |
| export_dataset_version_name   | String  | Name of the dataset version to which data is exported.                                                                                                                                                                         |
| export_dest                   | String  | Dataset export type. The options are as follows: <ul style="list-style-type: none"><li>• <b>DIR</b>: Data is exported to OBS (default value).</li><li>• <b>NEW_DATASET</b>: Export data to a new dataset.</li></ul>            |
| export_new_dataset_name       | String  | Name of the new dataset to which data is exported.                                                                                                                                                                             |

| Parameter                    | Type                                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| export_new_dataset_work_path | String                                           | Working directory of the new dataset to which data is exported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| ratio_sample_usage           | Boolean                                          | Whether to randomly allocate the training set and validation set based on the specified ratio. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Allocate the training set and validation set.</li><li>• <b>false</b>: Do not allocate the training set and validation set. (Default value)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| sample_state                 | String                                           | Sample status. The options are as follows: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: not marked</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: The acceptance is passed.</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: approved</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: Sampling is to be accepted.</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: Sampling has been accepted.</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: The sampling is passed.</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: The sampling has been rejected.</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| samples                      | Array of strings                                 | ID list of exported samples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| search_conditions            | Array of <a href="#">SearchCondition</a> objects | Exported search conditions. The relationship between multiple search conditions is OR.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| train_sample_ratio           | String                                           | Split ratio of training set and verification set during specified version release. The default value is <b>1.00</b> , indicating that all released versions are training sets.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

**Table 28-372** SearchCondition

| Parameter        | Type                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| coefficient      | String                              | Filter by coefficient of difficulty.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| frame_in_video   | Integer                             | A frame in the video.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| hard             | String                              | Whether a sample is a hard sample. Options: <ul style="list-style-type: none"><li>• <b>0</b>: non-hard sample</li><li>• <b>1</b>: hard sample</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| import_origin    | String                              | Filter by data source.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| kvp              | String                              | CT dosage, filtered by dosage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| label_list       | <a href="#">SearchLabels</a> object | Label search criteria.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| labeler          | String                              | Labeler.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| metadata         | <a href="#">SearchProp</a> object   | Search by sample attribute.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| parent_sample_id | String                              | Parent sample ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| sample_dir       | String                              | Directory where data samples are stored (the directory must end with a slash (/)). Only samples in the specified directory are searched for. Recursive search of directories is not supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| sample_name      | String                              | Search by sample name, including the file name extension.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| sample_time      | String                              | When a sample is added to the dataset, an index is created based on the last modification time (accurate to day) of the sample on OBS. You can search for the sample based on the time. Options: <ul style="list-style-type: none"><li>• <b>month</b>: Search for samples added from 30 days ago to the current day.</li><li>• <b>day</b>: Search for samples added from yesterday (one day ago) to the current day.</li><li>• <b>yyyyMMdd-yyyyMMdd</b>: Search for samples added in a specified period (at most 30 days), in the format of <b>Start date-End date</b>. For example, <b>20190901-2019091501</b> indicates that samples generated from September 1 to September 15, 2019 are searched.</li></ul> |
| score            | String                              | Search by confidence.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter       | Type   | Description                                                     |
|-----------------|--------|-----------------------------------------------------------------|
| slice_thickness | String | DICOM layer thickness. Samples are filtered by layer thickness. |
| study_date      | String | DICOM scanning time.                                            |
| time_in_video   | String | A time point in the video.                                      |

**Table 28-373** SearchLabels

| Parameter | Type                                         | Description                                                                                                                                                                                                                                                   |
|-----------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| labels    | Array of <a href="#">SearchLabel</a> objects | List of label search criteria.                                                                                                                                                                                                                                |
| op        | String                                       | If you want to search for multiple labels, <b>op</b> must be specified. If you search for only one label, <b>op</b> can be left blank. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul> |

**Table 28-374** SearchLabel

| Parameter | Type                      | Description                                                                                                                                                                                                                                                                                         |
|-----------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | String                    | Label name.                                                                                                                                                                                                                                                                                         |
| op        | String                    | Operation type between multiple attributes. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul>                                                                                                                                  |
| property  | Map<String,Array<String>> | Label attribute, which is in the Object format and stores any key-value pairs. <b>key</b> indicates the attribute name, and <b>value</b> indicates the value list. If <b>value</b> is <b>null</b> , the search is not performed by value. Otherwise, the search value can be any value in the list. |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Integer | Label type. Options: <ul style="list-style-type: none"><li>● <b>0</b>: image classification</li><li>● <b>1</b>: object detection</li><li>● <b>3</b>: image segmentation</li><li>● <b>100</b>: text classification</li><li>● <b>101</b>: named entity recognition</li><li>● <b>102</b>: text triplet relationship</li><li>● <b>103</b>: text triplet entity</li><li>● <b>200</b>: sound classification</li><li>● <b>201</b>: speech content</li><li>● <b>202</b>: speech paragraph labeling</li><li>● <b>600</b>: video labeling</li></ul> |

**Table 28-375** SearchProp

| Parameter | Type                      | Description                                                                                                                                                         |
|-----------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | String                    | Relationship between attribute values. Options: <ul style="list-style-type: none"><li>● <b>AND</b>: AND relationship</li><li>● <b>OR</b>: OR relationship</li></ul> |
| props     | Map<String,Array<String>> | Search criteria of an attribute. Multiple search criteria can be set.                                                                                               |

## Example Requests

- Creating an Export Task (Exporting Data to OBS)

```
{
 "path" : "/test-obs/daoChu/",
 "export_type" : 3,
 "export_params" : {
 "sample_state" : "",
 "export_dest" : "DIR"
 }
}
```

- Creating an Export Task (Exporting Data to a New Dataset)

```
{
 "path" : "/test-obs/classify/input/",
 "export_type" : 3,
 "export_params" : {
 "sample_state" : "",
 "export_dest" : "NEW_DATASET",
 "export_new_dataset_name" : "dataset-export-test",
 "export_new_dataset_work_path" : "/test-obs/classify/output/"
 }
}
```



## Example Responses

Status code: 200

OK

```
{
 "task_id" : "rF9NNob56k5rtYKg2Y7"
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.59 Querying the Status of a Dataset Export Task

### Function

This API is used to query the status of a dataset export task.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{resource\_id}/export-tasks/{task\_id}

**Table 28-376** Path Parameters

| Parameter   | Mandatory | Type   | Description                                                                                                     |
|-------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| resource_id | Yes       | String | Resource ID. Currently, the dataset ID can be specified.                                                        |

| Parameter | Mandatory | Type   | Description           |
|-----------|-----------|--------|-----------------------|
| task_id   | Yes       | String | ID of an export task. |

## Request Parameters

None

## Response Parameters

Status code: 200

Table 28-377 Response body parameters

| Parameter             | Type                                | Description                                                                                                                                                                                                                              |
|-----------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time           | Long                                | Time when a task is created.                                                                                                                                                                                                             |
| error_code            | String                              | Error code.                                                                                                                                                                                                                              |
| error_msg             | String                              | Error message.                                                                                                                                                                                                                           |
| export_format         | Integer                             | Format of the exported directory. Options: <ul style="list-style-type: none"><li>• <b>1</b>: tree structure. Example: <b>rabbits/1.jpg,bees/2.jpg</b>.</li><li>• <b>2</b>: tile structure. Example: 1.jpg, 1.txt; 2.jpg,2.txt.</li></ul> |
| export_params         | <a href="#">ExportParams</a> object | Parameters of a dataset export task.                                                                                                                                                                                                     |
| export_type           | Integer                             | Export type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: labeled</li><li>• <b>1</b>: unlabeled</li><li>• <b>2</b>: all</li><li>• <b>3</b>: conditional search</li></ul>                                                   |
| finished_sample_count | Integer                             | Number of completed samples.                                                                                                                                                                                                             |
| path                  | String                              | Export output path.                                                                                                                                                                                                                      |
| progress              | Float                               | Percentage of current task progress.                                                                                                                                                                                                     |
| status                | String                              | Task status.                                                                                                                                                                                                                             |
| task_id               | String                              | Task ID.                                                                                                                                                                                                                                 |
| total_sample_count    | Integer                             | Total number of samples.                                                                                                                                                                                                                 |
| update_time           | Long                                | Time when a task is updated.                                                                                                                                                                                                             |

| Parameter      | Type   | Description                                                                                                                                                                                                                 |
|----------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| version_format | String | Format of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>Default</b>: default format</li><li>• <b>CarbonData</b>: CarbonData (supported only by table datasets)</li><li>• <b>CSV</b>: CSV</li></ul> |
| version_id     | String | Dataset version ID.                                                                                                                                                                                                         |

**Table 28-378** ExportParams

| Parameter                     | Type    | Description                                                                                                                                                                                                                                                                                                       |
|-------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| clear_hard_property           | Boolean | Whether to clear hard example attributes. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Clear hard example attributes. (Default value)</li><li>• <b>false</b>: Do not clear hard example attributes.</li></ul>                                                                                    |
| export_dataset_version_format | String  | Format of the dataset version to which data is exported.                                                                                                                                                                                                                                                          |
| export_dataset_version_name   | String  | Name of the dataset version to which data is exported.                                                                                                                                                                                                                                                            |
| export_dest                   | String  | Dataset export type. The options are as follows: <ul style="list-style-type: none"><li>• <b>DIR</b>: Data is exported to OBS (default value).</li><li>• <b>NEW_DATASET</b>: Export data to a new dataset.</li></ul>                                                                                               |
| export_new_dataset_name       | String  | Name of the new dataset to which data is exported.                                                                                                                                                                                                                                                                |
| export_new_dataset_work_path  | String  | Working directory of the new dataset to which data is exported.                                                                                                                                                                                                                                                   |
| ratio_sample_usage            | Boolean | Whether to randomly allocate the training set and validation set based on the specified ratio. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Allocate the training set and validation set.</li><li>• <b>false</b>: Do not allocate the training set and validation set. (Default value)</li></ul> |

| Parameter          | Type                                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_state       | String                                           | Sample status. The options are as follows: <ul style="list-style-type: none"><li>• <code>__ALL__</code>: labeled</li><li>• <code>__NONE__</code>: not marked</li><li>• <code>__UNCHECK__</code>: to be accepted</li><li>• <code>__ACCEPTED__</code>: The acceptance is passed.</li><li>• <code>__REJECTED__</code>: rejected</li><li>• <code>__UNREVIEWED__</code>: to be reviewed</li><li>• <code>__REVIEWED__</code>: approved</li><li>• <code>__WORKFORCE_SAMPLED__</code>: sampled</li><li>• <code>__WORKFORCE_SAMPLED_UNCHECK__</code>: Sampling is to be accepted.</li><li>• <code>__WORKFORCE_SAMPLED_CHECKED__</code>: Sampling has been accepted.</li><li>• <code>__WORKFORCE_SAMPLED_ACCEPTED__</code>: The sampling is passed.</li><li>• <code>__WORKFORCE_SAMPLED_REJECTED__</code>: The sampling has been rejected.</li><li>• <code>__AUTO_ANNOTATION__</code>: to be confirmed</li></ul> |
| samples            | Array of strings                                 | ID list of exported samples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| search_conditions  | Array of <a href="#">SearchCondition</a> objects | Exported search conditions. The relationship between multiple search conditions is OR.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| train_sample_ratio | String                                           | Split ratio of training set and verification set during specified version release. The default value is <b>1.00</b> , indicating that all released versions are training sets.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

**Table 28-379** SearchCondition

| Parameter      | Type    | Description                                                                                                                                             |
|----------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| coefficient    | String  | Filter by coefficient of difficulty.                                                                                                                    |
| frame_in_video | Integer | A frame in the video.                                                                                                                                   |
| hard           | String  | Whether a sample is a hard sample. Options: <ul style="list-style-type: none"><li>• <b>0</b>: non-hard sample</li><li>• <b>1</b>: hard sample</li></ul> |
| import_origin  | String  | Filter by data source.                                                                                                                                  |

| Parameter        | Type                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| kvp              | String                              | CT dosage, filtered by dosage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| label_list       | <a href="#">SearchLabels</a> object | Label search criteria.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| labeler          | String                              | Labeler.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| metadata         | <a href="#">SearchProp</a> object   | Search by sample attribute.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| parent_sample_id | String                              | Parent sample ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| sample_dir       | String                              | Directory where data samples are stored (the directory must end with a slash (/)). Only samples in the specified directory are searched for. Recursive search of directories is not supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| sample_name      | String                              | Search by sample name, including the file name extension.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| sample_time      | String                              | When a sample is added to the dataset, an index is created based on the last modification time (accurate to day) of the sample on OBS. You can search for the sample based on the time. Options: <ul style="list-style-type: none"><li>● <b>month</b>: Search for samples added from 30 days ago to the current day.</li><li>● <b>day</b>: Search for samples added from yesterday (one day ago) to the current day.</li><li>● <b>yyyyMMdd-yyyyMMdd</b>: Search for samples added in a specified period (at most 30 days), in the format of <b>Start date-End date</b>. For example, <b>20190901-2019091501</b> indicates that samples generated from September 1 to September 15, 2019 are searched.</li></ul> |
| score            | String                              | Search by confidence.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| slice_thickness  | String                              | DICOM layer thickness. Samples are filtered by layer thickness.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| study_date       | String                              | DICOM scanning time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| time_in_video    | String                              | A time point in the video.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Table 28-380** SearchLabels

| Parameter | Type                                         | Description                                                                                                                                                                                                                                                   |
|-----------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| labels    | Array of <a href="#">SearchLabel</a> objects | List of label search criteria.                                                                                                                                                                                                                                |
| op        | String                                       | If you want to search for multiple labels, <b>op</b> must be specified. If you search for only one label, <b>op</b> can be left blank. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul> |

**Table 28-381** SearchLabel

| Parameter | Type                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | String                    | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| op        | String                    | Operation type between multiple attributes. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul>                                                                                                                                                                                                                                                                                                                                                                        |
| property  | Map<String,Array<String>> | Label attribute, which is in the Object format and stores any key-value pairs. <b>key</b> indicates the attribute name, and <b>value</b> indicates the value list. If <b>value</b> is <b>null</b> , the search is not performed by value. Otherwise, the search value can be any value in the list.                                                                                                                                                                                                                                       |
| type      | Integer                   | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

Table 28-382 SearchProp

| Parameter | Type                      | Description                                                                                                                                                         |
|-----------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | String                    | Relationship between attribute values. Options: <ul style="list-style-type: none"><li>• <b>AND</b>: AND relationship</li><li>• <b>OR</b>: OR relationship</li></ul> |
| props     | Map<String,Array<String>> | Search criteria of an attribute. Multiple search criteria can be set.                                                                                               |

Example Requests

Querying the Status of an Export Task (Exporting Data to OBS)

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/export-tasks/{task_id}
```

Example Responses

Status code: 200

OK

```
{
 "task_id" : "TzMuy7OKbClkGCAC3gb",
 "path" : "/test-obs/daoChu/",
 "export_type" : 3,
 "version_format" : "Default",
 "export_format" : 2,
 "export_params" : {
 "sample_state" : "",
 "export_dest" : "DIR",
 "clear_hard_property" : true,
 "train_sample_ratio" : 1.0,
 "ratio_sample_usage" : false
 },
 "status" : "RUNNING",
 "progress" : 0.0,
 "create_time" : 1606103424662,
 "update_time" : 1606103494124
}
```

Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.60 Synchronizing a Dataset

### Function

Synchronize samples and labeling information from the input dataset path to the dataset. Text datasets do not support this operation.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/sync-data

**Table 28-383** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

### Request Parameters

None

### Response Parameters

None

### Example Requests

Synchronizing a Dataset

```
POST https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/sync-data
```

### Example Responses

None



## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.61 Querying the Status of a Dataset Synchronization Task

### Function

This API is used to query the status of a dataset synchronization task.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/sync-data/status

**Table 28-384** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

### Request Parameters

None

### Response Parameters

**Status code: 200**

**Table 28-385** Response body parameters

| Parameter            | Type   | Description                                                                                                                                                                                                                                                                                     |
|----------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| add_sample_count     | Long   | Number of added samples.                                                                                                                                                                                                                                                                        |
| create_time          | Long   | Task creation time.                                                                                                                                                                                                                                                                             |
| dataset_id           | String | Dataset ID.                                                                                                                                                                                                                                                                                     |
| deleted_sample_count | Long   | Number of deleted samples.                                                                                                                                                                                                                                                                      |
| duration_time        | Long   | Task running time.                                                                                                                                                                                                                                                                              |
| error_code           | String | Error code.                                                                                                                                                                                                                                                                                     |
| error_msg            | String | Error message.                                                                                                                                                                                                                                                                                  |
| status               | String | Status of a task. Options: <ul style="list-style-type: none"><li>● <b>QUEUING</b>: queuing</li><li>● <b>STARTING</b>: execution started</li><li>● <b>RUNNING</b>: running</li><li>● <b>COMPLETED</b>: completed</li><li>● <b>FAILED</b>: failed</li><li>● <b>NOT_EXIST</b>: not found</li></ul> |
| task_id              | String | Synchronization task ID.                                                                                                                                                                                                                                                                        |
| total_sample_count   | Long   | Total number of samples.                                                                                                                                                                                                                                                                        |

## Example Requests

Obtaining the Dataset Synchronization Status

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/sync-data/status
```

## Example Responses

**Status code: 200**

OK

```
{
 "status": "COMPLETED",
 "dataset_id": "gfgHHSokody6AJigS5A"
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.62 Obtaining an Auto Labeling Sample List

### Function

Obtain a list of auto labeling samples in a dataset.

### Debugging

You can debug this API in [API Explorer](#) which supports automatic authentication. API Explorer can automatically generate SDK code examples and provide the SDK code example debugging.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/auto-annotations/samples

**Table 28-386** URI parameters

| Parameter  | Mandatory | Type   | Description                                                                    |
|------------|-----------|--------|--------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID                                                                     |
| project_id | Yes       | String | Project ID. For details, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-387** Query parameters

| Parameter  | Mandatory | Type   | Description                                                          |
|------------|-----------|--------|----------------------------------------------------------------------|
| high_score | No        | String | Upper limit of the confidence score. The default value is <b>1</b> . |
| label_name | No        | String | Label name                                                           |

| Parameter         | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| label_type        | No        | Integer | Labeling type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>400</b>: table dataset</li><li>• <b>600</b>: video labeling</li><li>• <b>900</b>: free format</li></ul> |
| limit             | No        | Integer | Maximum number of records returned on each page. The value ranges from <b>1</b> to <b>100</b> . The default value is <b>10</b> .                                                                                                                                                                                                                                                                                                                                                                                                                            |
| low_score         | No        | String  | Lower limit of the confidence score. The default value is <b>0</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| offset            | No        | Integer | Start page for pagination display. The default value is <b>0</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| order             | No        | String  | Sorting sequence of the query. Options: <ul style="list-style-type: none"><li>• <b>asc</b>: ascending order</li><li>• <b>desc</b>: descending order (default value)</li></ul>                                                                                                                                                                                                                                                                                                                                                                               |
| process_parameter | No        | String  | Image resize configuration, which is the same as OBS settings. For details, see <a href="#">Resizing Images</a> . For example, <b>image/resize,m_lfit,h_200</b> indicates that the target image is resized proportionally and the height is set to 200 pixels.                                                                                                                                                                                                                                                                                              |
| search_conditions | No        | String  | Multi-dimensional search criteria after URL encoding. The relationship between multiple search conditions is AND.                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 28-388** Response body parameters

| Parameter    | Type                                                | Description       |
|--------------|-----------------------------------------------------|-------------------|
| sample_count | Integer                                             | Number of samples |
| samples      | Array of <a href="#">DescribeSampleResp</a> objects | List of samples   |

**Table 28-389** DescribeSampleResp

| Parameter        | Type                                         | Description                                                                                                                                                                                                                |
|------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| check_accept     | Boolean                                      | Whether the acceptance is passed, which is used for team labeling. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The acceptance is passed.</li><li>• <b>false</b>: The acceptance is not passed.</li></ul> |
| check_comment    | String                                       | Acceptance comment, which is used for team labeling.                                                                                                                                                                       |
| check_score      | String                                       | Acceptance score, which is used for team labeling.                                                                                                                                                                         |
| deletion_reasons | Array of strings                             | Reason for deleting a sample, which is used for healthcare.                                                                                                                                                                |
| hard_details     | Map<String, <a href="#">HardDetail</a> >     | Difficult problem details, including description, causes, and suggestions of difficult problems.                                                                                                                           |
| labelers         | Array of <a href="#">Worker</a> objects      | Labeling personnel list of sample allocation. The list records the team members receiving the samples, which is used for team labeling.                                                                                    |
| labels           | Array of <a href="#">SampleLabel</a> objects | List of sample labels                                                                                                                                                                                                      |
| metadata         | <a href="#">SampleMetadata</a> object        | Attribute key-value pair of the sample metadata                                                                                                                                                                            |

| Parameter      | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| review_accept  | Boolean          | Whether to accept the review, which is used for team labeling. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The review is accepted.</li><li>• <b>false</b>: The review is rejected.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| review_comment | String           | Review comment, which is used for team labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| review_score   | String           | Review score, which is used for team labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| sample_data    | Array of strings | List of sample data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| sample_dir     | String           | Path for storing a sample                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| sample_id      | String           | Sample ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| sample_name    | String           | Sample name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| sample_size    | Long             | Sample size or text length, in bytes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| sample_status  | String           | Sample status. Options: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: unlabeled</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: accepted</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: reviewed</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: sampling pending check</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: sampling checked</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: sampling accepted</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: sampling rejected</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| sample_time    | Long             | Sample time, when OBS is last modified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Parameter      | Type    | Description                                                                                                                                                                          |
|----------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_type    | Integer | Sample type. Options: <ul style="list-style-type: none"><li>• 0: image</li><li>• 1: text</li><li>• 2: audio</li><li>• 4: table</li><li>• 6: video</li><li>• 9: free format</li></ul> |
| score          | String  | Comprehensive score, which is used for team labeling.                                                                                                                                |
| source         | String  | Source address of sample data                                                                                                                                                        |
| sub_sample_url | String  | Subsample URL, which is used for healthcare.                                                                                                                                         |
| worker_id      | String  | ID of a labeling team member, which is used for team labeling.                                                                                                                       |

**Table 28-390** HardDetail

| Parameter  | Type    | Description         |
|------------|---------|---------------------|
| alo_name   | String  | Alias               |
| id         | Integer | Reason ID           |
| reason     | String  | Reason description  |
| suggestion | String  | Handling suggestion |

**Table 28-391** Worker

| Parameter   | Type   | Description                                                                                                              |
|-------------|--------|--------------------------------------------------------------------------------------------------------------------------|
| create_time | Long   | Worker creation time                                                                                                     |
| description | String | Labeling team member description. The value contains 0 to 256 characters. Special characters (^!<>=&"') are not allowed. |
| email       | String | Email address of a labeling team member                                                                                  |

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                                                   |
|--------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| role         | Integer | Role. Options: <ul style="list-style-type: none"><li>• <b>0</b>: marker</li><li>• <b>1</b>: reviewer</li><li>• <b>2</b>: team manager</li><li>• <b>3</b>: dataset owner</li></ul>                                                                                                                                             |
| status       | Integer | Current login status of a labeled member. Options: <ul style="list-style-type: none"><li>• <b>0</b>: No invitation email is sent.</li><li>• <b>1</b>: The invitation email is sent but the member has not logged in.</li><li>• <b>2</b>: The member has logged in.</li><li>• <b>3</b>: The member has been deleted.</li></ul> |
| update_time  | Long    | Worker update time                                                                                                                                                                                                                                                                                                            |
| worker_id    | String  | ID of a labeling team member                                                                                                                                                                                                                                                                                                  |
| workforce_id | String  | ID of a labeling team                                                                                                                                                                                                                                                                                                         |

**Table 28-392** SampleLabel

| Parameter    | Type                                        | Description                                                                                                                                                                                                                           |
|--------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_by | String                                      | Video labeling method, which is used to determine whether a video is labeled manually or automatically. Options: <ul style="list-style-type: none"><li>• <b>human</b>: manual labeling</li><li>• <b>auto</b>: auto labeling</li></ul> |
| id           | String                                      | Label ID                                                                                                                                                                                                                              |
| name         | String                                      | Label name                                                                                                                                                                                                                            |
| property     | <a href="#">SampleLabel Property</a> object | Attribute key-value pair of the sample label, such as the object shape and shape feature                                                                                                                                              |
| score        | Float                                       | Confidence. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                              |



| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Integer | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-393** SampleLabelProperty

| Parameter            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:content   | String  | Speech text content, which is a default attribute dedicated to the speech label (including the speech content and speech start and end points)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| @modelarts:end_index | Integer | End position of the text, which is a default attribute dedicated to the named entity label. The end position does not include the character corresponding to the value of <b>end_index</b> . Examples: <ul style="list-style-type: none"><li>• If the text is "<b>Barack Hussein Obama II (born on August 4, 1961) is an attorney and politician.</b>", the <b>start_index</b> and <b>end_index</b> of <b>Barack Hussein Obama II</b> are <b>0</b> and <b>23</b>, respectively.</li><li>• If the text is "<b>Hope is the thing with feathers</b>", <b>start_index</b> and <b>end_index</b> of <b>Hope</b> are <b>0</b> and <b>4</b>, respectively.</li></ul> |
| @modelarts:end_time  | String  | Speech end time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter                   | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:feature          | Object | <p>Shape feature, which is a default attribute dedicated to the object detection label, with type of <b>List</b>. The upper left corner of an image is used as the coordinate origin <b>[0, 0]</b>. Each coordinate point is represented by <b>[x, y]</b>. <i>x</i> indicates the horizontal coordinate, and <i>y</i> indicates the vertical coordinate (both <i>x</i> and <i>y</i> are greater than or equal to 0). The format of each shape is as follows:</p> <ul style="list-style-type: none"><li>• <b>bndbox</b>: consists of two points, for example, <b>[[0,10],[50,95]]</b>. The upper left vertex of the rectangle is the first point, and the lower right vertex is the second point. That is, the <i>x</i>-coordinate of the first point must be less than the <i>x</i>-coordinate of the second point, and the <i>y</i>-coordinate of the first point must be less than the <i>y</i>-coordinate of the second point.</li><li>• <b>polygon</b>: consists of multiple points that are connected in sequence to form a polygon, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li><li>• <b>circle</b>: consists of the center and radius, for example, <b>[[100,100],[50]]</b>.</li><li>• <b>line</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>dashed</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>point</b>: consists of one point, for example, <b>[[0,100]]</b>.</li><li>• <b>polyline</b>: consists of multiple points, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li></ul> |
| @modelarts:from             | String | Start entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| @modelarts:hard             | String | Whether the sample is labeled as a hard example, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0/false</b>: The label is not a hard example.</li><li>• <b>1/true</b>: The label is a hard example.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| @modelarts:hard_coefficient | String | Coefficient of difficulty of each label level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Parameter               | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | String | <p>Reasons why the sample is a hard example, which is a default attribute. Use a hyphen (-) to separate every two hard example reason IDs, for example, <b>3-20-21-19</b>. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on flplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |

| Parameter              | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:shape       | String  | Object shape, which is a default attribute dedicated to the object detection label and is left empty by default. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dashed line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:source      | String  | Speech source, which is a default attribute dedicated to the speech start/end point label and can be set to a speaker or narrator                                                                                                                                                                                                                                                                                  |
| @modelarts:start_index | Integer | Start position of the text, which is a default attribute dedicated to the named entity label. The start value begins from 0, including the character corresponding to the value of <b>start_index</b> .                                                                                                                                                                                                            |
| @modelarts:start_time  | String  | Speech start time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                           |
| @modelarts:triplet_id  | String  | Direction entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                    |

**Table 28-394** SampleMetadata

| Parameter                   | Type    | Description                                                                                                                                                                                                                           |
|-----------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:import_origin    | Integer | Sample source, which is a default attribute.                                                                                                                                                                                          |
| @modelarts:hard             | Double  | Whether the sample is labeled as a hard example, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The label is not a hard example.</li><li>• <b>1</b>: The label is a hard example.</li></ul> |
| @modelarts:hard_coefficient | Double  | Coefficient of difficulty of each sample level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                            |

| Parameter               | Type              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | Array of integers | <p>ID of a hard example reason, which is a default attribute. Options:</p> <ul style="list-style-type: none"><li>• <b>0:</b> No object is identified.</li><li>• <b>1:</b> The confidence is low.</li><li>• <b>2:</b> The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3:</b> The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4:</b> The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5:</b> There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6:</b> There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7:</b> There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8:</b> There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9:</b> There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10:</b> There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11:</b> There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12:</b> There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13:</b> There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14:</b> There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>• <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on fliplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |

| Parameter       | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:size | Array of objects | image size, including width, height, and depth. The type is List[/topic/body/section/table/tgroup/tbody/row/entry/p/br. {""}] (br]. In the list, the first number indicates the width (pixels), the second number indicates the height (pixels), and the third number indicates the depth (the depth can be left blank and the default value is 3). For example, <b>[100,200,3]</b> and <b>[100,200]</b> are both valid. Note: This parameter is mandatory only when the sample label list contains the object detection label. |

## Request Example

Run the following command to obtain an auto labeling sample list:

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/auto-annotations/samples
```

## Response Example

**Status code: 200**

OK

```
{
 "sample_count" : 1,
 "samples" : [{
 "sample_id" : "10de574cbf0f09d4798b87ba0eb34e37",
 "sample_type" : 0,
 "labels" : [{
 "name" : "sunflowers",
 "type" : 0,
 "id" : "1",
 "property" : {
 "@modelarts:hard_coefficient" : "0.0",
 "@modelarts:hard" : "false"
 },
 "score" : 1.0
 }],
 "source" : "https://test-obs.obs.xxx.com:443/animals/8_1597649054631.jpeg?
AccessKeyId=alRn0xskf5luJaG2jBJe&Expires=1606299230&x-image-process=image%2Fresize%2Cm_lfit
%2Ch_200&Signature=MNAAJXz%2Fmwn%2BSabSK9wkaG6b6bU%3D",
 "metadata" : {
 "@modelarts:hard_coefficient" : 1.0,
 "@modelarts:hard" : true,
 "@modelarts:import_origin" : 0,
 "@modelarts:hard_reasons" : [8, 6, 5, 3]
 },
 "sample_time" : 1601432758000,
 "sample_status" : "UN_ANNOTATION"
 }]
}
```



## Status Code

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Code

For details, see [Error Codes](#).

## 28.1.63 Querying Details About an Auto Labeling Sample

### Function

This API is used to query details about an auto labeling sample.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/auto-annotations/samples/{sample\_id}

**Table 28-395** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| sample_id  | Yes       | String | Sample ID.                                                                                                      |

### Request Parameters

None

## Response Parameters

Status code: 200

**Table 28-396** Response body parameters

| Parameter        | Type                                         | Description                                                                                                                                                                                                                |
|------------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| check_accept     | Boolean                                      | Whether the acceptance is passed, which is used for team labeling. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The acceptance is passed.</li><li>• <b>false</b>: The acceptance is not passed.</li></ul> |
| check_comment    | String                                       | Acceptance comment, which is used for team labeling.                                                                                                                                                                       |
| check_score      | String                                       | Acceptance score, which is used for team labeling.                                                                                                                                                                         |
| deletion_reasons | Array of strings                             | Reason for deleting a sample, which is used for healthcare.                                                                                                                                                                |
| hard_details     | Map<String, <a href="#">HardDetail</a> >     | Details about difficulties, including description, causes, and suggestions of difficult problems.                                                                                                                          |
| labelers         | Array of <a href="#">Worker</a> objects      | Labeling personnel list of sample assignment. The labelers record the team members to which the sample is allocated for team labeling.                                                                                     |
| labels           | Array of <a href="#">SampleLabel</a> objects | Sample label list.                                                                                                                                                                                                         |
| metadata         | <a href="#">SampleMetadata</a> object        | Key-value pair of the sample <b>metadata</b> attribute.                                                                                                                                                                    |
| review_accept    | Boolean                                      | Whether to accept the review, which is used for team labeling. Options: <ul style="list-style-type: none"><li>• <b>true</b>: accepted</li><li>• <b>false</b>: rejected</li></ul>                                           |
| review_comment   | String                                       | Review comment, which is used for team labeling.                                                                                                                                                                           |
| review_score     | String                                       | Review score, which is used for team labeling.                                                                                                                                                                             |
| sample_data      | Array of strings                             | Sample data list.                                                                                                                                                                                                          |
| sample_dir       | String                                       | Sample path.                                                                                                                                                                                                               |
| sample_id        | String                                       | Sample ID.                                                                                                                                                                                                                 |
| sample_name      | String                                       | Sample name.                                                                                                                                                                                                               |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_size    | Long    | Sample size or text length, in bytes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| sample_status  | String  | Sample status. The options are as follows: <ul style="list-style-type: none"><li>• <code>__ALL__</code>: labeled</li><li>• <code>__NONE__</code>: not marked</li><li>• <code>__UNCHECK__</code>: to be accepted</li><li>• <code>__ACCEPTED__</code>: The acceptance is passed.</li><li>• <code>__REJECTED__</code>: rejected</li><li>• <code>__UNREVIEWED__</code>: to be reviewed</li><li>• <code>__REVIEWED__</code>: approved</li><li>• <code>__WORKFORCE_SAMPLED__</code>: sampled</li><li>• <code>__WORKFORCE_SAMPLED_UNCHECK__</code>: Sampling is to be accepted.</li><li>• <code>__WORKFORCE_SAMPLED_CHECKED__</code>: Sampling has been accepted.</li><li>• <code>__WORKFORCE_SAMPLED_ACCEPTED__</code>: The sampling is passed.</li><li>• <code>__WORKFORCE_SAMPLED_REJECTED__</code>: The sampling has been rejected.</li><li>• <code>__AUTO_ANNOTATION__</code>: to be confirmed</li></ul> |
| sample_time    | Long    | Sample time, when OBS is last modified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| sample_type    | Integer | Sample type. Options: <ul style="list-style-type: none"><li>• <code>0</code>: image</li><li>• <code>1</code>: text</li><li>• <code>2</code>: speech</li><li>• <code>4</code>: table</li><li>• <code>6</code>: video</li><li>• <code>9</code>: custom format</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| score          | String  | Comprehensive score, which is used for team labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| source         | String  | Source address of sample data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| sub_sample_url | String  | Subsample URL, which is used for healthcare.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| worker_id      | String  | ID of a labeling team member, which is used for team labeling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

**Table 28-397** HardDetail

| Parameter  | Type    | Description          |
|------------|---------|----------------------|
| alo_name   | String  | Alias.               |
| id         | Integer | Reason ID.           |
| reason     | String  | Reason description.  |
| suggestion | String  | Handling suggestion. |

**Table 28-398** Worker

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                                                        |
|--------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time  | Long    | Creation time.                                                                                                                                                                                                                                                                                                                     |
| description  | String  | Labeling team member description. The value contains 0 to 256 characters and does not support the following special characters: ^! <>=&"'                                                                                                                                                                                          |
| email        | String  | Email address of a labeling team member.                                                                                                                                                                                                                                                                                           |
| role         | Integer | Role. Options: <ul style="list-style-type: none"><li>● 0: labeling personnel</li><li>● 1: reviewer</li><li>● 2: team administrator</li><li>● 3: dataset owner</li></ul>                                                                                                                                                            |
| status       | Integer | Current login status of a labeling team member. Options: <ul style="list-style-type: none"><li>● 0: The invitation email has not been sent.</li><li>● 1: The invitation email has been sent but the user has not logged in.</li><li>● 2: The user has logged in.</li><li>● 3: The labeling team member has been deleted.</li></ul> |
| update_time  | Long    | Update time.                                                                                                                                                                                                                                                                                                                       |
| worker_id    | String  | ID of a labeling team member.                                                                                                                                                                                                                                                                                                      |
| workforce_id | String  | ID of a labeling team.                                                                                                                                                                                                                                                                                                             |

**Table 28-399** SampleLabel

| Parameter    | Type                                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_by | String                                      | Video labeling method, which is used to distinguish whether a video is labeled manually or automatically. Options: <ul style="list-style-type: none"><li>• <b>human</b>: manual labeling</li><li>• <b>auto</b>: automatic labeling</li></ul>                                                                                                                                                                                                                                                                                              |
| id           | String                                      | Label ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| name         | String                                      | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property     | <a href="#">SampleLabel Property</a> object | Attribute key-value pair of the sample label, such as the object shape and shape feature.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| score        | Float                                       | Confidence. The value range is [0,1].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| type         | Integer                                     | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-400** SampleLabelProperty

| Parameter          | Type   | Description                                                                                                                                     |
|--------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:content | String | Speech text content, which is a default attribute dedicated to the speech label (including the speech content and speech start and end points). |

| Parameter            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:end_index | Integer | <p>End position of the text, which is a default attribute dedicated to the named entity label. The end position does not include the character corresponding to the value of <b>end_index</b>. Example:</p> <ul style="list-style-type: none"><li>• If the text is "<b>Barack Hussein Obama II (born August 4, 1961) is an attorney and politician.</b>", <b>start_index</b> and <b>end_index</b> of <b>Barack Hussein Obama II</b> are <b>0</b> and <b>23</b>, respectively.</li><li>• If the text is "<b>Hope is the thing with feathers</b>", <b>start_index</b> and <b>end_index</b> of <b>Hope</b> are <b>0</b> and <b>4</b>, respectively.</li></ul> |
| @modelarts:end_time  | String  | <p>Speech end time, which is a default attribute dedicated to the speech start/end point label, in the format of <b>hh:mm:ss.SSS</b>. (<b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)</p>                                                                                                                                                                                                                                                                                                                                                                                        |

| Parameter                   | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:feature          | Object | <p>Shape feature, which is a default attribute dedicated to the object detection label, with type of <b>List</b>. The upper left corner of the image is used as the coordinate origin [0, 0]. Each coordinate point is represented by [x, y], where x indicates the horizontal coordinate and y indicates the vertical coordinate (both x and y are <math>\geq 0</math>). The format of each shape is as follows:</p> <ul style="list-style-type: none"><li>• <b>bndbox</b> consists of two points, for example, <b>[[0,10],[50,95]]</b>. The upper left vertex of the rectangle is the first point, and the lower right vertex is the second point. That is, the x-coordinate of the first point must be less than the x-coordinate of the second point, and the y-coordinate of the first point must be less than the y-coordinate of the second point.</li><li>• <b>polygon</b>: consists of multiple points that are connected in sequence to form a polygon, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li><li>• <b>circle</b>: consists of the center and radius, for example, <b>[[100,100],[50]]</b>.</li><li>• <b>line</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>dashed</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>point</b>: consists of one point, for example, <b>[[0,100]]</b>.</li><li>• <b>polyline</b>: consists of multiple points, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li></ul> |
| @modelarts:from             | String | ID of the head entity in the triplet relationship label, which is a default attribute dedicated to the triplet relationship label.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| @modelarts:hard             | String | Sample labeled as a hard sample or not, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0/false</b>: not a hard example</li><li>• <b>1/true</b>: hard example</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| @modelarts:hard_coefficient | String | Coefficient of difficulty of each label level, which is a default attribute. The value range is <b>[0,1]</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| Parameter               | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | String | <p>Reasons that the sample is a hard sample, which is a default attribute. Use a hyphen (-) to separate every two hard sample reason IDs, for example, <b>3-20-21-19</b>. Options:</p> <ul style="list-style-type: none"><li>● <b>0</b>: No target objects are identified.</li><li>● <b>1</b>: The confidence is low.</li><li>● <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>● <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>● <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>● <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>● <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>● <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>● <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>● <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>● <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>● <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>● <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>● <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>● <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li></ul> |



| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data enhancement result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data enhancement result based on flplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data enhancement result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data enhancement result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data enhancement result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data enhancement result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data enhancement result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data enhancement result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data enhancement result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data enhancement result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data enhancement result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |

| Parameter              | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:shape       | String  | Object shape, which is a default attribute dedicated to the object detection label and is left empty by default. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dotted line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:source      | String  | Speech source, which is a default attribute dedicated to the speech start/end point label and can be set to a speaker or narrator.                                                                                                                                                                                                                                                                                 |
| @modelarts:start_index | Integer | Start position of the text, which is a default attribute dedicated to the named entity label. The start value begins from 0, including the character corresponding to the value of <b>start_index</b> .                                                                                                                                                                                                            |
| @modelarts:start_time  | String  | Speech start time, which is a default attribute dedicated to the speech start/end point label, in the format of <b>hh:mm:ss.SSS</b> . ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                   |
| @modelarts:tail_id     | String  | ID of the tail entity in the triplet relationship label, which is a default attribute dedicated to the triplet relationship label.                                                                                                                                                                                                                                                                                 |

**Table 28-401** SampleMetadata

| Parameter                   | Type    | Description                                                                                                                                                                                        |
|-----------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:import_origin    | Integer | Sample source, which is a built-in attribute.                                                                                                                                                      |
| @modelarts:hard             | Double  | Whether the sample is labeled as a hard sample, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0</b>: non-hard sample</li><li>• <b>1</b>: hard sample</li></ul> |
| @modelarts:hard_coefficient | Double  | Coefficient of difficulty of each sample level, which is a default attribute. The value range is <b>[0,1]</b> .                                                                                    |

| Parameter               | Type              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | Array of integers | <p>ID of a hard sample reason, which is a default attribute. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>• <b>15</b>: There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"> <li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li> <li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li> <li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li> <li>● <b>19:</b> The data enhancement result based on GaussianBlur is inconsistent with the prediction result of the original image.</li> <li>● <b>20:</b> The data enhancement result based on fliplr is inconsistent with the prediction result of the original image.</li> <li>● <b>21:</b> The data enhancement result based on Crop is inconsistent with the prediction result of the original image.</li> <li>● <b>22:</b> The data enhancement result based on flipud is inconsistent with the prediction result of the original image.</li> <li>● <b>23:</b> The data enhancement result based on scale is inconsistent with the prediction result of the original image.</li> <li>● <b>24:</b> The data enhancement result based on translate is inconsistent with the prediction result of the original image.</li> <li>● <b>25:</b> The data enhancement result based on shear is inconsistent with the prediction result of the original image.</li> <li>● <b>26:</b> The data enhancement result based on superpixels is inconsistent with the prediction result of the original image.</li> <li>● <b>27:</b> The data enhancement result based on sharpen is inconsistent with the prediction result of the original image.</li> <li>● <b>28:</b> The data enhancement result based on add is inconsistent with the prediction result of the original image.</li> <li>● <b>29:</b> The data enhancement result based on invert is inconsistent with the prediction result of the original image.</li> <li>● <b>30:</b> The data is predicted to be abnormal.</li> </ul> |

| Parameter       | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:size | Array of objects | Image size (width, height, and depth of the image), which is a default attribute, with type of <b>List&lt;Integer&gt;</b> . In the list, the first number indicates the width (pixels), the second number indicates the height (pixels), and the third number indicates the depth (the depth can be left blank and the default value is <b>3</b> ). For example, <b>[100,200,3]</b> and <b>[100,200]</b> are both valid. Note: This parameter is mandatory only when the sample label list contains the object detection label. |

## Example Requests

Querying Details About an Auto Labeling Sample

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/auto-annotations/samples/{sample_id}
```

## Example Responses

Status code: 200

OK

```
{
 "sample_id" : "0059c1b9458a2da9443af684b5099b4e",
 "sample_type" : 0,
 "labels" : [{
 "name" : "Bees",
 "type" : 0,
 "id" : "1",
 "property" : {
 "@modelarts:hard_coefficient" : "0.0",
 "@modelarts:hard" : "false"
 },
 "score" : 0.66
 }],
 "source" : "https://test-obs.obs.xxx.com:443/data/3_1597649054631.jpg?
AccessKeyId=RciyO7RHmhNTfOZVryUH&Expires=1606299474&Signature=anOLGOHPSrj3WXUHVc70tAxWlf4
%3D",
 "metadata" : {
 "@modelarts:hard_coefficient" : 0.0,
 "@modelarts:hard" : false,
 "@modelarts:import_origin" : 0,
 "@modelarts:hard_reasons" : []
 },
 "sample_time" : 1600490651933,
 "sample_status" : "UN_ANNOTATION"
}
```

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 200         | OK          |

| Status Code | Description  |
|-------------|--------------|
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.64 Obtaining an Auto Labeling Task List by Page

### Function

Obtain auto labeling tasks by page, including auto labeling and auto grouping tasks. You can specify **type** to obtain the list of a specific type of tasks.

- Auto labeling means learning and training are performed based on the selected labels and images and an existing model is selected to quickly label the remaining images. Auto labeling includes active learning and pre-labeling.
  - Active learning: The system uses semi-supervised learning and hard example filtering to perform auto labeling, reducing manual labeling workload and helping you find hard examples.
  - Pre-labeling: You select a model on the Model Management page for auto labeling.
- In auto grouping, unlabeled images are clustered using a clustering algorithm and then processed based on the clustering result. Images can be labeled by group or cleaned.

### Debugging

You can debug this API in [API Explorer](#) which supports automatic authentication. API Explorer can automatically generate SDK code examples and provide the SDK code example debugging.

### URI

GET /v2/{project\_id}/datasets/{dataset\_id}/tasks

**Table 28-402** URI parameters

| Parameter  | Mandatory | Type   | Description |
|------------|-----------|--------|-------------|
| dataset_id | Yes       | String | Dataset ID  |

| Parameter  | Mandatory | Type   | Description                                                                    |
|------------|-----------|--------|--------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-403** Query parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit     | No        | Integer | Maximum number of records returned on each page. The value ranges from <b>1</b> to <b>100</b> . The default value is <b>10</b> .                                                                                                                                                                                          |
| offset    | No        | Integer | Start page for pagination display. The default value is <b>0</b> .                                                                                                                                                                                                                                                        |
| task_name | No        | String  | Task name filtering.                                                                                                                                                                                                                                                                                                      |
| type      | No        | String  | Task type. If this parameter is not delivered, the auto labeling (active learning or pre-labeling) task list is returned by default. Options: <ul style="list-style-type: none"><li>• <b>auto-label</b>: active learning</li><li>• <b>pre-label</b>: pre-labeling</li><li>• <b>auto-grouping</b>: auto grouping</li></ul> |

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 28-404** Response body parameters

| Parameter                 | Type                                         | Description                                                                                                                                                                                                                                                                                                           |
|---------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| exist_running_deploy_task | Boolean                                      | Whether the dataset contains running (including initialization) one-click model deployment. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The dataset contains running one-click model deployment.</li><li>• <b>false</b>: The dataset does not contain running one-click model deployment.</li></ul> |
| tasks                     | Array of <a href="#">RunningTask</a> objects | Specifies the task list.                                                                                                                                                                                                                                                                                              |
| total_count               | Integer                                      | Total number of tasks.                                                                                                                                                                                                                                                                                                |

**Table 28-405** RunningTask

| Parameter              | Type                                   | Description               |
|------------------------|----------------------------------------|---------------------------|
| annotated_sample_count | Integer                                | Number of labeled samples |
| code                   | String                                 | Error code                |
| config                 | <a href="#">SmartTaskConfig</a> object | Task configuration        |
| create_time            | String                                 | Task creation time        |
| dataset_id             | String                                 | Dataset ID                |
| elapsed_time           | Long                                   | Task execution time       |
| error_code             | String                                 | Error code                |
| error_detail           | String                                 | Error details             |
| error_msg              | String                                 | Error message             |
| message                | String                                 | Error message             |
| model_id               | String                                 | Model ID                  |
| model_name             | String                                 | Model name                |
| model_version          | String                                 | Model version             |
| progress               | Float                                  | Current task progress     |
| result                 | <a href="#">Result</a> object          | Task result               |
| status                 | Integer                                | Task status               |



| Parameter                | Type    | Description                       |
|--------------------------|---------|-----------------------------------|
| task_id                  | String  | Task ID                           |
| task_name                | String  | Task name                         |
| total_sample_count       | Integer | Total number of samples           |
| type                     | Integer | Task type                         |
| unconfirmed_sample_count | Integer | Number of samples to be confirmed |

**Table 28-406** SmartTaskConfig

| Parameter         | Type                                | Description                                                                                                                                                                                                                                              |
|-------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| algorithm_type    | String                              | Algorithm type for auto labeling. Options: <ul style="list-style-type: none"><li>• <b>fast</b>: Only labeled samples are used for training.</li><li>• <b>accurate</b>: Unlabeled samples are also used for semi-supervised training.</li></ul>           |
| ambiguity         | Boolean                             | Whether to perform clustering based on the image blurring degree.                                                                                                                                                                                        |
| annotation_output | String                              | Output path of the active learning labeling result                                                                                                                                                                                                       |
| collect_rule      | String                              | Sample collection rule. The default value is <b>all</b> , indicating full collection. Only <b>all</b> is available.                                                                                                                                      |
| collect_sample    | Boolean                             | Whether to enable sample collection. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Sample collection is enabled. (Default)</li><li>• <b>false</b>: Sample collection is disabled.</li></ul>                                              |
| confidence_scope  | String                              | Confidence range of key samples. The minimum and maximum values are separated by hyphens (-), for example, <b>0.10-0.90</b> .                                                                                                                            |
| description       | String                              | Job description                                                                                                                                                                                                                                          |
| engine_name       | String                              | Engine name                                                                                                                                                                                                                                              |
| export_format     | Integer                             | Format of the exported directory. Options: <ul style="list-style-type: none"><li>• <b>1</b>: tree structure, for example, <b>rabbits/1.jpg, bees/2.jpg</b>.</li><li>• <b>2</b>: tile structure, for example, <b>1.jpg, 1.txt; 2.jpg, 2.txt</b></li></ul> |
| export_params     | <a href="#">ExportParams</a> object | Parameters of a dataset export task                                                                                                                                                                                                                      |

| Parameter               | Type                              | Description                                                                                                                                                                                                                                                                                                                                            |
|-------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| flavor                  | <b>Flavor</b> object              | Training resource flavor                                                                                                                                                                                                                                                                                                                               |
| image_brightness        | Boolean                           | Whether to perform clustering based on the image brightness                                                                                                                                                                                                                                                                                            |
| image_colorfulness      | Boolean                           | Whether to perform clustering based on the image color                                                                                                                                                                                                                                                                                                 |
| inf_cluster_id          | String                            | ID of a dedicated cluster. This parameter is left blank by default, indicating that a dedicated cluster is not used. When using a dedicated cluster to deploy services, ensure that the cluster status is normal. After this parameter is set, the network configuration of the cluster is used, and the <b>vpc_id</b> parameter does not take effect. |
| inf_config_list         | Array of <b>InfConfig</b> objects | Configuration list required for running an inference job, which is optional and left blank by default                                                                                                                                                                                                                                                  |
| inf_output              | String                            | Output path of inference in active learning                                                                                                                                                                                                                                                                                                            |
| infer_result_output_dir | String                            | OBS directory for storing sample prediction results. This parameter is optional. The <b>{service_id}-infer-result</b> subdirectory in the <b>output_dir</b> directory is used by default.                                                                                                                                                              |
| key_sample_output       | String                            | Output path of hard examples in active learning                                                                                                                                                                                                                                                                                                        |
| log_url                 | String                            | OBS URL of the logs of a training job. By default, this parameter is left blank.                                                                                                                                                                                                                                                                       |
| manifest_path           | String                            | Path of the manifest file, which is used as the input for training and inference                                                                                                                                                                                                                                                                       |
| model_id                | String                            | Model ID                                                                                                                                                                                                                                                                                                                                               |
| model_name              | String                            | Model name                                                                                                                                                                                                                                                                                                                                             |
| model_parameter         | String                            | Model parameters                                                                                                                                                                                                                                                                                                                                       |
| model_version           | String                            | Model version                                                                                                                                                                                                                                                                                                                                          |
| n_clusters              | Integer                           | Number of clusters                                                                                                                                                                                                                                                                                                                                     |
| name                    | String                            | Task name                                                                                                                                                                                                                                                                                                                                              |

| Parameter         | Type                                      | Description                                                                                                                                                                                                                  |
|-------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_dir        | String                                    | Sample output path. The format is as follows: <i>Dataset output path/Dataset name-Dataset ID/annotation/auto-deploy/</i> . Example: <b>/test/work_1608083108676/dataset123-g6lO9qSu6hoxwCAirfm/annotation/auto-deploy/</b> . |
| parameters        | Array of <b>TrainingParameter</b> objects | Running parameters of a training job                                                                                                                                                                                         |
| pool_id           | String                                    | Resource pool ID                                                                                                                                                                                                             |
| property          | String                                    | Attribute name                                                                                                                                                                                                               |
| req_uri           | String                                    | Inference path of a batch job                                                                                                                                                                                                |
| result_type       | Integer                                   | Processing mode of auto grouping results. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The results are saved to OBS.</li><li>• <b>1</b>: The results are saved to samples.</li></ul>                           |
| samples           | Array of <b>SampleLabels</b> objects      | Labeling information for samples to be auto labeled                                                                                                                                                                          |
| stop_time         | Integer                                   | Timeout interval, in minutes. The default value is 15 minutes. This parameter is used only in the scenario of auto labeling for videos.                                                                                      |
| time              | String                                    | Timestamp in active learning                                                                                                                                                                                                 |
| train_data_path   | String                                    | Path for storing existing training datasets                                                                                                                                                                                  |
| train_url         | String                                    | OBS URL of the output file of a training job. By default, this parameter is left blank.                                                                                                                                      |
| version_format    | String                                    | Format of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>Default</b></li><li>• <b>CarbonData</b> (supported only by table datasets)</li><li>• <b>CSV</b></li></ul>                                   |
| worker_server_num | Integer                                   | Number of workers in a training job                                                                                                                                                                                          |

**Table 28-407** ExportParams

| Parameter                     | Type    | Description                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| clear_hard_property           | Boolean | Whether to clear hard example attributes. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Hard example attributes are cleared. (Default)</li><li>• <b>false</b>: Hard example attributes are not cleared.</li></ul>                                                                                                                                     |
| export_dataset_version_format | String  | Format of the dataset version to be exported                                                                                                                                                                                                                                                                                                                          |
| export_dataset_version_name   | String  | Name of the dataset version to be exported                                                                                                                                                                                                                                                                                                                            |
| export_dest                   | String  | Format of the exported dataset. Options: <ul style="list-style-type: none"><li>• <b>DIR</b>: Export to OBS. (default)</li><li>• <b>NEW_DATASET</b>: Export to a new dataset.</li></ul>                                                                                                                                                                                |
| export_new_dataset_name       | String  | Name of the new dataset to which data is exported                                                                                                                                                                                                                                                                                                                     |
| export_new_dataset_work_path  | String  | Working directory of the new dataset to which data is exported                                                                                                                                                                                                                                                                                                        |
| ratio_sample_usage            | Boolean | Whether to randomly allocate data to the training and validation datasets based on the specified ratio. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The data is randomly allocated to the training and validation datasets.</li><li>• <b>false</b>: The data is not randomly allocated to the training and validation datasets. (Default)</li></ul> |

| Parameter          | Type                                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_state       | String                                           | Sample status. Options: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: unlabeled</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: accepted</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: reviewed</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: sampling pending check</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: sampling checked</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: sampling accepted</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: sampling rejected</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| samples            | Array of strings                                 | ID list of exported samples                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| search_conditions  | Array of <a href="#">SearchCondition</a> objects | Exported search criteria. Multiple search criteria are in the OR relationship.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| train_sample_ratio | String                                           | Split ratio of training and validation datasets for specified version release. The default value is <b>1.00</b> , indicating that all data is allocated to the training dataset.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**Table 28-408** SearchCondition

| Parameter      | Type    | Description                                                                                                                                                                                |
|----------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| coefficient    | String  | Filter by difficulty coefficient                                                                                                                                                           |
| frame_in_video | Integer | A frame in the video                                                                                                                                                                       |
| hard           | String  | Whether a sample is a hard example. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The label is not a hard example.</li><li>• <b>1</b>: The label is a hard example.</li></ul> |
| import_origin  | String  | Filter by data source                                                                                                                                                                      |

| Parameter        | Type                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| kvp              | String                              | CT dosage, filtered by dosage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| label_list       | <a href="#">SearchLabels</a> object | Label search criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| labeler          | String                              | Annotator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| metadata         | <a href="#">SearchProp</a> object   | Search by sample attribute                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| parent_sample_id | String                              | Parent sample ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| sample_dir       | String                              | Directory where samples are stored (the directory must end with a slash (/)). Only samples in the specified directory are searched for. Recursive search of directories is not supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| sample_name      | String                              | Search by sample name, including the file name extension                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| sample_time      | String                              | When a sample is added to the dataset, an index is created based on the last modification time (accurate to day) of the sample on OBS. You can search for the sample based on the time. Options: <ul style="list-style-type: none"><li>● <b>month</b>: Search for samples added in the last 30 days</li><li>● <b>day</b>: Search for samples added from yesterday (one day before) to today.</li><li>● <b>yyyyMMdd-yyyyMMdd</b>: Search for samples added in a specified period. The format is <i>Start date-End date</i>. Maximum number of days for the search: <b>30</b>. For example, <b>20190901-2019091501</b> indicates that samples generated from September 1 to September 15, 2019 are searched for.</li></ul> |
| score            | String                              | Search by confidence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| slice_thickness  | String                              | DICOM layer thickness. Samples are filtered by layer thickness.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| study_date       | String                              | DICOM scanning time                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| time_in_video    | String                              | A time point in the video                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**Table 28-409** SearchLabels

| Parameter | Type                                         | Description                                                                                                                                                                                                                                                   |
|-----------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| labels    | Array of <a href="#">SearchLabel</a> objects | Label search criteria                                                                                                                                                                                                                                         |
| op        | String                                       | If you want to search for multiple labels, <b>op</b> must be specified. If you search for only one label, <b>op</b> can be left blank. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul> |

**Table 28-410** SearchLabel

| Parameter | Type                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | String                    | Label name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| op        | String                    | Operation type between multiple attributes. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul>                                                                                                                                                                                                                                                                                                                                                                        |
| property  | Map<String,Array<String>> | Label attribute, which is in the Object format and stores any key-value pairs. <b>key</b> indicates the attribute name, and <b>value</b> indicates the value list. If <b>value</b> is <b>null</b> , the search is not performed by value. Otherwise, the search value can be any value in the list.                                                                                                                                                                                                                                       |
| type      | Integer                   | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-411** SearchProp

| Parameter | Type                      | Description                                                                                                                                                         |
|-----------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | String                    | Relationship between attribute values. Options: <ul style="list-style-type: none"><li>• <b>AND</b>: AND relationship</li><li>• <b>OR</b>: OR relationship</li></ul> |
| props     | Map<String,Array<String>> | Search criteria of an attribute. Multiple search criteria can be set.                                                                                               |

**Table 28-412** Flavor

| Parameter | Type   | Description                                                                 |
|-----------|--------|-----------------------------------------------------------------------------|
| code      | String | Attribute code of a resource specification, which is used for task creating |

**Table 28-413** InfConfig

| Parameter      | Type               | Description                                                                                                                                                                                                       |
|----------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| envs           | Map<String,String> | Environment variable key-value pair required for running a model. This parameter is optional. By default, it is left blank. To ensure data security, do not enter sensitive information in environment variables. |
| instance_count | Integer            | Number of instances (compute nodes) for deploying a model                                                                                                                                                         |
| model_id       | String             | Model ID                                                                                                                                                                                                          |
| specification  | String             | Resource specifications of real-time services. For details, see <a href="#">Deploying a Service</a> .                                                                                                             |
| weight         | Integer            | Traffic weight allocated to a model. This parameter is mandatory only when <b>infer_type</b> is set to <b>real-time</b> . The sum of the weights must be 100.                                                     |

**Table 28-414** TrainingParameter

| Parameter | Type   | Description     |
|-----------|--------|-----------------|
| label     | String | Parameter name  |
| value     | String | Parameter value |



**Table 28-415** Result

| Parameter              | Type                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_sample_count | Integer                                         | Number of labeled samples                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| confidence_scope       | String                                          | Confidence. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| dataset_name           | String                                          | Dataset name, which can contain 1 to 100 characters. Only letters, digits, underscores (_), and hyphens (-) are allowed.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| dataset_type           | String                                          | Dataset type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>400</b>: table dataset</li><li>• <b>600</b>: video labeling</li><li>• <b>900</b>: free format</li></ul> |
| description            | String                                          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| dlf_model_job_name     | String                                          | DLF model inference job name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| dlf_service_job_name   | String                                          | DLF real-time service job name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| dlf_train_job_name     | String                                          | DLF training job name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| events                 | Array of <a href="#">Event</a> objects          | Event                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| hard_example_path      | String                                          | Path for storing hard examples                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| hard_select_tasks      | Array of <a href="#">HardSelectTask</a> objects | List of selected hard example jobs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| manifest_path          | String                                          | Path for storing the <b>manifest</b> files                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| model_id               | String                                          | Model ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| Parameter                | Type                                          | Description                                                                                                                 |
|--------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| model_name               | String                                        | Model name                                                                                                                  |
| model_version            | String                                        | Model version                                                                                                               |
| samples                  | Array of <a href="#">SampleLabels</a> objects | Inference result of the real-time video service.                                                                            |
| service_id               | String                                        | Real-time service ID                                                                                                        |
| service_name             | String                                        | Real-time service name                                                                                                      |
| service_resource         | String                                        | ID of the real-time service bound to a user.                                                                                |
| total_sample_count       | Integer                                       | Total number of samples                                                                                                     |
| train_data_path          | String                                        | Path for storing training data                                                                                              |
| train_job_id             | String                                        | Training job ID                                                                                                             |
| train_job_name           | String                                        | Training job name                                                                                                           |
| unconfirmed_sample_count | Integer                                       | Number of samples to be confirmed                                                                                           |
| version_id               | String                                        | Dataset version ID                                                                                                          |
| version_name             | String                                        | Dataset version name                                                                                                        |
| workspace_id             | String                                        | Workspace ID. If no workspace is created, the default value is 0. If a workspace is created and used, use the actual value. |

**Table 28-416** Event

| Parameter     | Type   | Description          |
|---------------|--------|----------------------|
| create_time   | Long   | Event creation time  |
| description   | String | Description          |
| elapsed_time  | Long   | Event execution time |
| error_code    | String | Error code           |
| error_message | String | Error message        |

| Parameter   | Type                                   | Description                                                                                                                                                                                                                                                            |
|-------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| events      | Array of <a href="#">Event</a> objects | List of sub-events                                                                                                                                                                                                                                                     |
| level       | Integer                                | Event severity                                                                                                                                                                                                                                                         |
| name        | String                                 | Event name                                                                                                                                                                                                                                                             |
| ordinal     | Integer                                | Sequence number                                                                                                                                                                                                                                                        |
| parent_name | String                                 | Parent event name                                                                                                                                                                                                                                                      |
| status      | String                                 | Status. Options: <ul style="list-style-type: none"><li>• <b>waiting</b>: The event is waiting.</li><li>• <b>running</b>: The event is running.</li><li>• <b>failed</b>: The event is failed.</li><li>• <b>success</b>: The subtask is successfully executed.</li></ul> |

**Table 28-417** HardSelectTask

| Parameter           | Type   | Description                      |
|---------------------|--------|----------------------------------|
| create_at           | Long   | Task creation time               |
| dataset_id          | String | Dataset ID                       |
| dataset_name        | String | Dataset name                     |
| hard_select_task_id | String | ID of selected hard example task |
| task_status         | String | Task status                      |
| time                | Long   | Task execution time              |
| update_at           | Long   | Task update time                 |

**Table 28-418** SampleLabels

| Parameter | Type                                         | Description                                                                            |
|-----------|----------------------------------------------|----------------------------------------------------------------------------------------|
| labels    | Array of <a href="#">SampleLabel</a> objects | List of sample labels. If this parameter is left blank, all sample labels are deleted. |
| metadata  | <a href="#">SampleMetadata</a> object        | Attribute key-value pair of the sample metadata                                        |
| sample_id | String                                       | Sample ID                                                                              |

| Parameter    | Type    | Description                                                                                                                                                                                                                    |
|--------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_type  | Integer | Sample type. Options: <ul style="list-style-type: none"><li>● <b>0</b>: image</li><li>● <b>1</b>: text</li><li>● <b>2</b>: audio</li><li>● <b>4</b>: table</li><li>● <b>6</b>: video</li><li>● <b>9</b>: free format</li></ul> |
| sample_usage | String  | Sample usage. Options: <ul style="list-style-type: none"><li>● <b>TRAIN</b>: training</li><li>● <b>EVAL</b>: validation</li><li>● <b>TEST</b>: test</li><li>● <b>INFERENCE</b>: inference</li></ul>                            |
| source       | String  | Source address of sample data, which can be obtained by calling the sample list API.                                                                                                                                           |
| worker_id    | String  | ID of a labeling team member                                                                                                                                                                                                   |

**Table 28-419** SampleLabel

| Parameter    | Type                                        | Description                                                                                                                                                                                                                           |
|--------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_by | String                                      | Video labeling method, which is used to determine whether a video is labeled manually or automatically. Options: <ul style="list-style-type: none"><li>● <b>human</b>: manual labeling</li><li>● <b>auto</b>: auto labeling</li></ul> |
| id           | String                                      | Label ID                                                                                                                                                                                                                              |
| name         | String                                      | Label name                                                                                                                                                                                                                            |
| property     | <a href="#">SampleLabel Property</a> object | Attribute key-value pair of the sample label, such as the object shape and shape feature                                                                                                                                              |
| score        | Float                                       | Confidence. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                              |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Integer | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-420** SampleLabelProperty

| Parameter            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:content   | String  | Speech text content, which is a default attribute dedicated to the speech label (including the speech content and speech start and end points)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| @modelarts:end_index | Integer | End position of the text, which is a default attribute dedicated to the named entity label. The end position does not include the character corresponding to the value of <b>end_index</b> . Examples: <ul style="list-style-type: none"><li>• If the text is "<b>Barack Hussein Obama II (born on August 4, 1961) is an attorney and politician.</b>", <b>start_index</b> and <b>end_index</b> of <b>Barack Hussein Obama II</b> are <b>0</b> and <b>23</b>, respectively.</li><li>• If the text is "<b>Hope is the thing with feathers</b>", <b>start_index</b> and <b>end_index</b> of <b>Hope</b> are <b>0</b> and <b>4</b>, respectively.</li></ul> |
| @modelarts:end_time  | String  | Speech end time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                                                                                                                                                                                                                                                                   |

| Parameter                   | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:feature          | Object | <p>Shape feature, which is a default attribute dedicated to the object detection label, with type of <b>List</b>. The upper left corner of an image is used as the coordinate origin <b>[0, 0]</b>. Each coordinate point is represented by <b>[x, y]</b>. <i>x</i> indicates the horizontal coordinate, and <i>y</i> indicates the vertical coordinate (both <i>x</i> and <i>y</i> are greater than or equal to 0). The format of each shape is as follows:</p> <ul style="list-style-type: none"><li>• <b>bndbox</b>: consists of two points, for example, <b>[[0,10],[50,95]]</b>. The upper left vertex of the rectangle is the first point, and the lower right vertex is the second point. That is, the <i>x</i>-coordinate of the first point must be less than the <i>x</i>-coordinate of the second point, and the <i>y</i>-coordinate of the first point must be less than the <i>y</i>-coordinate of the second point.</li><li>• <b>polygon</b>: consists of multiple points that are connected in sequence to form a polygon, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li><li>• <b>circle</b>: consists of the center and radius, for example, <b>[[100,100],[50]]</b>.</li><li>• <b>line</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>dashed</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>point</b>: consists of one point, for example, <b>[[0,100]]</b>.</li><li>• <b>polyline</b>: consists of multiple points, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li></ul> |
| @modelarts:from             | String | Start entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| @modelarts:hard             | String | Whether the sample is labeled as a hard example, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0/false</b>: The label is not a hard example.</li><li>• <b>1/true</b>: The label is a hard example.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| @modelarts:hard_coefficient | String | Coefficient of difficulty of each label level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Parameter               | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | String | <p>Reasons why the sample is a hard example, which is a default attribute. Use a hyphen (-) to separate every two hard example reason IDs, for example, <b>3-20-21-19</b>. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on flplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |



| Parameter                | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:shape         | String  | Object shape, which is a default attribute dedicated to the object detection label and is left empty by default. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dashed line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:speech_source | String  | Speech source, which is a default attribute dedicated to the speech start/end point label and can be set to a speaker or narrator                                                                                                                                                                                                                                                                                  |
| @modelarts:start_index   | Integer | Start position of the text, which is a default attribute dedicated to the named entity label. The start value begins from 0, including the character corresponding to the value of <b>start_index</b> .                                                                                                                                                                                                            |
| @modelarts:start_time    | String  | Speech start time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                           |
| @modelarts:triplet_id    | String  | Direction entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                    |

**Table 28-421** SampleMetadata

| Parameter                   | Type    | Description                                                                                                                                                                                                                          |
|-----------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:import_origin    | Integer | Sample source, which is a default attribute.                                                                                                                                                                                         |
| @modelarts:hard             | Double  | Whether the sample is labeled as a hard sample, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The label is not a hard example.</li><li>• <b>1</b>: The label is a hard example.</li></ul> |
| @modelarts:hard_coefficient | Double  | Coefficient of difficulty of each sample level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                           |

| Parameter               | Type              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | Array of integers | <p>ID of a hard example reason, which is a default attribute. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>• <b>15</b>: There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on fliplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |

| Parameter       | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:size | Array of objects | image size, including width, height, and depth. The type is List[/topic/body/section/table/tgroup/tbody/row/entry/p/br. {""}] (br]. In the list, the first number indicates the width (pixels), the second number indicates the height (pixels), and the third number indicates the depth (the depth can be left blank and the default value is 3). For example, <b>[100,200,3]</b> and <b>[100,200]</b> are both valid. Note: This parameter is mandatory only when the sample label list contains the object detection label. |

## Request Example

Run the following command to obtain auto labeling or auto grouping tasks by page:

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/tasks?offset=0&limit=10
```

## Response Example

**Status code: 200**

OK

```
{
 "tasks": [{
 "dataset_id": "OBegCXHxTJ2JHRAZWr0",
 "task_id": "14cyxyu6UXaNT3lrPFL",
 "type": 1,
 "create_time": "2020-11-03 15:22:39",
 "status": 3,
 "code": "ModelArts.4996",
 "message": "prelabel task execute successfully.",
 "elapsed_time": 531,
 "result": {
 "service_id": "ee2ade80-0967-4ef3-b6da-e8c873017b9a",
 "service_name": "prelabel_infer_1604388201993_xubo_cls_snt9_2_993",
 "hard_select_tasks": [{
 "hard_select_task_id": "86711ab3-8ceb-4b0e-bd52-8545b184a2a7",
 "dataset_id": "OBegCXHxTJ2JHRAZWr0",
 "dataset_name": "xubo_cls_snt9_2",
 "task_status": "import_dataset_completed",
 "time": 262,
 "create_at": 0,
 "update_at": 0
 }]
 }
 },
 "progress": 100.0,
 "total_sample_count": 246,
 "annotated_sample_count": 38,
 "unconfirmed_sample_count": 208,
 "model_id": "c717a39f-c64f-45df-a9d3-be9ed79cdcb4",
 "model_name": "auto-deploy-50041602581620628",
 "model_version": "0.0.1",
 "config": {
 "ambiguity": false,
 "name": "5fXxR01TyUoiobqNEd9",
 "worker_server_num": 0,
 }
}
```

```
"inf_config_list" : [{
 "specification" : "modelarts.vm.cpu.2u",
 "weight" : 0,
 "instance_count" : 1
}, {
 "collect_sample" : false,
 "confidence_scope" : "0.0-0.5",
 "algorithm_type" : "supervisory",
 "image_brightness" : false,
 "image_colorfulness" : false
}
}, {
 "dataset_id" : "OBegCXHxTJ2JHRAZWr0",
 "task_id" : "5QPy73VwnwHi5NqvbcP",
 "type" : 0,
 "create_time" : "2020-10-31 16:11:37",
 "status" : 3,
 "code" : "ModelArts.4996",
 "message" : "task executed successfully.",
 "elapsed_time" : 397,
 "result" : {
 "train_job_name" : "BNFURaEyftGNMITaBiv",
 "train_job_id" : "74679",
 "version_id" : "89745"
 },
 "progress" : 100.0,
 "total_sample_count" : 246,
 "annotated_sample_count" : 38,
 "unconfirmed_sample_count" : 198,
 "model_name" : "Supervisory",
 "model_version" : "0.0.1",
 "config" : {
 "ambiguity" : false,
 "worker_server_num" : 0,
 "collect_sample" : false,
 "algorithm_type" : "fast",
 "image_brightness" : false,
 "image_colorfulness" : false
 }
}, {
 "total_count" : 2,
 "exist_running_deploy_task" : false
}
```

## Status Code

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Code

For details, see [Error Codes](#).

## 28.1.65 Starting Intelligent Tasks

### Function

This interface is used to start an intelligent task. Two types of intelligent tasks are supported: intelligent labeling and automatic grouping. You can specify the **task\_type** parameter in the request body to start a type of tasks. For datasets whose data path or working path is in the KMS encryption bucket, active learning and automatic grouping tasks cannot be started, but pre-labeling tasks are supported.

- Intelligent Labeling allows you to select an existing model in the system for intelligent labeling based on the labeling and image learning training in the current labeling phase to quickly label the remaining images. Auto labeling includes active learning and pre-labeling. \* Active learning: The system uses semi-supervised learning and hard example filtering to perform auto labeling, reducing manual labeling workload and helping you find hard examples. \* Pre-labeling: You select a model on the Model Management page for auto labeling. - Auto grouping: Unlabeled images are clustered using the clustering algorithm and then processed based on the clustering result. Images can be labeled by group or cleaned.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/tasks

**Table 28-422** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Parameters

**Table 28-423** Request body parameters

| Parameter          | Mandatory | Type                   | Description                                                                                                                                                                                      |
|--------------------|-----------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| collect_key_sample | No        | Boolean                | Whether to collect key samples. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Collect key samples.</li><li>• <b>false</b>: Do not collect key samples. (Default value)</li></ul> |
| config             | No        | SmartTaskConfig object | Task configuration.                                                                                                                                                                              |
| model_id           | No        | String                 | Model ID.                                                                                                                                                                                        |
| task_type          | No        | String                 | Task type. The options are as follows: - <b>auto-label</b> : active learning - <b>pre-label</b> : pre-labeling - <b>auto-grouping</b> : auto grouping                                            |

**Table 28-424** SmartTaskConfig

| Parameter         | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| algorithm_type    | No        | String  | Algorithm type for auto labeling. Options: <ul style="list-style-type: none"><li>• <b>fast</b>: Only labeled samples are used for training. This type of algorithm achieves faster labeling.</li><li>• <b>accurate</b>: In addition to labeled samples, unlabeled samples are used for semi-supervised training. This type of algorithm achieves more accurate labeling.</li></ul> |
| ambiguity         | No        | Boolean | Whether to perform clustering based on the image blurring degree.                                                                                                                                                                                                                                                                                                                  |
| annotation_output | No        | String  | Output path of the active learning labeling result.                                                                                                                                                                                                                                                                                                                                |
| collect_rule      | No        | String  | Sample collection rule. The default value is <b>all</b> , indicating full collection. Currently, only value <b>all</b> is available.                                                                                                                                                                                                                                               |

| Parameter          | Mandatory | Type                                | Description                                                                                                                                                                                                                                                                                                                                              |
|--------------------|-----------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| collect_sample     | No        | Boolean                             | Whether to enable sample collection. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Enable sample collection. (Default value)</li><li>• <b>false</b>: Do not enable sample collection.</li></ul>                                                                                                                                          |
| confidence_scope   | No        | String                              | Confidence range of key samples. The minimum and maximum values are separated by hyphens (-). Example: 0.10-0.90.                                                                                                                                                                                                                                        |
| description        | No        | String                              | Task description.                                                                                                                                                                                                                                                                                                                                        |
| engine_name        | No        | String                              | Engine name.                                                                                                                                                                                                                                                                                                                                             |
| export_format      | No        | Integer                             | Format of the exported directory. Options: <ul style="list-style-type: none"><li>• <b>1</b>: tree structure. Example: <b>rabbits/1.jpg,bees/2.jpg</b>.</li><li>• <b>2</b>: tile structure. Example: 1.jpg, 1.txt; 2.jpg,2.txt.</li></ul>                                                                                                                 |
| export_params      | No        | <a href="#">ExportParams</a> object | Parameters of a dataset export task.                                                                                                                                                                                                                                                                                                                     |
| flavor             | No        | <a href="#">Flavor</a> object       | Training resource flavor.                                                                                                                                                                                                                                                                                                                                |
| image_brightness   | No        | Boolean                             | Whether to perform clustering based on the image brightness.                                                                                                                                                                                                                                                                                             |
| image_colorfulness | No        | Boolean                             | Whether to perform clustering based on the image color.                                                                                                                                                                                                                                                                                                  |
| inf_cluster_id     | No        | String                              | ID of a dedicated cluster. This parameter is left blank by default, indicating that a dedicated cluster is not used. When using the dedicated cluster to deploy services, ensure that the cluster status is normal. After this parameter is set, the network configuration of the cluster is used, and the <b>vpc_id</b> parameter does not take effect. |



| Parameter               | Mandatory | Type                                               | Description                                                                                                                                                                                                                  |
|-------------------------|-----------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| inf_config_list         | No        | Array of <a href="#">InfConfig</a> objects         | Configuration list required for running an inference task, which is optional and left blank by default.                                                                                                                      |
| inf_output              | No        | String                                             | Output path of inference in active learning.                                                                                                                                                                                 |
| infer_result_output_dir | No        | String                                             | OBS directory for storing sample prediction results. This parameter is optional. The <code>{service_id}-infer-result</code> subdirectory in the <b>output_dir</b> directory is used by default.                              |
| key_sample_output       | No        | String                                             | Output path of hard examples in active learning.                                                                                                                                                                             |
| log_url                 | No        | String                                             | OBS URL of the logs of a training job. By default, this parameter is left blank.                                                                                                                                             |
| manifest_path           | No        | String                                             | Path of the <b>manifest</b> file, which is used as the input for training and inference.                                                                                                                                     |
| model_id                | No        | String                                             | Model ID.                                                                                                                                                                                                                    |
| model_name              | No        | String                                             | Model name.                                                                                                                                                                                                                  |
| model_parameter         | No        | String                                             | Model parameter.                                                                                                                                                                                                             |
| model_version           | No        | String                                             | Model version.                                                                                                                                                                                                               |
| n_clusters              | No        | Integer                                            | Number of clusters.                                                                                                                                                                                                          |
| name                    | No        | String                                             | Task name.                                                                                                                                                                                                                   |
| output_dir              | No        | String                                             | Sample output path. The format is as follows: <i>Dataset output path/Dataset name-Dataset ID/annotation/auto-deploy/</i> . Example: <b>/test/work_1608083108676/dataset123-g6IO9qSu6hoxwCAirfm/annotation/auto-deploy/</b> . |
| parameters              | No        | Array of <a href="#">TrainingParameter</a> objects | Runtime parameters of a training job                                                                                                                                                                                         |
| pool_id                 | No        | String                                             | ID of a resource pool.                                                                                                                                                                                                       |

| Parameter         | Mandatory | Type                                          | Description                                                                                                                                                                                                                 |
|-------------------|-----------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| property          | No        | String                                        | Attribute name.                                                                                                                                                                                                             |
| req_uri           | No        | String                                        | Inference path of a batch job.                                                                                                                                                                                              |
| result_type       | No        | Integer                                       | Processing mode of auto grouping results. Options: <ul style="list-style-type: none"><li>• <b>0</b>: Save to OBS.</li><li>• <b>1</b>: Save to samples.</li></ul>                                                            |
| samples           | No        | Array of <a href="#">SampleLabels</a> objects | List of labeling information for samples to be auto labeled.                                                                                                                                                                |
| stop_time         | No        | Integer                                       | Timeout interval, in minutes. The default value is 15 minutes. This parameter is used only in the scenario of auto labeling for videos.                                                                                     |
| time              | No        | String                                        | Timestamp in active learning.                                                                                                                                                                                               |
| train_data_path   | No        | String                                        | Path for storing existing training datasets.                                                                                                                                                                                |
| train_url         | No        | String                                        | URL of the OBS path where the file of a training job is outputted. By default, this parameter is left blank.                                                                                                                |
| version_format    | No        | String                                        | Format of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>Default</b>: default format</li><li>• <b>CarbonData</b>: CarbonData (supported only by table datasets)</li><li>• <b>CSV</b>: CSV</li></ul> |
| worker_server_num | No        | Integer                                       | Number of workers in a training job.                                                                                                                                                                                        |

**Table 28-425** ExportParams

| Parameter                     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                       |
|-------------------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| clear_hard_property           | No        | Boolean | Whether to clear hard example attributes. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Clear hard example attributes. (Default value)</li><li>• <b>false</b>: Do not clear hard example attributes.</li></ul>                                                                                    |
| export_dataset_version_format | No        | String  | Format of the dataset version to which data is exported.                                                                                                                                                                                                                                                          |
| export_dataset_version_name   | No        | String  | Name of the dataset version to which data is exported.                                                                                                                                                                                                                                                            |
| export_dest                   | No        | String  | Dataset export type. The options are as follows: <ul style="list-style-type: none"><li>• DIR: Data is exported to OBS (default value).</li><li>• NEW_DATASET: Export data to a new dataset.</li></ul>                                                                                                             |
| export_new_dataset_name       | No        | String  | Name of the new dataset to which data is exported.                                                                                                                                                                                                                                                                |
| export_new_dataset_work_path  | No        | String  | Working directory of the new dataset to which data is exported.                                                                                                                                                                                                                                                   |
| ratio_sample_usage            | No        | Boolean | Whether to randomly allocate the training set and validation set based on the specified ratio. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Allocate the training set and validation set.</li><li>• <b>false</b>: Do not allocate the training set and validation set. (Default value)</li></ul> |

| Parameter          | Mandatory | Type                                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------|-----------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_state       | No        | String                                           | Sample status. The options are as follows: <ul style="list-style-type: none"><li>• <code>__ALL__</code>: labeled</li><li>• <code>__NONE__</code>: not marked</li><li>• <code>__UNCHECK__</code>: to be accepted</li><li>• <code>__ACCEPTED__</code>: The acceptance is passed.</li><li>• <code>__REJECTED__</code>: rejected</li><li>• <code>__UNREVIEWED__</code>: to be reviewed</li><li>• <code>__REVIEWED__</code>: approved</li><li>• <code>__WORKFORCE_SAMPLED__</code>: sampled</li><li>• <code>__WORKFORCE_SAMPLED_UNCHECK__</code>: Sampling is to be accepted.</li><li>• <code>__WORKFORCE_SAMPLED_CHECKED__</code>: Sampling has been accepted.</li><li>• <code>__WORKFORCE_SAMPLED_ACCEPTED__</code>: The sampling is passed.</li><li>• <code>__WORKFORCE_SAMPLED_REJECTED__</code>: The sampling has been rejected.</li><li>• <code>__AUTO_ANNOTATION__</code>: to be confirmed</li></ul> |
| samples            | No        | Array of strings                                 | ID list of exported samples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| search_conditions  | No        | Array of <a href="#">SearchCondition</a> objects | Exported search conditions. The relationship between multiple search conditions is OR.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| train_sample_ratio | No        | String                                           | Split ratio of training set and verification set during specified version release. The default value is <b>1.00</b> , indicating that all released versions are training sets.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

**Table 28-426** SearchCondition

| Parameter        | Mandatory | Type                                | Description                                                                                                                                                                                    |
|------------------|-----------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| coefficient      | No        | String                              | Filter by coefficient of difficulty.                                                                                                                                                           |
| frame_in_video   | No        | Integer                             | A frame in the video.                                                                                                                                                                          |
| hard             | No        | String                              | Whether a sample is a hard sample. Options: <ul style="list-style-type: none"><li>• <b>0</b>: non-hard sample</li><li>• <b>1</b>: hard sample</li></ul>                                        |
| import_origin    | No        | String                              | Filter by data source.                                                                                                                                                                         |
| kvp              | No        | String                              | CT dosage, filtered by dosage.                                                                                                                                                                 |
| label_list       | No        | <a href="#">SearchLabels</a> object | Label search criteria.                                                                                                                                                                         |
| labeler          | No        | String                              | Labeler.                                                                                                                                                                                       |
| metadata         | No        | <a href="#">SearchProp</a> object   | Search by sample attribute.                                                                                                                                                                    |
| parent_sample_id | No        | String                              | Parent sample ID.                                                                                                                                                                              |
| sample_dir       | No        | String                              | Directory where data samples are stored (the directory must end with a slash (/)). Only samples in the specified directory are searched for. Recursive search of directories is not supported. |
| sample_name      | No        | String                              | Search by sample name, including the file name extension.                                                                                                                                      |

| Parameter       | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_time     | No        | String | When a sample is added to the dataset, an index is created based on the last modification time (accurate to day) of the sample on OBS. You can search for the sample based on the time. Options: <ul style="list-style-type: none"><li>• <b>month</b>: Search for samples added from 30 days ago to the current day.</li><li>• <b>day</b>: Search for samples added from yesterday (one day ago) to the current day.</li><li>• <b>yyyyMMdd-yyyyMMdd</b>: Search for samples added in a specified period (at most 30 days), in the format of <b>Start date-End date</b>. For example, <b>20190901-2019091501</b> indicates that samples generated from September 1 to September 15, 2019 are searched.</li></ul> |
| score           | No        | String | Search by confidence.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| slice_thickness | No        | String | DICOM layer thickness. Samples are filtered by layer thickness.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| study_date      | No        | String | DICOM scanning time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| time_in_video   | No        | String | A time point in the video.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Table 28-427** SearchLabels

| Parameter | Mandatory | Type                                         | Description                    |
|-----------|-----------|----------------------------------------------|--------------------------------|
| labels    | No        | Array of <a href="#">SearchLabel</a> objects | List of label search criteria. |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | No        | String | If you want to search for multiple labels, <b>op</b> must be specified. If you search for only one label, <b>op</b> can be left blank. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul> |

**Table 28-428** SearchLabel

| Parameter | Mandatory | Type                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | No        | String                    | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| op        | No        | String                    | Operation type between multiple attributes. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul>                                                                                                                                                                                                                                                                                                                                                                        |
| property  | No        | Map<String,Array<String>> | Label attribute, which is in the Object format and stores any key-value pairs. <b>key</b> indicates the attribute name, and <b>value</b> indicates the value list. If <b>value</b> is <b>null</b> , the search is not performed by value. Otherwise, the search value can be any value in the list.                                                                                                                                                                                                                                       |
| type      | No        | Integer                   | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-429** SearchProp

| Parameter | Mandatory | Type                      | Description                                                                                                                                                         |
|-----------|-----------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | No        | String                    | Relationship between attribute values. Options: <ul style="list-style-type: none"><li>• <b>AND</b>: AND relationship</li><li>• <b>OR</b>: OR relationship</li></ul> |
| props     | No        | Map<String,Array<String>> | Search criteria of an attribute. Multiple search criteria can be set.                                                                                               |

**Table 28-430** Flavor

| Parameter | Mandatory | Type   | Description                                                                  |
|-----------|-----------|--------|------------------------------------------------------------------------------|
| code      | No        | String | Attribute code of a resource specification, which is used for task creating. |

**Table 28-431** InfConfig

| Parameter      | Mandatory | Type               | Description                                                                                                                                                                                                  |
|----------------|-----------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| envs           | No        | Map<String,String> | (Optional) Environment variable key-value pair required for running a model. By default, this parameter is left blank. To ensure data security, do not enter sensitive information in environment variables. |
| instance_count | No        | Integer            | Instance number of model deployment, that is, the number of compute nodes.                                                                                                                                   |
| model_id       | No        | String             | Model ID.                                                                                                                                                                                                    |
| specification  | No        | String             | Resource specifications of real-time services. For details, see <a href="#">Deploying Services</a> .                                                                                                         |
| weight         | No        | Integer            | Traffic weight allocated to a model. This parameter is mandatory only when <b>infer_type</b> is set to <b>real-time</b> . The sum of the weights must be <b>100</b> .                                        |



**Table 28-432** TrainingParameter

| Parameter | Mandatory | Type   | Description      |
|-----------|-----------|--------|------------------|
| label     | No        | String | Parameter name.  |
| value     | No        | String | Parameter value. |

**Table 28-433** SampleLabels

| Parameter    | Mandatory | Type                                         | Description                                                                                                                                                                                                                       |
|--------------|-----------|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| labels       | No        | Array of <a href="#">SampleLabel</a> objects | Sample label list. If this parameter is left blank, all sample labels are deleted.                                                                                                                                                |
| metadata     | No        | <a href="#">SampleMetadata</a> object        | Key-value pair of the sample <b>metadata</b> attribute.                                                                                                                                                                           |
| sample_id    | No        | String                                       | Sample ID.                                                                                                                                                                                                                        |
| sample_type  | No        | Integer                                      | Sample type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image</li><li>• <b>1</b>: text</li><li>• <b>2</b>: speech</li><li>• <b>4</b>: table</li><li>• <b>6</b>: video</li><li>• <b>9</b>: custom format</li></ul> |
| sample_usage | No        | String                                       | Sample usage. Options: <ul style="list-style-type: none"><li>• <b>TRAIN</b>: training</li><li>• <b>EVAL</b>: evaluation</li><li>• <b>TEST</b>: test</li><li>• <b>INFERENCE</b>: inference</li></ul>                               |
| source       | No        | String                                       | Source address of sample data, which is obtained by invoking the sample list interface.                                                                                                                                           |
| worker_id    | No        | String                                       | ID of a labeling team member.                                                                                                                                                                                                     |

**Table 28-434** SampleLabel

| Parameter    | Mandatory | Type                                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|-----------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_by | No        | String                                         | Video labeling method, which is used to distinguish whether a video is labeled manually or automatically. Options: <ul style="list-style-type: none"><li>• <b>human</b>: manual labeling</li><li>• <b>auto</b>: automatic labeling</li></ul>                                                                                                                                                                                                                                                                                              |
| id           | No        | String                                         | Label ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| name         | No        | String                                         | Label name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| property     | No        | <a href="#">SampleLabel Property</a><br>object | Attribute key-value pair of the sample label, such as the object shape and shape feature.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| score        | No        | Float                                          | Confidence. The value range is [0,1].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| type         | No        | Integer                                        | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-435** SampleLabelProperty

| Parameter          | Mandatory | Type   | Description                                                                                                                                     |
|--------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:content | No        | String | Speech text content, which is a default attribute dedicated to the speech label (including the speech content and speech start and end points). |

| Parameter            | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:end_index | No        | Integer | <p>End position of the text, which is a default attribute dedicated to the named entity label. The end position does not include the character corresponding to the value of <b>end_index</b>.<br/>Example:</p> <ul style="list-style-type: none"><li>• If the text is "<b>Barack Hussein Obama II (born August 4, 1961) is an attorney and politician.</b>", <b>start_index</b> and <b>end_index</b> of <b>Barack Hussein Obama II</b> are <b>0</b> and <b>23</b>, respectively.</li><li>• If the text is "<b>Hope is the thing with feathers</b>", <b>start_index</b> and <b>end_index</b> of <b>Hope</b> are <b>0</b> and <b>4</b>, respectively.</li></ul> |
| @modelarts:end_time  | No        | String  | <p>Speech end time, which is a default attribute dedicated to the speech start/end point label, in the format of <b>hh:mm:ss.SSS</b>. (<b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)</p>                                                                                                                                                                                                                                                                                                                                                                                            |

| Parameter          | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:feature | No        | Object | <p>Shape feature, which is a default attribute dedicated to the object detection label, with type of <b>List</b>. The upper left corner of the image is used as the coordinate origin [0, 0]. Each coordinate point is represented by [x, y], where x indicates the horizontal coordinate and y indicates the vertical coordinate (both x and y are <math>\geq 0</math>). The format of each shape is as follows:</p> <ul style="list-style-type: none"><li>• <b>bndbox</b> consists of two points, for example, <b>[[0,10],[50,95]]</b>. The upper left vertex of the rectangle is the first point, and the lower right vertex is the second point. That is, the x-coordinate of the first point must be less than the x-coordinate of the second point, and the y-coordinate of the first point must be less than the y-coordinate of the second point.</li><li>• <b>polygon</b>: consists of multiple points that are connected in sequence to form a polygon, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li><li>• <b>circle</b>: consists of the center and radius, for example, <b>[[100,100],[50]]</b>.</li><li>• <b>line</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>dashed</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li></ul> |

| Parameter                   | Mandatory | Type   | Description                                                                                                                                                                                                                               |
|-----------------------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             |           |        | <ul style="list-style-type: none"> <li>• <b>point</b>: consists of one point, for example, <b>[[0,100]]</b>.</li> <li>• <b>polyline</b>: consists of multiple points, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li> </ul> |
| @modelarts:from             | No        | String | ID of the head entity in the triplet relationship label, which is a default attribute dedicated to the triplet relationship label.                                                                                                        |
| @modelarts:hard             | No        | String | Sample labeled as a hard sample or not, which is a default attribute. Options: <ul style="list-style-type: none"> <li>• <b>0/false</b>: not a hard example</li> <li>• <b>1/true</b>: hard example</li> </ul>                              |
| @modelarts:hard_coefficient | No        | String | Coefficient of difficulty of each label level, which is a default attribute. The value range is <b>[0,1]</b> .                                                                                                                            |

| Parameter               | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | No        | String | <p>Reasons that the sample is a hard sample, which is a default attribute. Use a hyphen (-) to separate every two hard sample reason IDs, for example, <b>3-20-21-19</b>.</p> <p>Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No target objects are identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>• <b>10:</b> There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11:</b> There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12:</b> There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13:</b> There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14:</b> There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>• <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>• <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>• <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>• <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>• <b>19:</b> The data enhancement result based on</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p>GaussianBlur is inconsistent with the prediction result of the original image.</p> <ul style="list-style-type: none"> <li>• <b>20:</b> The data enhancement result based on fliplr is inconsistent with the prediction result of the original image.</li> <li>• <b>21:</b> The data enhancement result based on Crop is inconsistent with the prediction result of the original image.</li> <li>• <b>22:</b> The data enhancement result based on flipud is inconsistent with the prediction result of the original image.</li> <li>• <b>23:</b> The data enhancement result based on scale is inconsistent with the prediction result of the original image.</li> <li>• <b>24:</b> The data enhancement result based on translate is inconsistent with the prediction result of the original image.</li> <li>• <b>25:</b> The data enhancement result based on shear is inconsistent with the prediction result of the original image.</li> <li>• <b>26:</b> The data enhancement result based on superpixels is inconsistent with the prediction result of the original image.</li> <li>• <b>27:</b> The data enhancement result based on sharpen is inconsistent with the prediction result of the original image.</li> <li>• <b>28:</b> The data enhancement result based on add is inconsistent with the prediction result of the original image.</li> </ul> |



| Parameter                | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                          |           |         | <ul style="list-style-type: none"><li>● <b>29</b>: The data enhancement result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30</b>: The data is predicted to be abnormal.</li></ul>                                                                                                                                                                                 |
| @modelarts:shape         | No        | String  | Object shape, which is a default attribute dedicated to the object detection label and is left empty by default.<br>Options: <ul style="list-style-type: none"><li>● <b>bndbox</b>: rectangle</li><li>● <b>polygon</b>: polygon</li><li>● <b>circle</b>: circle</li><li>● <b>line</b>: straight line</li><li>● <b>dashed</b>: dotted line</li><li>● <b>point</b>: point</li><li>● <b>polyline</b>: polyline</li></ul> |
| @modelarts:speech_source | No        | String  | Speech source, which is a default attribute dedicated to the speech start/end point label and can be set to a speaker or narrator.                                                                                                                                                                                                                                                                                    |
| @modelarts:start_index   | No        | Integer | Start position of the text, which is a default attribute dedicated to the named entity label. The start value begins from 0, including the character corresponding to the value of <b>start_index</b> .                                                                                                                                                                                                               |
| @modelarts:start_time    | No        | String  | Speech start time, which is a default attribute dedicated to the speech start/end point label, in the format of <b>hh:mm:ss.SSS</b> . ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                      |
| @modelarts:tail_id       | No        | String  | ID of the tail entity in the triplet relationship label, which is a default attribute dedicated to the triplet relationship label.                                                                                                                                                                                                                                                                                    |

**Table 28-436** SampleMetadata

| Parameter                   | Mandatory | Type    | Description                                                                                                                                                                                        |
|-----------------------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:import_origin    | No        | Integer | Sample source, which is a built-in attribute.                                                                                                                                                      |
| @modelarts:hard             | No        | Double  | Whether the sample is labeled as a hard sample, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0</b>: non-hard sample</li><li>• <b>1</b>: hard sample</li></ul> |
| @modelarts:hard_coefficient | No        | Double  | Coefficient of difficulty of each sample level, which is a default attribute. The value range is <b>[0,1]</b> .                                                                                    |

| Parameter               | Mandatory | Type              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|-----------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | No        | Array of integers | <p>ID of a hard sample reason, which is a default attribute. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <ul style="list-style-type: none"><li>● <b>11:</b> There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>● <b>12:</b> There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>● <b>13:</b> There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>● <b>14:</b> There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>● <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data enhancement result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data enhancement result based on fliplr is</li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p>inconsistent with the prediction result of the original image.</p> <ul style="list-style-type: none"><li>• <b>21:</b> The data enhancement result based on Crop is inconsistent with the prediction result of the original image.</li><li>• <b>22:</b> The data enhancement result based on flipud is inconsistent with the prediction result of the original image.</li><li>• <b>23:</b> The data enhancement result based on scale is inconsistent with the prediction result of the original image.</li><li>• <b>24:</b> The data enhancement result based on translate is inconsistent with the prediction result of the original image.</li><li>• <b>25:</b> The data enhancement result based on shear is inconsistent with the prediction result of the original image.</li><li>• <b>26:</b> The data enhancement result based on superpixels is inconsistent with the prediction result of the original image.</li><li>• <b>27:</b> The data enhancement result based on sharpen is inconsistent with the prediction result of the original image.</li><li>• <b>28:</b> The data enhancement result based on add is inconsistent with the prediction result of the original image.</li><li>• <b>29:</b> The data enhancement result based on invert is inconsistent with the prediction result of the original image.</li></ul> |

| Parameter       | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|-----------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |           |                  | <ul style="list-style-type: none"><li>• <b>30</b>: The data is predicted to be abnormal.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                              |
| @modelarts:size | No        | Array of objects | Image size (width, height, and depth of the image), which is a default attribute, with type of <b>List&lt;Integer&gt;</b> . In the list, the first number indicates the width (pixels), the second number indicates the height (pixels), and the third number indicates the depth (the depth can be left blank and the default value is <b>3</b> ). For example, <b>[100,200,3]</b> and <b>[100,200]</b> are both valid. Note: This parameter is mandatory only when the sample label list contains the object detection label. |

## Response Parameters

Status code: 200

Table 28-437 Response body parameters

| Parameter | Type   | Description |
|-----------|--------|-------------|
| task_id   | String | Task ID.    |

## Example Requests

- The following is an example of how to start an auto labeling (active learning) task. The task type has been set to **auto-label**.

```
{
 "task_type": "auto-label",
 "collect_key_sample": true,
 "config": {
 "algorithm_type": "fast"
 }
}
```

- The following is an example of how to start an auto labeling (pre-labeling) task. The task type has been set to **pre-label**.

```
{
 "task_type": "pre-label",
 "model_id": "c4989033-7584-44ee-a180-1c476b810e46",
 "collect_key_sample": true,
 "config": {
 "inf_config_list": [{
 "specification": "modelarts.vm.cpu.2u",

```

```
 "instance_count" : 1
 }]
}
```

- The following is an example of how to start an auto grouping task. The task type has been set to **auto-grouping**.

```
{
 "task_type" : "auto-grouping",
 "config" : {
 "n_clusters" : "2",
 "ambiguity" : false,
 "image_brightness" : false,
 "image_colorfulness" : false,
 "property" : "size",
 "result_type" : 1
 }
}
```

## Example Responses

**Status code: 200**

OK

```
{
 "task_id" : "r0jT2zwxBDKf8KEnSuZ"
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.66 Obtaining Details About an Auto Labeling Task

### Function

Obtain details about an auto labeling task, including auto labeling and auto grouping tasks. You can specify the **task\_id** parameter to obtain the details about a specific task.

## Debugging

You can debug this API in [API Explorer](#) which supports automatic authentication. API Explorer can automatically generate SDK code examples and provide the SDK code example debugging.

## URI

GET /v2/{project\_id}/datasets/{dataset\_id}/tasks/{task\_id}

**Table 28-438** URI parameters

| Parameter  | Mandatory | Type   | Description                                                                    |
|------------|-----------|--------|--------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID                                                                     |
| project_id | Yes       | String | Project ID. For details, see <a href="#">Obtaining a Project ID and Name</a> . |
| task_id    | Yes       | String | Task ID                                                                        |

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 28-439** Response body parameters

| Parameter    | Type                                   | Description                          |
|--------------|----------------------------------------|--------------------------------------|
| code         | String                                 | Task running status code             |
| config       | <a href="#">SmartTaskConfig</a> object | Task configuration                   |
| create_time  | String                                 | Task creation time                   |
| elapsed_time | Long                                   | Execution time                       |
| error_code   | String                                 | Error code                           |
| error_detail | String                                 | Error details                        |
| error_msg    | String                                 | Error message                        |
| message      | String                                 | Task running information.            |
| progress     | Float                                  | Percentage of current task progress. |
| resource_id  | String                                 | Resource ID.                         |



| Parameter   | Type                 | Description                                                                                                                                                                                                                                                               |
|-------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| result      | <b>Result</b> object | Task result.                                                                                                                                                                                                                                                              |
| status      | Integer              | Task status. Options: <ul style="list-style-type: none"><li>• <b>-1</b>: queuing</li><li>• <b>0</b>: initializing</li><li>• <b>1</b>: running</li><li>• <b>2</b>: failed</li><li>• <b>3</b>: succeeded</li><li>• <b>4</b>: stopping</li><li>• <b>5</b>: stopped</li></ul> |
| task_id     | String               | Task ID                                                                                                                                                                                                                                                                   |
| task_name   | String               | Task name                                                                                                                                                                                                                                                                 |
| export_type | Integer              | Export type. Options: Options: <ul style="list-style-type: none"><li>• <b>0</b>: Export to OBS.</li><li>• <b>1</b>: Export to sample attributes.</li></ul>                                                                                                                |

**Table 28-440** SmartTaskConfig

| Parameter         | Type    | Description                                                                                                                                                                                                                                    |
|-------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| algorithm_type    | String  | Algorithm type for auto labeling. Options: <ul style="list-style-type: none"><li>• <b>fast</b>: Only labeled samples are used for training.</li><li>• <b>accurate</b>: Unlabeled samples are also used for semi-supervised training.</li></ul> |
| ambiguity         | Boolean | Whether to perform clustering based on the image blurring degree.                                                                                                                                                                              |
| annotation_output | String  | Output path of the active learning labeling result                                                                                                                                                                                             |
| collect_rule      | String  | Sample collection rule. The default value is <b>all</b> , indicating full collection. Only <b>all</b> is available.                                                                                                                            |
| collect_sample    | Boolean | Whether to enable sample collection. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Sample collection is enabled. (Default)</li><li>• <b>false</b>: Sample collection is disabled.</li></ul>                                    |
| confidence_scope  | String  | Confidence range of key samples. The minimum and maximum values are separated by hyphens (-). Example: 0.10-0.90.                                                                                                                              |
| description       | String  | Job description                                                                                                                                                                                                                                |

| Parameter               | Type                              | Description                                                                                                                                                                                                                                                                                                                                            |
|-------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| engine_name             | String                            | Engine name                                                                                                                                                                                                                                                                                                                                            |
| export_format           | Integer                           | Format of the exported directory. Options: <ul style="list-style-type: none"><li>• 1: tree structure, for example, <b>rabbits/1.jpg,bees/2.jpg</b>.</li><li>• 2: tile structure, for example, <b>1.jpg, 1.txt; 2.jpg, 2.txt</b></li></ul>                                                                                                              |
| export_params           | <b>ExportParams</b> object        | Parameters of a dataset export task                                                                                                                                                                                                                                                                                                                    |
| flavor                  | <b>Flavor</b> object              | Training resource flavor                                                                                                                                                                                                                                                                                                                               |
| image_brightness        | Boolean                           | Whether to perform clustering based on the image brightness                                                                                                                                                                                                                                                                                            |
| image_colorfulness      | Boolean                           | Whether to perform clustering based on the image color                                                                                                                                                                                                                                                                                                 |
| inf_cluster_id          | String                            | ID of a dedicated cluster. This parameter is left blank by default, indicating that a dedicated cluster is not used. When using a dedicated cluster to deploy services, ensure that the cluster status is normal. After this parameter is set, the network configuration of the cluster is used, and the <b>vpc_id</b> parameter does not take effect. |
| inf_config_list         | Array of <b>InfConfig</b> objects | Configuration list required for running an inference job, which is optional and left blank by default                                                                                                                                                                                                                                                  |
| inf_output              | String                            | Output path of inference in active learning                                                                                                                                                                                                                                                                                                            |
| infer_result_output_dir | String                            | OBS directory for storing sample prediction results. This parameter is optional. The <b>{service_id}-infer-result</b> subdirectory in the <b>output_dir</b> directory is used by default.                                                                                                                                                              |
| key_sample_output       | String                            | Output path of hard examples in active learning                                                                                                                                                                                                                                                                                                        |
| log_url                 | String                            | OBS URL of the logs of a training job. By default, this parameter is left blank.                                                                                                                                                                                                                                                                       |
| manifest_path           | String                            | Path of the manifest file, which is used as the input for training and inference                                                                                                                                                                                                                                                                       |
| model_id                | String                            | Model ID                                                                                                                                                                                                                                                                                                                                               |
| model_name              | String                            | Model name                                                                                                                                                                                                                                                                                                                                             |
| model_parameter         | String                            | Model parameters                                                                                                                                                                                                                                                                                                                                       |

| Parameter         | Type                                               | Description                                                                                                                                                                                                                 |
|-------------------|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| model_version     | String                                             | Model version                                                                                                                                                                                                               |
| n_clusters        | Integer                                            | Number of clusters                                                                                                                                                                                                          |
| name              | String                                             | Task name                                                                                                                                                                                                                   |
| output_dir        | String                                             | Sample output path. The format is as follows: <i>Dataset output path/Dataset name-Dataset ID/annotation/auto-deploy/</i> . Example: <b>/test/work_1608083108676/dataset123-g6lO9qSu6hoxwCAirm/annotation/auto-deploy/</b> . |
| parameters        | Array of <a href="#">TrainingParameter</a> objects | Running parameters of a training job                                                                                                                                                                                        |
| pool_id           | String                                             | Resource pool ID                                                                                                                                                                                                            |
| property          | String                                             | Attribute name                                                                                                                                                                                                              |
| req_uri           | String                                             | Inference path of a batch job                                                                                                                                                                                               |
| result_type       | Integer                                            | Processing mode of auto grouping results. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The results are saved to OBS.</li><li>• <b>1</b>: The results are saved to samples.</li></ul>                          |
| samples           | Array of <a href="#">SampleLabels</a> objects      | Labeling information for samples to be auto labeled                                                                                                                                                                         |
| stop_time         | Integer                                            | Timeout interval, in minutes. The default value is 15 minutes. This parameter is used only in the scenario of auto labeling for videos.                                                                                     |
| time              | String                                             | Timestamp in active learning                                                                                                                                                                                                |
| train_data_path   | String                                             | Path for storing existing training datasets                                                                                                                                                                                 |
| train_url         | String                                             | OBS URL of the output file of a training job. By default, this parameter is left blank.                                                                                                                                     |
| version_format    | String                                             | Format of a dataset version. Options: <ul style="list-style-type: none"><li>• <b>Default</b></li><li>• <b>CarbonData</b> (supported only by table datasets)</li><li>• <b>CSV</b></li></ul>                                  |
| worker_server_num | Integer                                            | Number of workers in a training job                                                                                                                                                                                         |

**Table 28-441** ExportParams

| Parameter                     | Type    | Description                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| clear_hard_property           | Boolean | Whether to clear hard example attributes. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Hard example attributes are cleared. (Default)</li><li>• <b>false</b>: Hard example attributes are not cleared.</li></ul>                                                                                                                                     |
| export_dataset_version_format | String  | Format of the dataset version to be exported                                                                                                                                                                                                                                                                                                                          |
| export_dataset_version_name   | String  | Name of the dataset version to be exported                                                                                                                                                                                                                                                                                                                            |
| export_dest                   | String  | Dataset export type. Options: <ul style="list-style-type: none"><li>• <b>DIR</b>: Export to OBS. (default)</li><li>• <b>NEW_DATASET</b>: Export to a new dataset.</li></ul>                                                                                                                                                                                           |
| export_new_dataset_name       | String  | Name of the new dataset to which data is exported                                                                                                                                                                                                                                                                                                                     |
| export_new_dataset_work_path  | String  | Working directory of the new dataset to which data is exported                                                                                                                                                                                                                                                                                                        |
| ratio_sample_usage            | Boolean | Whether to randomly allocate data to the training and validation datasets based on the specified ratio. Options: <ul style="list-style-type: none"><li>• <b>true</b>: The data is randomly allocated to the training and validation datasets.</li><li>• <b>false</b>: The data is not randomly allocated to the training and validation datasets. (Default)</li></ul> |

| Parameter          | Type                                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_state       | String                                           | Sample status. Options: <ul style="list-style-type: none"><li>• <b>__ALL__</b>: labeled</li><li>• <b>__NONE__</b>: unlabeled</li><li>• <b>__UNCHECK__</b>: to be accepted</li><li>• <b>__ACCEPTED__</b>: accepted</li><li>• <b>__REJECTED__</b>: rejected</li><li>• <b>__UNREVIEWED__</b>: to be reviewed</li><li>• <b>__REVIEWED__</b>: reviewed</li><li>• <b>__WORKFORCE_SAMPLED__</b>: sampled</li><li>• <b>__WORKFORCE_SAMPLED_UNCHECK__</b>: sampling pending check</li><li>• <b>__WORKFORCE_SAMPLED_CHECKED__</b>: sampling checked</li><li>• <b>__WORKFORCE_SAMPLED_ACCEPTED__</b>: sampling accepted</li><li>• <b>__WORKFORCE_SAMPLED_REJECTED__</b>: sampling rejected</li><li>• <b>__AUTO_ANNOTATION__</b>: to be confirmed</li></ul> |
| samples            | Array of strings                                 | ID list of exported samples                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| search_conditions  | Array of <a href="#">SearchCondition</a> objects | Exported search criteria. Multiple search criteria are in the OR relationship.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| train_sample_ratio | String                                           | Split ratio of training and validation datasets for specified version release. The default value is <b>1.00</b> , indicating that all data is allocated to the training dataset.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**Table 28-442** SearchCondition

| Parameter      | Type    | Description                                                                                                                                                                                |
|----------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| coefficient    | String  | Filter by difficulty coefficient                                                                                                                                                           |
| frame_in_video | Integer | A frame in the video                                                                                                                                                                       |
| hard           | String  | Whether a sample is a hard example. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The label is not a hard example.</li><li>• <b>1</b>: The label is a hard example.</li></ul> |
| import_origin  | String  | Filter by data source                                                                                                                                                                      |

| Parameter        | Type                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| kvp              | String                              | CT dosage, filtered by dosage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| label_list       | <a href="#">SearchLabels</a> object | Label search criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| labeler          | String                              | Annotator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| metadata         | <a href="#">SearchProp</a> object   | Search by sample attribute                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| parent_sample_id | String                              | Parent sample ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| sample_dir       | String                              | Directory where samples are stored (the directory must end with a slash (/)). Only samples in the specified directory are searched for. Recursive search of directories is not supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| sample_name      | String                              | Search by sample name, including the file name extension                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| sample_time      | String                              | When a sample is added to the dataset, an index is created based on the last modification time (accurate to day) of the sample on OBS. You can search for the sample based on the time. Options: <ul style="list-style-type: none"><li>● <b>month</b>: Search for samples added in the last 30 days</li><li>● <b>day</b>: Search for samples added from yesterday (one day before) to today.</li><li>● <b>yyyyMMdd-yyyyMMdd</b>: Search for samples added in a specified period. The format is <i>Start date-End date</i>. Maximum number of days for the search: <b>30</b>. For example, <b>20190901-2019091501</b> indicates that samples generated from September 1 to September 15, 2019 are searched for.</li></ul> |
| score            | String                              | Search by confidence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| slice_thickness  | String                              | DICOM layer thickness. Samples are filtered by layer thickness.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| study_date       | String                              | DICOM scanning time                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| time_in_video    | String                              | A time point in the video                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**Table 28-443** SearchLabels

| Parameter | Type                                         | Description                                                                                                                                                                                                                                                   |
|-----------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| labels    | Array of <a href="#">SearchLabel</a> objects | Label search criteria                                                                                                                                                                                                                                         |
| op        | String                                       | If you want to search for multiple labels, <b>op</b> must be specified. If you search for only one label, <b>op</b> can be left blank. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul> |

**Table 28-444** SearchLabel

| Parameter | Type                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | String                    | Label name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| op        | String                    | Operation type between multiple attributes. Options: <ul style="list-style-type: none"><li>• <b>OR</b>: OR operation</li><li>• <b>AND</b>: AND operation</li></ul>                                                                                                                                                                                                                                                                                                                                                                        |
| property  | Map<String,Array<String>> | Label attribute, which is in the Object format and stores any key-value pairs. <b>key</b> indicates the attribute name, and <b>value</b> indicates the value list. If <b>value</b> is <b>null</b> , the search is not performed by value. Otherwise, the search value can be any value in the list.                                                                                                                                                                                                                                       |
| type      | Integer                   | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-445** SearchProp

| Parameter | Type                      | Description                                                                                                                                                         |
|-----------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| op        | String                    | Relationship between attribute values. Options: <ul style="list-style-type: none"><li>• <b>AND</b>: AND relationship</li><li>• <b>OR</b>: OR relationship</li></ul> |
| props     | Map<String,Array<String>> | Search criteria of an attribute. Multiple search criteria can be set.                                                                                               |

**Table 28-446** Flavor

| Parameter | Type   | Description                                                                 |
|-----------|--------|-----------------------------------------------------------------------------|
| code      | String | Attribute code of a resource specification, which is used for task creating |

**Table 28-447** InfConfig

| Parameter      | Type               | Description                                                                                                                                                                                                       |
|----------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| envs           | Map<String,String> | Environment variable key-value pair required for running a model. This parameter is optional. By default, it is left blank. To ensure data security, do not enter sensitive information in environment variables. |
| instance_count | Integer            | Number of instances (compute nodes) for deploying a model                                                                                                                                                         |
| model_id       | String             | Model ID                                                                                                                                                                                                          |
| specification  | String             | Resource specifications of real-time services. For details, see <a href="#">Deploying a Service</a> .                                                                                                             |
| weight         | Integer            | Traffic weight allocated to a model. This parameter is mandatory only when <b>infer_type</b> is set to <b>real-time</b> . The sum of the weights must be 100.                                                     |

**Table 28-448** TrainingParameter

| Parameter | Type   | Description     |
|-----------|--------|-----------------|
| label     | String | Parameter name  |
| value     | String | Parameter value |



**Table 28-449** Result

| Parameter              | Type                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_sample_count | Integer                                         | Number of labeled samples.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| confidence_scope       | String                                          | Confidence. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| dataset_name           | String                                          | Dataset name, which can contain 1 to 100 characters. Only letters, digits, underscores (_), and hyphens (-) are allowed.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| dataset_type           | String                                          | Dataset type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>400</b>: table dataset</li><li>• <b>600</b>: video labeling</li><li>• <b>900</b>: free format</li></ul> |
| description            | String                                          | Result description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| dlf_model_job_name     | String                                          | DLF model inference job name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| dlf_service_job_name   | String                                          | DLF real-time service job name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| dlf_train_job_name     | String                                          | DLF training job name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| events                 | Array of <a href="#">Event</a> objects          | Event                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| hard_example_path      | String                                          | Path for storing hard examples                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| hard_select_tasks      | Array of <a href="#">HardSelectTask</a> objects | List of selected hard example jobs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| manifest_path          | String                                          | Path for storing the <b>manifest</b> files                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| model_id               | String                                          | Model ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| Parameter                | Type                                          | Description                                                                                                                 |
|--------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| model_name               | String                                        | Model name                                                                                                                  |
| model_version            | String                                        | Model version                                                                                                               |
| samples                  | Array of <a href="#">SampleLabels</a> objects | Inference result of the real-time video service.                                                                            |
| service_id               | String                                        | Real-time service ID                                                                                                        |
| service_name             | String                                        | Real-time service name                                                                                                      |
| service_resource         | String                                        | ID of the real-time service bound to a user.                                                                                |
| total_sample_count       | Integer                                       | Total number of samples                                                                                                     |
| train_data_path          | String                                        | Path for storing training data                                                                                              |
| train_job_id             | String                                        | Training job ID                                                                                                             |
| train_job_name           | String                                        | Training job name                                                                                                           |
| unconfirmed_sample_count | Integer                                       | Number of samples to be confirmed                                                                                           |
| version_id               | String                                        | Dataset version ID                                                                                                          |
| version_name             | String                                        | Dataset version name                                                                                                        |
| workspace_id             | String                                        | Workspace ID. If no workspace is created, the default value is 0. If a workspace is created and used, use the actual value. |

**Table 28-450** Event

| Parameter     | Type   | Description                    |
|---------------|--------|--------------------------------|
| create_time   | Long   | Event creation time            |
| description   | String | Event description              |
| elapsed_time  | Long   | Time when an event is executed |
| error_code    | String | Error code                     |
| error_message | String | Error message                  |

| Parameter   | Type                                   | Description                                                                                                                                                                                                                                                                                   |
|-------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| events      | Array of <a href="#">Event</a> objects | List of sub-events                                                                                                                                                                                                                                                                            |
| level       | Integer                                | Event severity.                                                                                                                                                                                                                                                                               |
| name        | String                                 | Event name                                                                                                                                                                                                                                                                                    |
| ordinal     | Integer                                | Sequence number.                                                                                                                                                                                                                                                                              |
| parent_name | String                                 | Parent event name.                                                                                                                                                                                                                                                                            |
| status      | String                                 | Event status. Options: <ul style="list-style-type: none"><li>• <b>waiting</b>: DCS instance restoration is waiting to begin.</li><li>• running</li><li>• <b>failed</b>: indicates that a job fails to be processed.</li><li>• <b>success</b>: The subtask is successfully executed.</li></ul> |

**Table 28-451** HardSelectTask

| Parameter           | Type   | Description                      |
|---------------------|--------|----------------------------------|
| create_at           | Long   | Task creation time               |
| dataset_id          | String | Dataset ID                       |
| dataset_name        | String | Dataset name                     |
| hard_select_task_id | String | ID of selected hard example task |
| task_status         | String | Task status                      |
| time                | Long   | Execution time                   |
| update_at           | Long   | Task update time                 |

**Table 28-452** SampleLabels

| Parameter | Type                                         | Description                                                                            |
|-----------|----------------------------------------------|----------------------------------------------------------------------------------------|
| labels    | Array of <a href="#">SampleLabel</a> objects | List of sample labels. If this parameter is left blank, all sample labels are deleted. |
| metadata  | <a href="#">SampleMetadata</a> object        | Attribute key-value pair of the sample metadata                                        |

| Parameter    | Type    | Description                                                                                                                                                                                                                    |
|--------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sample_id    | String  | Sample ID                                                                                                                                                                                                                      |
| sample_type  | Integer | Sample type. Options: <ul style="list-style-type: none"><li>● <b>0</b>: image</li><li>● <b>1</b>: text</li><li>● <b>2</b>: audio</li><li>● <b>4</b>: table</li><li>● <b>6</b>: video</li><li>● <b>9</b>: free format</li></ul> |
| sample_usage | String  | Sample usage. Options: <ul style="list-style-type: none"><li>● <b>TRAIN</b>: training</li><li>● <b>EVAL</b>: validation</li><li>● <b>TEST</b>: test</li><li>● <b>INFERENCE</b>: inference</li></ul>                            |
| source       | String  | Source address of sample data, which can be obtained by calling the sample list API.                                                                                                                                           |
| worker_id    | String  | ID of a labeling team member                                                                                                                                                                                                   |

**Table 28-453** SampleLabel

| Parameter    | Type                                        | Description                                                                                                                                                                                                                           |
|--------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| annotated_by | String                                      | Video labeling method, which is used to determine whether a video is labeled manually or automatically. Options: <ul style="list-style-type: none"><li>● <b>human</b>: manual labeling</li><li>● <b>auto</b>: auto labeling</li></ul> |
| id           | String                                      | Label ID                                                                                                                                                                                                                              |
| name         | String                                      | Label name                                                                                                                                                                                                                            |
| property     | <a href="#">SampleLabel Property</a> object | Attribute key-value pair of the sample label, such as the object shape and shape feature                                                                                                                                              |
| score        | Float                                       | Confidence. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                              |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Integer | Label type. Options: <ul style="list-style-type: none"><li>• <b>0</b>: image classification</li><li>• <b>1</b>: object detection</li><li>• <b>3</b>: image segmentation</li><li>• <b>100</b>: text classification</li><li>• <b>101</b>: named entity recognition</li><li>• <b>102</b>: text triplet relationship</li><li>• <b>103</b>: text triplet entity</li><li>• <b>200</b>: sound classification</li><li>• <b>201</b>: speech content</li><li>• <b>202</b>: speech paragraph labeling</li><li>• <b>600</b>: video labeling</li></ul> |

**Table 28-454** SampleLabelProperty

| Parameter            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:content   | String  | Speech text content, which is a default attribute dedicated to the speech label (including the speech content and speech start and end points)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| @modelarts:end_index | Integer | End position of the text, which is a default attribute dedicated to the named entity label. The end position does not include the character corresponding to the value of <b>end_index</b> . Examples: <ul style="list-style-type: none"><li>• If the text is "<b>Barack Hussein Obama II (born on August 4, 1961) is an attorney and politician.</b>", the <b>start_index</b> and <b>end_index</b> of <b>Barack Hussein Obama II</b> are <b>0</b> and <b>23</b>, respectively.</li><li>• If the text is "<b>Hope is the thing with feathers</b>", <b>start_index</b> and <b>end_index</b> of <b>Hope</b> are <b>0</b> and <b>4</b>, respectively.</li></ul> |
| @modelarts:end_time  | String  | Speech end time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                                                                                                                                                                                                                                                                       |

| Parameter                   | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:feature          | Object | <p>Shape feature, which is a default attribute dedicated to the object detection label, with type of <b>List</b>. The upper left corner of an image is used as the coordinate origin <b>[0, 0]</b>. Each coordinate point is represented by <b>[x, y]</b>. <i>x</i> indicates the horizontal coordinate, and <i>y</i> indicates the vertical coordinate (both <i>x</i> and <i>y</i> are greater than or equal to 0). The format of each shape is as follows:</p> <ul style="list-style-type: none"><li>• <b>bndbox</b>: consists of two points, for example, <b>[[0,10],[50,95]]</b>. The upper left vertex of the rectangle is the first point, and the lower right vertex is the second point. That is, the <i>x</i>-coordinate of the first point must be less than the <i>x</i>-coordinate of the second point, and the <i>y</i>-coordinate of the first point must be less than the <i>y</i>-coordinate of the second point.</li><li>• <b>polygon</b>: consists of multiple points that are connected in sequence to form a polygon, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li><li>• <b>circle</b>: consists of the center and radius, for example, <b>[[100,100],[50]]</b>.</li><li>• <b>line</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>dashed</b>: consists of two points, for example, <b>[[0,100],[50,95]]</b>. The first point is the start point, and the second point is the end point.</li><li>• <b>point</b>: consists of one point, for example, <b>[[0,100]]</b>.</li><li>• <b>polyline</b>: consists of multiple points, for example, <b>[[0,100],[50,95],[10,60],[500,400]]</b>.</li></ul> |
| @modelarts:from             | String | Start entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| @modelarts:hard             | String | Whether the sample is labeled as a hard example, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0/false</b>: The label is not a hard example.</li><li>• <b>1/true</b>: The label is a hard example.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| @modelarts:hard_coefficient | String | Coefficient of difficulty of each label level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Parameter               | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | String | <p>Reasons why the sample is a hard example, which is a default attribute. Use a hyphen (-) to separate every two hard example reason IDs, for example, <b>3-20-21-19</b>. Options:</p> <ul style="list-style-type: none"><li>• <b>0</b>: No object is identified.</li><li>• <b>1</b>: The confidence is low.</li><li>• <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>• <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>• <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>• <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>• <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>• <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>• <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>• <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>• <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>• <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>• <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>• <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>• <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>15:</b> There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on flplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |



| Parameter                | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:shape         | String  | Object shape, which is a default attribute dedicated to the object detection label and is left empty by default. Options: <ul style="list-style-type: none"><li>• <b>bndbox</b>: rectangle</li><li>• <b>polygon</b>: polygon</li><li>• <b>circle</b>: circle</li><li>• <b>line</b>: straight line</li><li>• <b>dashed</b>: dashed line</li><li>• <b>point</b>: point</li><li>• <b>polyline</b>: polyline</li></ul> |
| @modelarts:speech_source | String  | Speech source, which is a default attribute dedicated to the speech start/end point label and can be set to a speaker or narrator                                                                                                                                                                                                                                                                                  |
| @modelarts:start_index   | Integer | Start position of the text, which is a default attribute dedicated to the named entity label. The start value begins from 0, including the character corresponding to the value of <b>start_index</b> .                                                                                                                                                                                                            |
| @modelarts:start_time    | String  | Speech start time, which is a default attribute dedicated to the speech start/end point label, in the format of hh:mm:ss.SSS. ( <b>hh</b> indicates hour; <b>mm</b> indicates minute; <b>ss</b> indicates second; and <b>SSS</b> indicates millisecond.)                                                                                                                                                           |
| @modelarts:triplet_id    | String  | Direction entity ID of the triplet relationship label, which is a default attribute dedicated to the triplet relationship label                                                                                                                                                                                                                                                                                    |

**Table 28-455** SampleMetadata

| Parameter                   | Type    | Description                                                                                                                                                                                                                          |
|-----------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:import_origin    | Integer | Sample source, which is a default attribute.                                                                                                                                                                                         |
| @modelarts:hard             | Double  | Whether the sample is labeled as a hard sample, which is a default attribute. Options: <ul style="list-style-type: none"><li>• <b>0</b>: The label is not a hard example.</li><li>• <b>1</b>: The label is a hard example.</li></ul> |
| @modelarts:hard_coefficient | Double  | Coefficient of difficulty of each sample level, which is a default attribute. The value ranges from <b>0</b> to <b>1</b> .                                                                                                           |

| Parameter               | Type              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:hard_reasons | Array of integers | <p>ID of a hard example reason, which is a default attribute. Options:</p> <ul style="list-style-type: none"><li>● <b>0</b>: No object is identified.</li><li>● <b>1</b>: The confidence is low.</li><li>● <b>2</b>: The clustering result based on the training dataset is inconsistent with the prediction result.</li><li>● <b>3</b>: The prediction result is greatly different from the data of the same type in the training dataset.</li><li>● <b>4</b>: The prediction results of multiple consecutive similar images are inconsistent.</li><li>● <b>5</b>: There is a large offset between the image resolution and the feature distribution of the training dataset.</li><li>● <b>6</b>: There is a large offset between the aspect ratio of the image and the feature distribution of the training dataset.</li><li>● <b>7</b>: There is a large offset between the brightness of the image and the feature distribution of the training dataset.</li><li>● <b>8</b>: There is a large offset between the saturation of the image and the feature distribution of the training dataset.</li><li>● <b>9</b>: There is a large offset between the color richness of the image and the feature distribution of the training dataset.</li><li>● <b>10</b>: There is a large offset between the definition of the image and the feature distribution of the training dataset.</li><li>● <b>11</b>: There is a large offset between the number of frames of the image and the feature distribution of the training dataset.</li><li>● <b>12</b>: There is a large offset between the standard deviation of area of image frames and the feature distribution of the training dataset.</li><li>● <b>13</b>: There is a large offset between the aspect ratio of image frames and the feature distribution of the training dataset.</li><li>● <b>14</b>: There is a large offset between the area portion of image frames and the feature distribution of the training dataset.</li><li>● <b>15</b>: There is a large offset between the edge of image frames and the feature distribution of the training dataset.</li></ul> |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |      | <ul style="list-style-type: none"><li>● <b>16:</b> There is a large offset between the brightness of image frames and the feature distribution of the training dataset.</li><li>● <b>17:</b> There is a large offset between the definition of image frames and the feature distribution of the training dataset.</li><li>● <b>18:</b> There is a large offset between the stack of image frames and the feature distribution of the training dataset.</li><li>● <b>19:</b> The data augmentation result based on GaussianBlur is inconsistent with the prediction result of the original image.</li><li>● <b>20:</b> The data augmentation result based on fliplr is inconsistent with the prediction result of the original image.</li><li>● <b>21:</b> The data augmentation result based on Crop is inconsistent with the prediction result of the original image.</li><li>● <b>22:</b> The data augmentation result based on flipud is inconsistent with the prediction result of the original image.</li><li>● <b>23:</b> The data augmentation result based on scale is inconsistent with the prediction result of the original image.</li><li>● <b>24:</b> The data augmentation result based on translate is inconsistent with the prediction result of the original image.</li><li>● <b>25:</b> The data augmentation result based on shear is inconsistent with the prediction result of the original image.</li><li>● <b>26:</b> The data augmentation result based on superpixels is inconsistent with the prediction result of the original image.</li><li>● <b>27:</b> The data augmentation result based on sharpen is inconsistent with the prediction result of the original image.</li><li>● <b>28:</b> The data augmentation result based on add is inconsistent with the prediction result of the original image.</li><li>● <b>29:</b> The data augmentation result based on invert is inconsistent with the prediction result of the original image.</li><li>● <b>30:</b> The data is predicted to be abnormal.</li></ul> |

| Parameter       | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| @modelarts:size | Array of objects | image size, including width, height, and depth. The type is List[/topic/body/section/table/tgroup/tbody/row/entry/p/br. {""}] (br]. In the list, the first number indicates the width (pixels), the second number indicates the height (pixels), and the third number indicates the depth (the depth can be left blank and the default value is 3). For example, <b>[100,200,3]</b> and <b>[100,200]</b> are both valid. Note: This parameter is mandatory only when the sample label list contains the object detection label. |

## Request Example

Run the following command to obtain details about an auto labeling task:

```
GET https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/tasks/{task_id}
```

## Response Example

**Status code: 200**

OK

```
{
 "resource_id" : "XGrRZuCV1qmMxnsMD5u",
 "create_time" : "2020-11-23 11:08:20",
 "progress" : 10.0,
 "status" : 1,
 "message" : "Start to export annotations. Export task id is jMZGm2SBp4Ymr2wrhAK",
 "code" : "ModelArts.4902",
 "elapsed_time" : 0,
 "result" : {
 "total_sample_count" : 49,
 "annotated_sample_count" : 30
 },
 "export_type" : 0,
 "config" : {
 "ambiguity" : false,
 "worker_server_num" : 0,
 "collect_sample" : false,
 "algorithm_type" : "fast",
 "image_brightness" : false,
 "image_colorfulness" : false
 }
}
```

## Status Code

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |

| Status Code | Description |
|-------------|-------------|
| 403         | Forbidden   |
| 404         | Not Found   |

## Error Code

For details, see [Error Codes](#).

## 28.1.67 Stopping an Intelligent Task

### Function

This interface is used to stop an intelligent task. Intelligent labeling and automatic grouping tasks can be stopped. You can specify the **task\_id** parameter to stop a specific task.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

POST /v2/{project\_id}/datasets/{dataset\_id}/tasks/{task\_id}/stop

**Table 28-456** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| dataset_id | Yes       | String | Dataset ID.                                                                                                     |
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| task_id    | Yes       | String | Task ID.                                                                                                        |

### Request Parameters

None

### Response Parameters

None

## Example Requests

Stopping an Intelligent Labeling or Automatic Grouping Task

```
POST https://{endpoint}/v2/{project_id}/datasets/{dataset_id}/tasks/{task_id}/stop
```

## Example Responses

Status code: 204

No Content

```
{ }
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 204         | No Content   |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.68 Querying the List of a Processing Task

### Function

This API is used to obtain processing tasks, including feature analysis tasks and data processing tasks. You can specify the **task\_type** parameter to obtain a specific type of tasks.

- During data feature analysis, images or target bounding boxes are analyzed based on image features, such as blurs and brightness to draw visualized curves to assist in dataset processing.
- Data processing is used to extract valuable data from a large amount of disordered, difficult-to-understand data. Data processing includes data validation, data cleansing, data selection, and data augmentation.
- Data validation indicates that the dataset is verified to ensure data accuracy.
- Data cleansing refers to the process of denoising, correcting, or supplementing data.
- Data selection indicates the process of selecting data subsets from full data.
- Data augmentation indicates that data volume is increased through simple data amplification operations such as scaling, cropping, transformation, and composition.

## Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

## URI

GET /v2/{project\_id}/processor-tasks

**Table 28-457** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-458** Query Parameters

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                            |
|---------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit         | No        | Integer | Maximum number of records returned on each page. The value ranges from 1 to 100. The default value is <b>10</b> .                                                                                                                                                      |
| offset        | No        | Integer | Start page of the paging list. The default value is <b>0</b> .                                                                                                                                                                                                         |
| order         | No        | String  | Sorting sequence of the query. Options: <ul style="list-style-type: none"><li>• <b>asc</b>: ascending order</li><li>• <b>desc</b>: descending order (default value)</li></ul>                                                                                          |
| query_current | No        | Boolean | Whether to query only the latest tasks of dataset version. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Query only the latest tasks of the dataset version.</li><li>• <b>false</b>: Query all tasks of the dataset version. (Default value)</li></ul> |

| Parameter     | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| return_result | No        | Boolean | Whether to return the task result. Options: <ul style="list-style-type: none"><li>• <b>true</b>: Return the task result. (Default value)</li><li>• <b>false</b>: Do not return the task result.</li></ul>                                                                                                                                                                                                                                                                                                                  |
| sort_by       | No        | String  | Sorting mode of the query. Options: <ul style="list-style-type: none"><li>• <b>create_time</b>: Sort by creation time. (Default value)</li><li>• <b>name</b>: Sort by task name.</li><li>• <b>duration_seconds</b>: Sort by running time.</li></ul>                                                                                                                                                                                                                                                                        |
| source        | No        | String  | Data source path of the query. Options: <ul style="list-style-type: none"><li>• If <b>type</b> is set to <b>OBS</b>, <b>source</b> is an OBS path.</li><li>• If <b>type</b> is set to <b>TASK</b>, <b>source</b> is a task ID.</li><li>• If <b>type</b> is set to <b>DATASET</b>, <b>source</b> is a dataset ID.</li><li>• If <b>type</b> is set to <b>CUSTOM</b> and the API is called by resource tenants, set <b>source</b> to the <b>project_id</b> of the actual user. Otherwise, this field is left blank.</li></ul> |
| source_type   | No        | String  | Data source type of the query. If this parameter is not specified, all data sources are queried by default. Options: <ul style="list-style-type: none"><li>• <b>OBS</b>: Data obtained from OBS</li><li>• <b>TASK</b>: Data processing task</li><li>• <b>DATASET</b>: Dataset</li><li>• <b>CUSTOM</b>: Data called by resource tenants</li></ul>                                                                                                                                                                           |



| Parameter    | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                           |
|--------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status       | No        | Integer | Task status of the query. If this parameter is not specified, tasks in all states are queried by default. Options: <ul style="list-style-type: none"><li>• <b>0</b>: initialized</li><li>• <b>1</b>: running</li><li>• <b>2</b>: completed</li><li>• <b>3</b>: failed</li><li>• <b>4</b>: stopped</li></ul>                                                                           |
| task_name    | No        | String  | Fuzzy search keyword.                                                                                                                                                                                                                                                                                                                                                                 |
| task_type    | No        | String  | Task type, which is the ID of a data processing template. Options: <ul style="list-style-type: none"><li>• <b>sys_data_analyse</b>: feature analysis</li><li>• <b>sys_data_cleaning</b>: data cleansing</li><li>• <b>sys_data_augmentation</b>: data augmentation</li><li>• <b>sys_data_validation</b>: data validation</li><li>• <b>sys_data_selection</b>: data filtering</li></ul> |
| version_id   | No        | Array   | Version ID list of a specific dataset of the query.                                                                                                                                                                                                                                                                                                                                   |
| workspace_id | No        | String  | Workspace ID. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value.                                                                                                                                                                                                                                                   |

Request Parameters

None

Response Parameters

Status code: 200

Table 28-459 Response body parameters

| Parameter | Type    | Description                            |
|-----------|---------|----------------------------------------|
| count     | Integer | Total number of data processing tasks. |

| Parameter | Type                                                       | Description                                |
|-----------|------------------------------------------------------------|--------------------------------------------|
| tasks     | Array of <a href="#">DescribeProcessorTaskResp</a> objects | Data processing task list queried by page. |

**Table 28-460** DescribeProcessorTaskResp

| Parameter        | Type                                                 | Description                                                                                                                                                                                                                         |
|------------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time      | Long                                                 | Time when a data processing task is created.                                                                                                                                                                                        |
| data_source      | <a href="#">ProcessorDataSource</a> object           | Input of a data processing task. Either this parameter or <b>inputs</b> is delivered.                                                                                                                                               |
| description      | String                                               | Description of a data processing task.                                                                                                                                                                                              |
| duration_seconds | Integer                                              | Running time of data processing, in seconds.                                                                                                                                                                                        |
| error_msg        | String                                               | Error message. This field is displayed when the value of status is <b>3</b> .                                                                                                                                                       |
| inputs           | Array of <a href="#">ProcessorDataSource</a> objects | Input channel list of a data processing task. Either this parameter or <b>data_source</b> is delivered.                                                                                                                             |
| is_current       | Boolean                                              | Whether the current task is the latest of the same type of this version.                                                                                                                                                            |
| name             | String                                               | Name of a data processing task.                                                                                                                                                                                                     |
| result           | Object                                               | Output result of a data processing task. This field is displayed when status is set to <b>2</b> and is valid for a feature analysis task.                                                                                           |
| status           | Integer                                              | Status of a data processing task. Options: <ul style="list-style-type: none"><li>● <b>0</b>: initialized</li><li>● <b>1</b>: running</li><li>● <b>2</b>: completed</li><li>● <b>3</b>: failed</li><li>● <b>4</b>: stopped</li></ul> |
| task_id          | String                                               | ID of a data processing task.                                                                                                                                                                                                       |
| template         | <a href="#">TemplateParam</a> object                 | Data processing template, such as the algorithm ID and parameters.                                                                                                                                                                  |
| version_count    | Integer                                              | Version number of a data processing task.                                                                                                                                                                                           |

| Parameter    | Type                            | Description                                                                                                                                                   |
|--------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| version_id   | String                          | Dataset version ID corresponding to a data processing task.                                                                                                   |
| version_name | String                          | Dataset version name corresponding to a data processing task.                                                                                                 |
| work_path    | <a href="#">WorkPath</a> object | Working directory of a data processing task.                                                                                                                  |
| workspace_id | String                          | Workspace ID of a data processing task. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value. |

**Table 28-461** ProcessorDataSource

| Parameter    | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name         | String | Dataset name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| source       | String | Data source path. Options: <ul style="list-style-type: none"><li>• If <b>type</b> is set to <b>OBS</b>, <b>source</b> is an OBS path.</li><li>• If <b>type</b> is set to <b>TASK</b>, <b>source</b> is a task ID.</li><li>• If <b>type</b> is set to <b>DATASET</b>, <b>source</b> is a dataset ID.</li><li>• If <b>type</b> is set to <b>CUSTOM</b> and the API is called by resource tenants, set <b>source</b> to the <b>project_id</b> of the actual user. Otherwise, this field is left blank.</li></ul> |
| type         | String | Data source type. Options: <ul style="list-style-type: none"><li>• <b>OBS</b>: Data obtained from OBS</li><li>• <b>TASK</b>: Data processing task</li><li>• <b>DATASET</b>: Dataset</li><li>• <b>CUSTOM</b>: Data called by resource tenants</li></ul>                                                                                                                                                                                                                                                        |
| version_id   | String | Version of a dataset.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| version_name | String | Dataset version name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

**Table 28-462** TemplateParam

| Parameter       | Type                                           | Description                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id              | String                                         | Task type, which is the ID of a data processing template. Options: <ul style="list-style-type: none"><li>• <b>sys_data_analyse</b>: feature analysis</li><li>• <b>sys_data_cleaning</b>: data cleansing</li><li>• <b>sys_data_augmentation</b>: data augmentation</li><li>• <b>sys_data_validation</b>: data validation</li><li>• <b>sys_data_selection</b>: data filtering</li></ul> |
| name            | String                                         | Template name.                                                                                                                                                                                                                                                                                                                                                                        |
| operator_params | Array of <a href="#">OperatorParam</a> objects | Operator parameter list.                                                                                                                                                                                                                                                                                                                                                              |

**Table 28-463** OperatorParam

| Parameter              | Type    | Description                                                                                                                                                                                                                                                                                                                                                            |
|------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| advanced_params_switch | Boolean | Advanced parameter switch.                                                                                                                                                                                                                                                                                                                                             |
| id                     | String  | ID of an operator.                                                                                                                                                                                                                                                                                                                                                     |
| name                   | String  | Name of an operator.                                                                                                                                                                                                                                                                                                                                                   |
| params                 | Object  | Operator parameter. The parameter type is map<string,object>. Currently, object only supports the types of Boolean, Integer, Long, String, List and Map<String,String>. For two special scenarios of object detection and image classification in a data preprocessing task, the value of <b>task_type</b> is <b>object_detection</b> or <b>image_classification</b> . |

**Table 28-464** WorkPath

| Parameter   | Type   | Description                               |
|-------------|--------|-------------------------------------------|
| name        | String | Dataset name.                             |
| output_path | String | Output path, for example, /datasets/demo. |

| Parameter    | Type   | Description                                                                                                                                                                                                                   |
|--------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| path         | String | Working path. Options: <ul style="list-style-type: none"><li>• If <b>type</b> is set to <b>OBS</b>, <b>source</b> is an OBS path.</li><li>• If <b>type</b> is set to <b>DATASET</b>, <b>source</b> is a dataset ID.</li></ul> |
| type         | String | Type of a working path. Options: <ul style="list-style-type: none"><li>• <b>OBS</b>: OBS path</li><li>• <b>DATASET</b>: dataset</li></ul>                                                                                     |
| version_id   | String | Version of a dataset.                                                                                                                                                                                                         |
| version_name | String | Name of a dataset version. The value can contain 0 to 32 characters. Only digits, letters, underscores (_), and hyphens (-) are allowed.                                                                                      |

## Example Requests

- Querying the Historical List of Feature Analysis Tasks of a Dataset

```
GET https://{endpoint}/v2/{project_id}/processor-tasks?offset=0&limit=10&sort_by=create_time&order=desc&source_type=DATASET&source=X6c3N3eztX7cr3Arvqu&task_type=sys_data_analyse&return_result=false&query_current=false
```

- Querying the Latest Feature Analysis Task Result for the Specified Version List of a Dataset

```
GET https://{endpoint}/v2/{project_id}/processor-tasks?offset=0&limit=100&source_type=DATASET&source=X6c3N3eztX7cr3Arvqu&version_id=XwTuRqI9En7xuZskW70%2CJ4Eh2FDEWH1qnDID3hQ&task_type=sys_data_analyse&return_result=true&query_current=true
```

## Example Responses

**Status code: 200**

OK

```
{
 "count" : 1,
 "tasks" : [{
 "task_id" : "ddwRJeTnpj4dNUZOq",
 "name" : "V001",
 "data_source" : {
 "type" : "DATASET",
 "source" : "X6c3N3eztX7cr3Arvqu"
 },
 "inputs" : [{
 "type" : "DATASET",
 "source" : "X6c3N3eztX7cr3Arvqu"
 }],
 "template" : {
 "id" : "sys_data_analyse",
 "name" : "data analyse template name",
 "operator_params" : [{
 "id" : "sys_data_analyse",
 "params" : {
 "op_list" : [],
 "task_type" : "image_classification",
 "manifest_path" : "s3://test-obs/classify/output/dataset-3026-X6c3N3eztX7cr3Arvqu/annotation/"
 }
 }]
 }
 }]
}
```

```
V001/V001.manifest",
 "file_path" : "s3://test-obs/classify/output/dataset-3026-X6c3N3eztX7cr3Arvqu/annotation/
evaluation/V001",
 "is_normed" : false
}
}]
},
"status" : 2,
"duration_seconds" : 11,
"create_time" : 1606372570023,
"version_id" : "J4Eh2FDEWH1qnDlD3hQ",
"version_name" : "V001",
"is_current" : true
}]
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.69 Creating a Processing Task

### Function

This API is used to create a processing task, including feature analysis tasks and data processing tasks. You can specify the **id** field of **template** composite parameter in the request body to create a task.

- During data feature analysis, images or target bounding boxes are analyzed based on image features, such as blurs and brightness to draw visualized curves to assist in dataset processing.
- Data processing is used to extract valuable data from a large amount of disordered, difficult-to-understand data. Data processing includes data validation, data cleansing, data selection, and data augmentation.
- Data validation indicates that the dataset is verified to ensure data accuracy.
- Data cleansing refers to the process of denoising, correcting, or supplementing data.
- Data selection indicates the process of selecting data subsets from full data.
- Data augmentation indicates that data volume is increased through simple data amplification operations such as scaling, cropping, transformation, and composition.

## Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

## URI

POST /v2/{project\_id}/processor-tasks

**Table 28-465** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Parameters

**Table 28-466** Request body parameters

| Parameter      | Mandatory | Type                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------|-----------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_version | No        | Boolean                                    | Whether to synchronously create a task version when creating a task. Set this parameter to <b>true</b> only when creating a data processing task. For other types of tasks, this parameter is set to <b>false</b> or left blank. Options: <ul style="list-style-type: none"><li><b>true</b>: Create a task version when creating a task.</li><li><b>false</b>: Do not create a task version when creating a task. (Default value)</li></ul> |
| data_source    | No        | <a href="#">ProcessorDataSource</a> object | Data source. Either this parameter or <b>inputs</b> is used. A data source path cannot be an OBS path in a KMS-encrypted bucket.                                                                                                                                                                                                                                                                                                            |
| description    | No        | String                                     | Description of a data processing task. The description contains 0 to 256 characters and does not support the following special characters: ^!<>=&"'                                                                                                                                                                                                                                                                                         |

| Parameter    | Mandatory | Type                                                 | Description                                                                                                                            |
|--------------|-----------|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| inputs       | No        | Array of <a href="#">ProcessorDataSource</a> objects | Data sources. Either this parameter or <b>data_source</b> is used. A data source path cannot be an OBS path in a KMS-encrypted bucket. |
| name         | Yes       | String                                               | Name of a data processing task.                                                                                                        |
| template     | Yes       | <a href="#">TemplateParameter</a> object             | Data processing template, such as the algorithm ID and parameters.                                                                     |
| version_id   | No        | String                                               | Dataset version ID.                                                                                                                    |
| work_path    | No        | <a href="#">WorkPath</a> object                      | Work directory of a data processing task. A work directory cannot be an OBS path in a KMS-encrypted bucket.                            |
| workspace_id | No        | String                                               | Workspace ID. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value.    |

**Table 28-467** ProcessorDataSource

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name      | No        | String | Dataset name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| source    | No        | String | Data source path. Options: <ul style="list-style-type: none"><li>• If <b>type</b> is set to <b>OBS</b>, <b>source</b> is an OBS path.</li><li>• If <b>type</b> is set to <b>TASK</b>, <b>source</b> is a task ID.</li><li>• If <b>type</b> is set to <b>DATASET</b>, <b>source</b> is a dataset ID.</li><li>• If <b>type</b> is set to <b>CUSTOM</b> and the API is called by resource tenants, set <b>source</b> to the <b>project_id</b> of the actual user. Otherwise, this field is left blank.</li></ul> |



| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                            |
|--------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type         | No        | String | Data source type. Options: <ul style="list-style-type: none"><li>• <b>OBS</b>: Data obtained from OBS</li><li>• <b>TASK</b>: Data processing task</li><li>• <b>DATASET</b>: Dataset</li><li>• <b>CUSTOM</b>: Data called by resource tenants</li></ul> |
| version_id   | No        | String | Version of a dataset.                                                                                                                                                                                                                                  |
| version_name | No        | String | Dataset version name.                                                                                                                                                                                                                                  |

**Table 28-468** TemplateParam

| Parameter       | Mandatory | Type                                           | Description                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------|-----------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id              | No        | String                                         | Task type, which is the ID of a data processing template. Options: <ul style="list-style-type: none"><li>• <b>sys_data_analyse</b>: feature analysis</li><li>• <b>sys_data_cleaning</b>: data cleansing</li><li>• <b>sys_data_augmentation</b>: data augmentation</li><li>• <b>sys_data_validation</b>: data validation</li><li>• <b>sys_data_selection</b>: data filtering</li></ul> |
| name            | No        | String                                         | Template name.                                                                                                                                                                                                                                                                                                                                                                        |
| operator_params | No        | Array of <a href="#">OperatorParam</a> objects | Operator parameter list.                                                                                                                                                                                                                                                                                                                                                              |

**Table 28-469** OperatorParam

| Parameter              | Mandatory | Type    | Description                |
|------------------------|-----------|---------|----------------------------|
| advanced_params_switch | No        | Boolean | Advanced parameter switch. |
| id                     | No        | String  | ID of an operator.         |
| name                   | No        | String  | Name of an operator.       |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| params    | No        | Object | Operator parameter. The parameter type is map<string,object>. Currently, object only supports the types of Boolean, Integer, Long, String, List[/topic/body/section/table/tgroup/tbody/row/entry/p/br {""}] (br] and Map<String,String>. For two special scenarios of object detection and image classification in a data preprocessing task, the value of <b>task_type</b> is <b>object_detection</b> or <b>image_classification</b> . |

Table 28-470 WorkPath

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                   |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name         | No        | String | Dataset name.                                                                                                                                                                                                                 |
| output_path  | No        | String | Output path, for example, / datasets/demo.                                                                                                                                                                                    |
| path         | No        | String | Working path. Options: <ul style="list-style-type: none"><li>• If <b>type</b> is set to <b>OBS</b>, <b>source</b> is an OBS path.</li><li>• If <b>type</b> is set to <b>DATASET</b>, <b>source</b> is a dataset ID.</li></ul> |
| type         | No        | String | Type of a working path. Options: <ul style="list-style-type: none"><li>• <b>OBS</b>: OBS path</li><li>• <b>DATASET</b>: dataset</li></ul>                                                                                     |
| version_id   | No        | String | Version of a dataset.                                                                                                                                                                                                         |
| version_name | No        | String | Name of a dataset version. The value can contain 0 to 32 characters. Only digits, letters, underscores (_), and hyphens (-) are allowed.                                                                                      |

## Response Parameters

Status code: 200

**Table 28-471** Response body parameters

| Parameter | Type   | Description                   |
|-----------|--------|-------------------------------|
| task_id   | String | ID of a data processing task. |

## Example Requests

- The following is an example of how to create a feature analysis task. The task type has been set to **sys\_data\_analyse**.

```
{
 "name": "V001",
 "description": "",
 "data_source": {
 "type": "DATASET",
 "source": "X6c3N3eztX7cr3Arvqu"
 },
 "template": {
 "id": "sys_data_analyse",
 "operator_params": [{
 "id": "sys_data_analyse",
 "params": {
 "op_list": []
 }
 }
],
 "version_id": "J4Eh2FDEWH1qnDID3hQ"
}
```

- The following is an example of how to create a data processing (data validation) task. The task type has been set to **sys\_data\_validation**.

```
{
 "name": "PRE-e77c",
 "inputs": [{
 "type": "DATASET",
 "source": "PYc9H2HGv5BJNwBGXyK",
 "version_id": "yoJ5ssClpNIOrsjjFDa"
 }],
 "work_path": {
 "type": "DATASET",
 "path": "PYc9H2HGv5BJNwBGXyK",
 "version_name": "V0010"
 },
 "description": "",
 "create_version": true,
 "template": {
 "id": "sys_data_validation",
 "operator_params": [{
 "name": "MetaValidation",
 "advanced_params_switch": false,
 "params": {
 "task_type": "image_classification",
 "dataset_type": "manifest",
 "source_service": "select",
 "filter_func": "data_validation_select",
 "image_max_width": "1920",
 "image_max_height": "1920",
 "total_status": "[0,1,2]"
 }
 }
],
 "workspace_id": "0"
}
```

- The following is an example of how to create a data processing (data cleansing) task. The task type has been set to **sys\_data\_cleaning**.

```
{
 "name": "PRE-330f",
 "inputs": [{
 "type": "DATASET",
 "source": "gfgHHSokody6AJigS5A",
 "version_id": "54IXbeJhfttGpL46lbv"
 }],
 "work_path": {
 "type": "DATASET",
 "path": "gfgHHSokody6AJigS5A",
 "version_name": "V004"
 },
 "description": "",
 "create_version": true,
 "template": {
 "id": "sys_data_cleaning",
 "operator_params": [{
 "name": "PCC",
 "advanced_params_switch": false,
 "params": {
 "task_type": "image_classification",
 "dataset_type": "manifest",
 "source_service": "select",
 "filter_func": "data_cleaning_select",
 "prototype_sample_path": "obs://test-obs/classify/data/animals/",
 "criticism_sample_path": "",
 "n_clusters": "auto",
 "similarity_threshold": "0.9",
 "embedding_distance": "0.2",
 "checkpoint_path": "/home/work/user-job-dir/test-lxm/resnet_v1_50",
 "total_status": "[0,2]",
 "do_validation": "True"
 }
 }]
 },
 "workspace_id": "0"
}
```

- The following is an example of how to create a data processing (data filtering) task. The task type has been set to **sys\_data\_selection**.

```
{
 "name": "PRE-aae5",
 "inputs": [{
 "type": "DATASET",
 "source": "gLNSdlQ1iAAmPgl0Won",
 "version_id": "WAVPSYpKE3FggbgRxiK"
 }],
 "work_path": {
 "type": "DATASET",
 "path": "gLNSdlQ1iAAmPgl0Won",
 "version_name": "V003"
 },
 "description": "",
 "create_version": true,
 "template": {
 "id": "sys_data_selection",
 "operator_params": [{
 "name": "SimDeduplication",
 "advanced_params_switch": false,
 "params": {
 "task_type": "image_classification",
 "dataset_type": "manifest",
 "source_service": "select",
 "filter_func": "data_deduplication_select",
 "similarity_threshold": "0.9",
 "total_status": "[0,2]",
 }
 }]
 }
}
```

```
 "do_validation" : "True"
 }
}]
},
"workspace_id" : "0"
}
```

- The following is an example of how to create a data processing (data augmentation) task. The task type has been set to **sys\_data\_augmentation**.

```
{
 "name": "PRE-637c",
 "inputs": [{
 "type": "DATASET",
 "source": "XGrRZuCV1qmMxnsmd5u",
 "version_id": "kjPDTOSi6BQqhtXZIFv"
 }],
 "work_path": {
 "type": "DATASET",
 "path": "XGrRZuCV1qmMxnsmd5u",
 "version_name": "V002"
 },
 "description": "",
 "create_version": true,
 "template": {
 "id": "sys_data_augmentation",
 "operator_params": [{
 "name": "AddNoise",
 "advanced_params_switch": false,
 "params": {
 "task_type": "image_classification",
 "dataset_type": "manifest",
 "noise_type": "Gauss",
 "loc": "0",
 "scale": "1",
 "lam": "2",
 "p": "0.01",
 "total_status": "[3]",
 "filter_func": "data_augmentation",
 "do_validation": "True"
 }
 }
]
},
"workspace_id" : "0"
}
```

### Example Responses

**Status code: 200**

OK

```
{
 "task_id": "SNEJua7qdZZN8GvkEr"
}
```

### Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |

| Status Code | Description |
|-------------|-------------|
| 404         | Not Found   |

## Error Codes

See [Error Codes](#).

## 28.1.70 Querying Details About a Processing Task

### Function

This API is used to obtain details about processing tasks, including feature analysis tasks and data processing tasks. You can specify the **task\_id** parameter to obtain the details about a specific task.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

GET /v2/{project\_id}/processor-tasks/{task\_id}

**Table 28-472** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| task_id    | Yes       | String | ID of a data processing task.                                                                                   |

### Request Parameters

None

### Response Parameters

Status code: 200

**Table 28-473** Response body parameters

| Parameter        | Type                                                  | Description                                                                                                                                                                                                                         |
|------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time      | Long                                                  | Time when a data processing task is created.                                                                                                                                                                                        |
| data_source      | <a href="#">ProcessorDataSource</a> object            | Input of a data processing task. Either this parameter or <b>inputs</b> is delivered.                                                                                                                                               |
| description      | String                                                | Description of a data processing task.                                                                                                                                                                                              |
| duration_seconds | Integer                                               | Running time of data processing, in seconds.                                                                                                                                                                                        |
| error_msg        | String                                                | Error message. This field is displayed when the value of status is <b>3</b> .                                                                                                                                                       |
| inputs           | Array of <a href="#">ProcessorDataSources</a> objects | Input channel list of a data processing task. Either this parameter or <b>data_source</b> is delivered.                                                                                                                             |
| is_current       | Boolean                                               | Whether the current task is the latest of the same type of this version.                                                                                                                                                            |
| name             | String                                                | Name of a data processing task.                                                                                                                                                                                                     |
| result           | Object                                                | Output result of a data processing task. This field is displayed when status is set to <b>2</b> and is valid for a feature analysis task.                                                                                           |
| status           | Integer                                               | Status of a data processing task. Options: <ul style="list-style-type: none"><li>● <b>0</b>: initialized</li><li>● <b>1</b>: running</li><li>● <b>2</b>: completed</li><li>● <b>3</b>: failed</li><li>● <b>4</b>: stopped</li></ul> |
| task_id          | String                                                | ID of a data processing task.                                                                                                                                                                                                       |
| template         | <a href="#">TemplateParameter</a> object              | Data processing template, such as the algorithm ID and parameters.                                                                                                                                                                  |
| version_count    | Integer                                               | Version number of a data processing task.                                                                                                                                                                                           |
| version_id       | String                                                | Dataset version ID corresponding to a data processing task.                                                                                                                                                                         |
| version_name     | String                                                | Dataset version name corresponding to a data processing task.                                                                                                                                                                       |
| work_path        | <a href="#">WorkPath</a> object                       | Working directory of a data processing task.                                                                                                                                                                                        |

| Parameter    | Type   | Description                                                                                                                                                   |
|--------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| workspace_id | String | Workspace ID of a data processing task. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value. |

**Table 28-474** ProcessorDataSource

| Parameter    | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name         | String | Dataset name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| source       | String | Data source path. Options: <ul style="list-style-type: none"><li>• If <b>type</b> is set to <b>OBS</b>, <b>source</b> is an OBS path.</li><li>• If <b>type</b> is set to <b>TASK</b>, <b>source</b> is a task ID.</li><li>• If <b>type</b> is set to <b>DATASET</b>, <b>source</b> is a dataset ID.</li><li>• If <b>type</b> is set to <b>CUSTOM</b> and the API is called by resource tenants, set <b>source</b> to the <b>project_id</b> of the actual user. Otherwise, this field is left blank.</li></ul> |
| type         | String | Data source type. Options: <ul style="list-style-type: none"><li>• <b>OBS</b>: Data obtained from OBS</li><li>• <b>TASK</b>: Data processing task</li><li>• <b>DATASET</b>: Dataset</li><li>• <b>CUSTOM</b>: Data called by resource tenants</li></ul>                                                                                                                                                                                                                                                        |
| version_id   | String | Version of a dataset.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| version_name | String | Dataset version name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

**Table 28-475** TemplateParam

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | Task type, which is the ID of a data processing template. Options: <ul style="list-style-type: none"><li>• <b>sys_data_analyse</b>: feature analysis</li><li>• <b>sys_data_cleaning</b>: data cleansing</li><li>• <b>sys_data_augmentation</b>: data augmentation</li><li>• <b>sys_data_validation</b>: data validation</li><li>• <b>sys_data_selection</b>: data filtering</li></ul> |
| name      | String | Template name.                                                                                                                                                                                                                                                                                                                                                                        |



| Parameter       | Type                                           | Description              |
|-----------------|------------------------------------------------|--------------------------|
| operator_params | Array of <a href="#">OperatorParam</a> objects | Operator parameter list. |

**Table 28-476** OperatorParam

| Parameter              | Type    | Description                                                                                                                                                                                                                                                                                                                                                            |
|------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| advanced_params_switch | Boolean | Advanced parameter switch.                                                                                                                                                                                                                                                                                                                                             |
| id                     | String  | ID of an operator.                                                                                                                                                                                                                                                                                                                                                     |
| name                   | String  | Name of an operator.                                                                                                                                                                                                                                                                                                                                                   |
| params                 | Object  | Operator parameter. The parameter type is map<string,object>. Currently, object only supports the types of Boolean, Integer, Long, String, List and Map<String,String>. For two special scenarios of object detection and image classification in a data preprocessing task, the value of <b>task_type</b> is <b>object_detection</b> or <b>image_classification</b> . |

**Table 28-477** WorkPath

| Parameter    | Type   | Description                                                                                                                                                                                                                   |
|--------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name         | String | Dataset name.                                                                                                                                                                                                                 |
| output_path  | String | Output path, for example, /datasets/demo.                                                                                                                                                                                     |
| path         | String | Working path. Options: <ul style="list-style-type: none"><li>• If <b>type</b> is set to <b>OBS</b>, <b>source</b> is an OBS path.</li><li>• If <b>type</b> is set to <b>DATASET</b>, <b>source</b> is a dataset ID.</li></ul> |
| type         | String | Type of a working path. Options: <ul style="list-style-type: none"><li>• <b>OBS</b>: OBS path</li><li>• <b>DATASET</b>: dataset</li></ul>                                                                                     |
| version_id   | String | Version of a dataset.                                                                                                                                                                                                         |
| version_name | String | Name of a dataset version. The value can contain 0 to 32 characters. Only digits, letters, underscores (_), and hyphens (-) are allowed.                                                                                      |

## Example Requests

### Querying Details About a Data Processing Task

```
GET https://{endpoint}/v2/{project_id}/processor-tasks/{task_id}
```

## Example Responses

### Status code: 200

OK

```
{
 "task_id" : "AcYfsdfhGyrWL5TtahH",
 "name" : "V002",
 "data_source" : {
 "type" : "DATASET",
 "source" : "X6c3N3eztX7cr3Arvqu"
 },
 "inputs" : [{
 "type" : "DATASET",
 "source" : "X6c3N3eztX7cr3Arvqu"
 }],
 "template" : {
 "id" : "sys_data_analyse",
 "name" : "data analyse template name",
 "operator_params" : [{
 "id" : "sys_data_analyse",
 "params" : {
 "op_list" : [],
 "task_type" : "image_classification",
 "manifest_path" : "s3://lch-test-obs/classify/output/dataset-3026-X6c3N3eztX7cr3Arvqu/annotation/V002/V002.manifest",
 "file_path" : "s3://lch-test-obs/classify/output/dataset-3026-X6c3N3eztX7cr3Arvqu/annotation/evaluation/V002",
 "is_normed" : false
 }
 }]
 },
 "status" : 2,
 "duration_seconds" : 22,
 "create_time" : 1606373999627,
 "result" : "xxx",
 "version_id" : "XwTuRqI9En7xuZskW70",
 "is_current" : true
}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.71 Updating a Processing Task

### Function

This API is used to update a processing task, including feature analysis tasks and data processing tasks. Only the description of tasks can be updated. You can specify the **task\_id** parameter to update a specific task.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

PUT /v2/{project\_id}/processor-tasks/{task\_id}

**Table 28-478** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| task_id    | Yes       | String | ID of a data processing task.                                                                                   |

### Request Parameters

**Table 28-479** Request body parameters

| Parameter   | Mandatory | Type   | Description                                                                                                                                         |
|-------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| description | No        | String | Description of a data processing task. The description contains 0 to 256 characters and does not support the following special characters: ^!<>=&"" |

### Response Parameters

None

## Example Requests

Updating a Data Processing Task

```
{
 "description" : "test"
}
```

## Example Responses

Status code: 200

OK

```
{ }
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |
| 404         | Not Found    |

## Error Codes

See [Error Codes](#).

## 28.1.72 Deleting a Processing Task

### Function

This API is used to delete a processing task, including feature analysis tasks and data processing tasks. A specific task can be deleted by specifying the **task\_id** parameter.

### Debugging

You can debug this API through automatic authentication in [API Explorer](#) or use the SDK sample code generated by API Explorer.

### URI

DELETE /v2/{project\_id}/processor-tasks/{task\_id}

**Table 28-480** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| task_id    | Yes       | String | ID of a data processing task.                                                                                   |

## Request Parameters

None

## Response Parameters

None

## Example Requests

Deleting a Data Processing Task

```
DELETE https://{endpoint}/v2/{project_id}/processor-tasks/{task_id}
```

## Example Responses

**Status code: 200**

OK

```
{}
```

## Status Codes

| Status Code | Description  |
|-------------|--------------|
| 200         | OK           |
| 401         | Unauthorized |
| 403         | Forbidden    |

## Error Codes

See [Error Codes](#).

## 28.2 DevEnviron (Old Version)

## 28.2.1 Creating a Development Environment Instance

### Function

This API is used to create a development environment instance for code development.

Calling this API is an asynchronous operation. The job status can be obtained by calling the API described in [Obtaining Details About a Development Environment Instance](#).

### URI

POST /v1/{project\_id}/demanager/instances

[Table 28-481](#) describes the required parameters.

**Table 28-481** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

### Request Body

[Table 28-482](#) describes the request parameters.

**Table 28-482** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name       | Yes       | String | Instance name, which contains a maximum of 64 characters.<br>The value can contain letters, digits, hyphens (-), and underscores (_).                                                                                                                                                                      |
| profile_id | Yes       | String | Configuration ID. Options: <ul style="list-style-type: none"><li>Ascend-Power-Engine 1.0(python3)</li><li>Multi-Engine 1.0 (python2)-cpu</li><li>Multi-Engine 1.0 (python2)-gpu</li><li>Multi-Engine 1.0 (python3)-cpu</li><li>Multi-Engine 1.0 (python3)-gpu</li><li>Multi-Engine 2.0 (python3)</li></ul> |

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                |
|-------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| description | No        | String | Instance description. The value contains a maximum of 512 characters and cannot contain the following special characters: &<>"/. By default, this parameter is left blank. |
| flavor      | Yes       | String | Instance flavor. The actual flavors depend on the region. To use other flavors, submit a service ticket to change the flavors.                                             |
| spec        | Yes       | Object | Instance definition. Only <b>Notebook</b> is supported. For example, see <a href="#">Table 28-483</a> .                                                                    |
| workspace   | No        | Object | Workspace. The default workspace ID is <b>0</b> . For details, see <a href="#">Table 28-487</a> .                                                                          |
| pool        | No        | Object | Resource pool. For details, see <a href="#">Table 28-488</a> .                                                                                                             |
| ai_project  | No        | Object | AI project. For details, see <a href="#">Table 28-490</a> .                                                                                                                |

**Table 28-483 notebook** parameters

| Parameter      | Mandatory | Type               | Description                                                                                                                                                                    |
|----------------|-----------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| storage        | Yes       | Object             | Storage path. For details, see <a href="#">Table 28-484</a> .                                                                                                                  |
| extend_storage | No        | Array<Storage>     | Extended storage list. For details, see <a href="#">Table 28-484</a> . Extended storage supports only <b>obsfs</b> and is available only for certain dedicated resource pools. |
| auto_stop      | No        | Object             | Auto stop parameter. For details, see <a href="#">Table 28-486</a> .                                                                                                           |
| annotations    | No        | Map<String,String> | Label information, which can be extended. By default, this parameter is left blank.                                                                                            |

**Table 28-484 storage parameters**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                     |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | Storage type.<br>Only <b>obs</b> , <b>obsfs</b> , and <b>evs</b> are supported. Additionally, <b>obsfs</b> can only be used in certain dedicated resource pools. To mount an OBS parallel file system, submit a service ticket. |
| location  | No        | Object | Storage location. If <b>type</b> is set to <b>obs</b> , this parameter is mandatory. See <a href="#">Table 28-485</a> . By default, this parameter is left blank.                                                               |

**Table 28-485 location parameters**

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| path        | No        | String  | Storage path <ul style="list-style-type: none"><li>If <b>type</b> is set to <b>obs</b>, this parameter is mandatory. The value must be a valid OBS bucket path and end with a slash (/). The value must be a specific directory in an OBS bucket rather than the root directory of an OBS bucket.</li><li>If <b>type</b> is set to <b>obsfs</b>, the parameter value must be a valid bucket name of the OBS parallel file system. (CCE does not support subdirectory mounting.)</li><li>If <b>type</b> is set to <b>evs</b>, this parameter does not need to be set.</li></ul> |
| volume_size | No        | Integer | EVS disk size. The minimum size is 5 GB and the maximum size is 4,096 GB. The default value is 5 GB. If <b>type</b> is set to <b>obs</b> , this parameter does not need to be set.                                                                                                                                                                                                                                                                                                                                                                                             |



| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| mount_path   | No        | String | <p>Mount path in a notebook instance. This parameter is valid only when <b>type</b> is set to <b>obsfs</b>.</p> <p>The default value is <b>/home/ma-user/work</b>.</p> <p>If you want to mount the file system to a specified path, set the value to the subdirectory of <b>/home/ma-user/work</b>. Otherwise, the mounting may fail or read/write exceptions may occur due to permission issues.</p> |
| access_modes | No        | String | <p>Access permission for the mounted file or folder. The permission can be read/write or read-only. This parameter is valid only when <b>type</b> is set to <b>obsfs</b>.</p> <p>Options:</p> <ul style="list-style-type: none"><li>• <b>ReadOnlyMany</b>: read-only mode</li><li>• <b>ReadWriteMany</b>: read/write mode (default value)</li></ul>                                                   |

Table 28-486 auto\_stop parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                     |
|-----------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| enable    | No        | Boolean | <p>Whether to enable the auto stop function. The value <b>true</b> indicates that the function is enabled and the instance will automatically stop when the running duration is reached. The value <b>false</b> indicates that the function is disabled. The default value is <b>false</b>.</p> |
| duration  | No        | Integer | <p>Running duration, in seconds. The value ranges from 3,600 to 86,400. After this parameter is set, it is valid for each startup. This parameter is mandatory when <b>enable</b> is set to <b>true</b>.</p>                                                                                    |
| prompt    | No        | Boolean | <p>Whether to display a prompt again. This parameter is provided for the console to determine whether to display a prompt again. The default value is <b>true</b>.</p>                                                                                                                          |

**Table 28-487 workspace** parameters

| Parameter | Mandatory | Type   | Description                                                                                                                         |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| id        | No        | String | Workspace ID. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value. |

**Table 28-488 poolSpec** parameters

| Parameter | Mandatory | Type   | Description                                                                 |
|-----------|-----------|--------|-----------------------------------------------------------------------------|
| id        | Yes       | String | Resource pool ID.                                                           |
| type      | No        | String | Resource pool type.                                                         |
| name      | No        | String | Resource pool name.                                                         |
| owner     | No        | Object | Owner of the resource pool. For details, see <a href="#">Table 28-489</a> . |

**Table 28-489 userSpec** parameters

| Parameter  | Mandatory | Type   | Description                                      |
|------------|-----------|--------|--------------------------------------------------|
| project_id | No        | String | ID of the project to which the resource belongs. |

**Table 28-490 AIProject** parameters

| Parameter | Mandatory | Type   | Description                                |
|-----------|-----------|--------|--------------------------------------------|
| id        | No        | String | AI project ID. This parameter is reserved. |

## Response Body

[Table 28-491](#) describes the response parameters.

**Table 28-491** Parameters

| Parameter | Type   | Description   |
|-----------|--------|---------------|
| id        | String | Instance ID   |
| name      | String | Instance name |

| Parameter               | Type   | Description                                                                                                                                                     |
|-------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| description             | String | Instance description                                                                                                                                            |
| status                  | String | Instance status                                                                                                                                                 |
| creation_timestamp      | String | Time when an instance is created                                                                                                                                |
| latest_update_timestamp | String | Time when an instance is modified                                                                                                                               |
| profile                 | Object | Configuration information. For details, see <a href="#">Table 28-492</a> .                                                                                      |
| flavor                  | String | Instance flavor                                                                                                                                                 |
| flavor_details          | Object | For details about the flavor, see <a href="#">Table 28-496</a> .                                                                                                |
| pool                    | Object | For details about the dedicated resource pool, see <a href="#">Table 28-497</a> .                                                                               |
| spec                    | Object | Instance definition For details about parameters of a notebook instance, see <a href="#">Table 28-499</a> .                                                     |
| workspace               | Object | Workspace. For details, see <a href="#">Table 28-504</a> .                                                                                                      |
| ai_project              | Object | AI project. For details, see <a href="#">Table 28-505</a> .                                                                                                     |
| error_code              | String | Error code. For details, see <a href="#">Error Codes</a> .                                                                                                      |
| queuing_info            | Object | Queuing information. For details, see <a href="#">Table 28-506</a> .                                                                                            |
| user                    | Object | User information. For details, see <a href="#">Table 28-507</a> .                                                                                               |
| repository              | Object | Git repository information. For details, see <a href="#">Table 28-508</a> . This parameter cannot be used. It is automatically returned when the API is called. |

**Table 28-492** profile parameters

| Parameter   | Type   | Description                                                      |
|-------------|--------|------------------------------------------------------------------|
| id          | String | Configuration ID                                                 |
| name        | String | Configuration name                                               |
| description | String | Configuration description                                        |
| de_type     | String | Development environment type. Only <b>Notebook</b> is supported. |

| Parameter   | Type               | Description                                                             |
|-------------|--------------------|-------------------------------------------------------------------------|
| flavor_type | String             | Hardware, which can be <b>CPU</b> , <b>GPU</b> , or <b>Ascend</b> .     |
| provision   | Object             | Deployment information. For details, see <a href="#">Table 28-493</a> . |
| labels      | Map<String,String> | Label                                                                   |

**Table 28-493** provision parameters

| Parameter | Type   | Description                                                         |
|-----------|--------|---------------------------------------------------------------------|
| type      | String | Deployment type. Only <b>Docker</b> is supported.                   |
| spec      | Object | Deployment details. For details, see <a href="#">Table 28-494</a> . |

**Table 28-494** spec parameters

| Parameter | Type   | Description                                                                                             |
|-----------|--------|---------------------------------------------------------------------------------------------------------|
| engine    | String | Deployment engine. Only <b>CCE</b> is supported.                                                        |
| params    | Object | Deployment parameters. Only <b>Docker</b> is supported. For details, see <a href="#">Table 28-495</a> . |

**Table 28-495** Docker deployment parameters

| Parameter   | Type               | Description                                                                         |
|-------------|--------------------|-------------------------------------------------------------------------------------|
| namespace   | String             | SWR organization name, which is globally unique                                     |
| image_name  | String             | Image name                                                                          |
| image_tag   | String             | Image tag                                                                           |
| annotations | Map<String,String> | Label information, which can be extended. By default, this parameter is left blank. |

Table 28-496 flavor\_details parameters

| Parameter       | Type                | Description                                                                                                                                                                          |
|-----------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name            | String              | Flavor name                                                                                                                                                                          |
| status          | String              | Flavor sales status. Options: <ul style="list-style-type: none"><li>• <b>onSale</b></li><li>• <b>soldOut</b></li></ul>                                                               |
| queuing_num     | Integer             | This parameter is mandatory when <b>promo_type</b> is set to <b>Free</b> and <b>status</b> is set to <b>soldOut</b> .                                                                |
| queue_left_time | Integer             | Left queuing time, in seconds<br>This parameter is mandatory when <b>promo_type</b> is set to <b>Free</b> and <b>status</b> is set to <b>soldOut</b> .                               |
| storage_list    | Array<Storage type> | Supported storage type. Options: <ul style="list-style-type: none"><li>• <b>obs</b></li><li>• <b>evs</b></li><li>• <b>efs</b></li></ul>                                              |
| is_permitted    | Boolean             | Whether the current user has the permission to use this flavor                                                                                                                       |
| type            | String              | Flavor type. Options: <ul style="list-style-type: none"><li>• <b>GPU</b></li><li>• <b>CPU</b></li><li>• <b>ASCEND</b></li></ul>                                                      |
| params          | Dict                | Parameters that describing flavor                                                                                                                                                    |
| promo_type      | String              | Promotion type. Options: <ul style="list-style-type: none"><li>• <b>Free</b></li><li>• <b>NoDiscount</b></li></ul>                                                                   |
| instance_num    | Integer             | Number of instances of this flavor the current created                                                                                                                               |
| duration        | Integer             | Auto stop time after startup, in seconds                                                                                                                                             |
| store_time      | Integer             | Maximum retention period of an inactive instance of this flavor in the database, in hours<br>The default value is <b>-1</b> , indicating that the instance can be permanently saved. |
| billing_flavor  | String              | Billing specifications. If this field is left blank, the specifications name is used for billing.                                                                                    |

| Parameter      | Type    | Description                                                                        |
|----------------|---------|------------------------------------------------------------------------------------|
| billing_params | Integer | Billing ratio This parameter is mandatory when <b>billing_flavor</b> is specified. |

**Table 28-497 pool** parameters

| Parameter | Type   | Description                                                                                                                  |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------|
| id        | String | ID of a resource pool                                                                                                        |
| name      | String | Name of a resource pool                                                                                                      |
| type      | String | Type of a resource pool. <b>USER_DEFINED</b> indicates a dedicated resource pool.                                            |
| owner     | Object | This parameter is mandatory when <b>type</b> is set to <b>USER_DEFINED</b> . For details, see <a href="#">Table 28-498</a> . |

**Table 28-498 owner** parameters

| Parameter  | Type   | Description |
|------------|--------|-------------|
| project_id | String | Project ID  |

**Table 28-499 notebook** parameters

| Parameter          | Type           | Description                                                                                                                                                                    |
|--------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| log_path           | String         | Path for storing custom image logs                                                                                                                                             |
| custom_script_path | String         | Path for storing custom initialization scripts used when a notebook instance is started                                                                                        |
| extend_storage     | Array<Storage> | Extended storage list. For details, see <a href="#">Table 28-500</a> . Extended storage supports only <b>obsfs</b> and is available only for certain dedicated resource pools. |
| storage            | Object         | Storage path. For details, see <a href="#">Table 28-500</a> .                                                                                                                  |
| credential         | Object         | AK and SK for accessing OBS. For details, see <a href="#">Table 28-510</a> .                                                                                                   |

| Parameter                    | Type               | Description                                                                                                                                                     |
|------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| repository                   | Object             | Git repository information. For details, see <a href="#">Table 28-508</a> . This parameter cannot be used. It is automatically returned when the API is called. |
| resource_reserved_time stamp | Integer            | Time when the resource is reserved                                                                                                                              |
| auto_stop                    | Object             | Auto stop parameter. For details, see <a href="#">Table 28-503</a> .                                                                                            |
| failed_reasons               | Object             | Cause for a creation or startup failure. For details, see <a href="#">Table 28-502</a> .                                                                        |
| annotations                  | Map<String,String> | Annotations<br>The generated URL cannot be directly accessed.                                                                                                   |
| extend_params                | Map<String,String> | Extended parameter                                                                                                                                              |

**Table 28-500 storage** parameters

| Parameter | Type   | Description                                                                                                                                                                                                                     |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String | Storage type.<br>Only <b>obs</b> , <b>obsfs</b> , and <b>evs</b> are supported. Additionally, <b>obsfs</b> can only be used in certain dedicated resource pools. To mount an OBS parallel file system, submit a service ticket. |
| location  | Object | Storage location. If <b>type</b> is set to <b>obs</b> , this parameter is mandatory. See <a href="#">Table 28-501</a> . By default, this parameter is left blank.                                                               |

Table 28-501 location parameters

| Parameter    | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| path         | String  | Storage path <ul style="list-style-type: none"><li>If <b>type</b> is set to <b>obs</b>, this parameter is mandatory. The value must be a valid OBS bucket path and end with a slash (/). The value must be a specific directory in an OBS bucket rather than the root directory of an OBS bucket.</li><li>If <b>type</b> is set to <b>obsfs</b>, the parameter value must be a valid bucket name of the OBS parallel file system. (CCE does not support subdirectory mounting.)</li><li>If <b>type</b> is set to <b>evs</b>, this parameter does not need to be set.</li></ul> |
| volume_size  | Integer | EVS disk size. The minimum size is 5 GB and the maximum size is 4,096 GB. The default value is 5 GB. If <b>type</b> is set to <b>obs</b> , this parameter does not need to be set.                                                                                                                                                                                                                                                                                                                                                                                             |
| mount_path   | String  | Mount path in a notebook instance. This parameter is valid only when <b>type</b> is set to <b>obsfs</b> .<br>The default value is <b>/home/ma-user/work</b> .<br>If you want to mount the file system to a specified path, set the value to the subdirectory of <b>/home/ma-user/work</b> . Otherwise, the mounting may fail or read/write exceptions may occur due to permission issues.                                                                                                                                                                                      |
| access_modes | String  | Access permission for the mounted file or folder. The permission can be read/write or read-only. This parameter is valid only when <b>type</b> is set to <b>obsfs</b> . Options: <ul style="list-style-type: none"><li><b>ReadOnlyMany</b>: read-only mode</li><li><b>ReadWriteMany</b>: read/write mode (default value)</li></ul>                                                                                                                                                                                                                                             |

Table 28-502 failed\_reasons parameters

| Parameter | Type               | Description   |
|-----------|--------------------|---------------|
| code      | String             | Error code.   |
| message   | String             | Error message |
| detail    | Map<String,String> | Error details |



**Table 28-503 auto\_stop** parameters

| Parameter      | Type    | Description                                                                           |
|----------------|---------|---------------------------------------------------------------------------------------|
| enable         | Boolean | Whether to enable the auto stop function                                              |
| duration       | Integer | Running duration, in seconds                                                          |
| prompt         | Boolean | Whether to display a prompt again. This parameter is provided for the console to use. |
| stop_timestamp | Integer | Time when the instance stops. The value is a 13-digit timestamp.                      |
| remain_time    | Integer | Remaining time before actual stop, in seconds                                         |

**Table 28-504 workspace** parameters

| Parameter | Type   | Description  |
|-----------|--------|--------------|
| id        | String | Workspace ID |

**Table 28-505 AIProject** parameters

| Parameter | Type   | Description   |
|-----------|--------|---------------|
| id        | String | AI project ID |

**Table 28-506 queuing\_info** parameters

| Parameter | Type   | Description                                                                                             |
|-----------|--------|---------------------------------------------------------------------------------------------------------|
| id        | String | Instance ID                                                                                             |
| name      | String | Instance name                                                                                           |
| de_type   | String | Development environment type. By default, all types are returned.<br>Only <b>Notebook</b> is supported. |

| Parameter       | Type    | Description                                                                                                                                                               |
|-----------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| flavor          | String  | Instance flavor. By default, all types are returned. Options: <ul style="list-style-type: none"><li>• modelarts.vm.cpu.free</li><li>• modelarts.vm.gpu.free</li></ul>     |
| flavor_details  | Object  | Flavor details, which display the flavor information and whether the flavor is sold out For details, see <a href="#">Table 28-496</a> .                                   |
| status          | String  | Instance status. By default, all statuses are returned, including: <ul style="list-style-type: none"><li>• <b>CREATE_QUEUING</b></li><li>• <b>START_QUEUING</b></li></ul> |
| begin_timestamp | Integer | Time when an instance starts queuing. The value is a 13-digit timestamp.                                                                                                  |
| remain_time     | Integer | Left queuing time, in seconds                                                                                                                                             |
| end_timestamp   | Integer | Time when an instance completes queuing. The value is a 13-digit timestamp.                                                                                               |
| rank            | Integer | Ranking of an instance in a queue                                                                                                                                         |

**Table 28-507** user parameters

| Parameter | Type   | Description |
|-----------|--------|-------------|
| id        | String | User ID     |
| name      | String | Username    |

**Table 28-508** repository parameters

| Parameter       | Type   | Description                                                                  |
|-----------------|--------|------------------------------------------------------------------------------|
| id              | String | Repository ID                                                                |
| branch          | String | Repository branch                                                            |
| user_name       | String | Repository username                                                          |
| user_email      | String | Repository user mailbox                                                      |
| type            | String | Repository type. The options are <b>CodeClub</b> and <b>GitHub</b> .         |
| connection_info | Object | Repository link information. For details, see <a href="#">Table 28-509</a> . |

**Table 28-509 connection\_info** parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| protocol   | String | Repository link protocol. The options are <b>ssh</b> and <b>https</b> .  |
| url        | String | Repository link address                                                  |
| credential | Object | Certificate information. For details, see <a href="#">Table 28-510</a> . |

**Table 28-510 credential** parameters

| Parameter       | Type   | Description             |
|-----------------|--------|-------------------------|
| ssh_private_key | String | SSH private certificate |
| access_token    | String | OAuth token of GitHub   |

## Sample Request

The following shows how to create the **notebook-instance** instance with ID **Python3-gpu**.

- Sample request

```
{
 "name": "notebook-instance",
 "description": "",
 "profile_id": "Multi-Engine 1.0 (python3)-gpu",
 "flavor": "modelarts.bm.gpu.v100NV32",
 "spec": {
 "storage": {
 "location": {
 "volume_size": 5
 },
 "type": "evs"
 },
 "auto_stop": {
 "enable": true,
 "duration": 3600
 }
 },
 "workspace": {
 "id": "0"
 }
}
```

## Sample Response

- Successful response

```
{
 "ai_project": {
 "id": "default-ai-project"
 },
 "creation_timestamp": "1594887749962",
 "description": "",
 "flavor": "modelarts.bm.gpu.v100NV32",
 "flavor_details": {
```

```
{
 "name": "modelarts.bm.gpu.v100NV32",
 "params": {
 "CPU": 8,
 "GPU": 1,
 "gpu_type": "v100NV32",
 "memory": "64GiB"
 },
 "status": "onSale",
 "type": "GPU"
},
{
 "id": "DE-7d558ef8-c73d-11ea-964c-0255ac100033",
 "latest_update_timestamp": "1594887749962",
 "name": "notebook-c6fd",
 "profile": {
 "de_type": "Notebook",
 "description": "multi engine, gpu, python 3.6 for notebook",
 "flavor_type": "GPU",
 "id": "Multi-Engine 1.0 (python3)-gpu",
 "name": "Multi-Engine 1.0 (python3)-gpu",
 "provision": {
 "spec": {
 "engine": "CCE",
 "params": {
 "image_name": "mul-kernel-gpu-cuda-cp36",
 "image_tag": "2.0.5-B003",
 "namespace": "atelier"
 }
 }
 },
 "type": "Docker"
 }
},
{
 "spec": {
 "annotations": {
 "target_domain": "https://modelarts-notebook-2.xxxx.com",
 "url": ""
 },
 "auto_stop": {
 "duration": 3600,
 "enable": true,
 "prompt": true
 },
 "storage": {
 "location": {
 "path": "/home/ma-user/work",
 "volume_size": 5
 },
 "type": "evs"
 }
 },
 "status": "CREATING",
 "user": {
 "id": "15dda26361214ca2a5953917d2f48ffb",
 "name": "ops_dev_env"
 },
 "workspace": {
 "id": "0"
 }
}
```

- Failed response

```
{
 "error_message": "The param path needs to end with /.",
 "error_code": "ModelArts.6318"
}
```

## Status Code

For details about the status code, see [Status Code](#).

## 28.2.2 Obtaining Development Environment Instances

### Function

This API is used to obtain the development environment instances that meet the search criteria.

### URI

GET /v1/{project\_id}/demanager/instances?  
de\_type={de\_type}&provision\_type={provision\_type}&status={status}&sortby={sort  
by}&order={order}&offset={offset}&limit={limit}

[Table 28-511](#) describes the required parameters.

**Table 28-511** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-512** query parameters

| Parameter      | Mandatory | Type   | Description                                                                                            |
|----------------|-----------|--------|--------------------------------------------------------------------------------------------------------|
| de_type        | Yes       | String | Development environment type. Only <b>Notebook</b> is supported. The first letter must be capitalized. |
| provision_type | No        | String | Deployment type. Only <b>Docker</b> is supported.                                                      |

| Parameter    | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status       | No        | String  | Instance status. By default, all statuses are returned. Options: <ul style="list-style-type: none"><li>• <b>CREATE_QUEUEING</b>: The instance is queuing for creating free resources.</li><li>• <b>CREATING</b>: The instance is being created.</li><li>• <b>CREATE_FAILED</b>: The instance fails to be created.</li><li>• <b>START_QUEUEING</b>: The instance is queuing for starting free resources.</li><li>• <b>READY_TO_START</b>: The free resources are waiting to be started.</li><li>• <b>STARTING</b>: The instance is being started.</li><li>• <b>RESTARTING</b>: The instance is being restarted.</li><li>• <b>START_FAILED</b>: The instance fails to be started.</li><li>• <b>RUNNING</b>: The instance is running.</li><li>• <b>STOPPING</b>: The instance is being stopped.</li><li>• <b>STOPPED</b>: The instance has been stopped.</li><li>• <b>UNAVAILABLE</b>: The instance is unavailable.</li><li>• <b>DELETED</b>: The instance has been deleted.</li><li>• <b>RESIZING</b>: The instance specifications are being changed.</li><li>• <b>RESIZE_FAILED</b>: The instance specifications fail to be changed.</li></ul> |
| sortby       | No        | String  | Classification standard. The value can be <b>name</b> or <b>creation_timestamp</b> . The default value is <b>name</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| order        | No        | String  | Sorting mode. The value can be <b>asc</b> or <b>desc</b> . The default value is <b>asc</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| offset       | No        | Integer | Start index. The default value is <b>0</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| limit        | No        | Integer | Number of returned result records. The value range is (0, ∞). The default value is <b>0</b> , which indicates that all results are returned.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| workspace_id | No        | String  | Workspace ID. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Parameter  | Mandatory | Type   | Description                                                                                                       |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------|
| show_self  | No        | String | Only the user is displayed. The default value is <b>true</b> .                                                    |
| ai_project | No        | String | AI project ID                                                                                                     |
| pool_id    | No        | String | ID of a dedicated resource pool. This parameter can be used to obtain all instances in a dedicated resource pool. |

## Request Body

None

## Response Body

[Table 28-513](#) describes the response parameters.

**Table 28-513** Parameters

| Parameter   | Type    | Description                                                         |
|-------------|---------|---------------------------------------------------------------------|
| total_count | Integer | Total number of development environments.                           |
| instances   | Array   | Configuration list. For details, see <a href="#">Table 28-514</a> . |

**Table 28-514** instances parameters

| Parameter          | Type   | Description                                                                                                  |
|--------------------|--------|--------------------------------------------------------------------------------------------------------------|
| id                 | String | Instance ID                                                                                                  |
| name               | String | Instance name                                                                                                |
| description        | String | Instance description                                                                                         |
| status             | String | Instance status                                                                                              |
| creation_timestamp | String | Time when an instance is created                                                                             |
| profile            | Object | Configuration information. For details, see <a href="#">Table 28-515</a> .                                   |
| flavor             | String | Instance flavor                                                                                              |
| spec               | Object | Instance definition. For details about parameters of a notebook instance, see <a href="#">Table 28-523</a> . |
| workspace          | Object | Workspace. For details, see <a href="#">Table 28-528</a> .                                                   |

| Parameter               | Type   | Description                                                                                                                                                     |
|-------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| latest_update_timestamp | String | Time when an instance is modified                                                                                                                               |
| flavor_details          | Object | Flavor details. For details, see <a href="#">Table 28-519</a> .                                                                                                 |
| pool                    | Object | Dedicated resource pool. For details, see <a href="#">Table 28-520</a> .                                                                                        |
| ai_project              | Object | AI project. For details, see <a href="#">Table 28-521</a> .                                                                                                     |
| error_code              | String | Error code. For details, see <a href="#">Error Codes</a> .                                                                                                      |
| queuing_info            | Object | Queuing information. For details, see <a href="#">Table 28-529</a> .                                                                                            |
| user                    | Object | User information. For details, see <a href="#">Table 28-530</a> .                                                                                               |
| repository              | Object | Git repository information. For details, see <a href="#">Table 28-531</a> . This parameter cannot be used. It is automatically returned when the API is called. |

**Table 28-515** profile parameters

| Parameter   | Type               | Description                                                             |
|-------------|--------------------|-------------------------------------------------------------------------|
| id          | String             | Configuration ID                                                        |
| name        | String             | Configuration name                                                      |
| description | String             | Configuration description                                               |
| de_type     | String             | Development environment type. Only <b>Notebook</b> is supported.        |
| provision   | Object             | Deployment information. For details, see <a href="#">Table 28-516</a> . |
| labels      | Map<String,String> | Label information, which can be extended                                |
| flavor_type | String             | Hardware, which can be <b>CPU</b> , <b>GPU</b> , or <b>Ascend</b> .     |



**Table 28-516** provision parameters

| Parameter   | Type               | Description                                                                         |
|-------------|--------------------|-------------------------------------------------------------------------------------|
| type        | String             | Deployment type. Only <b>Docker</b> is supported.                                   |
| spec        | Object             | Deployment details. For details, see <a href="#">Table 28-517</a> .                 |
| annotations | Map<String,String> | Label information, which can be extended. By default, this parameter is left blank. |

**Table 28-517** spec parameters

| Parameter | Type   | Description                                                                                             |
|-----------|--------|---------------------------------------------------------------------------------------------------------|
| engine    | String | Deployment engine. Only <b>CCE</b> is supported.                                                        |
| params    | Object | Deployment parameters. Only <b>Docker</b> is supported. For details, see <a href="#">Table 28-518</a> . |

**Table 28-518** Docker deployment parameters

| Parameter   | Type               | Description                                                                         |
|-------------|--------------------|-------------------------------------------------------------------------------------|
| namespace   | String             | SWR organization name, which is globally unique                                     |
| image_name  | String             | Image name                                                                          |
| image_tag   | String             | Image tag                                                                           |
| annotations | Map<String,String> | Label information, which can be extended. By default, this parameter is left blank. |

**Table 28-519** flavor\_details parameters

| Parameter   | Type    | Description                                                                                                            |
|-------------|---------|------------------------------------------------------------------------------------------------------------------------|
| name        | String  | Flavor name                                                                                                            |
| status      | String  | Flavor sales status. Options: <ul style="list-style-type: none"><li>• <b>onSale</b></li><li>• <b>soldOut</b></li></ul> |
| queuing_num | Integer | This parameter is mandatory when <b>promo_type</b> is set to <b>Free</b> and <b>status</b> is set to <b>soldOut</b> .  |

| Parameter       | Type                | Description                                                                                                                                                                          |
|-----------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| queue_left_time | Integer             | Left queuing time, in seconds<br>This parameter is mandatory when <b>promo_type</b> is set to <b>Free</b> and <b>status</b> is set to <b>soldOut</b> .                               |
| storage_list    | Array<Storage type> | Supported storage type. The options are <b>obs</b> , <b>evs</b> , and <b>efs</b> .                                                                                                   |
| is_permitted    | Boolean             | Whether the current user has the permission to use this flavor                                                                                                                       |
| type            | String              | Flavor type. Options: <ul style="list-style-type: none"><li>• <b>GPU</b></li><li>• <b>CPU</b></li><li>• <b>ASCEND</b></li></ul>                                                      |
| params          | Dict                | Parameters that describing flavor                                                                                                                                                    |
| promo_type      | String              | Promotion type. Options: <ul style="list-style-type: none"><li>• <b>Free</b></li><li>• <b>NoDiscount</b></li></ul>                                                                   |
| instance_num    | Integer             | Number of instances of this flavor the current created                                                                                                                               |
| duration        | Integer             | Auto stop time after startup, in seconds                                                                                                                                             |
| store_time      | Integer             | Maximum retention period of an inactive instance of this flavor in the database, in hours<br>The default value is <b>-1</b> , indicating that the instance can be permanently saved. |
| billing_flavor  | String              | Billing specifications. If this field is left blank, the specifications name is used for billing.                                                                                    |
| billing_params  | Integer             | Billing ratio This parameter is mandatory when <b>billing_flavor</b> is specified.                                                                                                   |

Table 28-520 pool parameters

| Parameter | Type   | Description                                                                                                                  |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------|
| id        | String | ID of a resource pool                                                                                                        |
| name      | String | Name of a resource pool                                                                                                      |
| type      | String | Type of a resource pool. <b>USER_DEFINED</b> indicates a dedicated resource pool.                                            |
| owner     | Object | This parameter is mandatory when <b>type</b> is set to <b>USER_DEFINED</b> . For details, see <a href="#">Table 28-522</a> . |

**Table 28-521 AIProject parameters**

| Parameter | Type   | Description   |
|-----------|--------|---------------|
| id        | String | AI project ID |

**Table 28-522 owner parameters**

| Parameter  | Type   | Description |
|------------|--------|-------------|
| project_id | String | Project ID  |

**Table 28-523 notebook parameters**

| Parameter      | Type               | Description                                                                                                                                                                    |
|----------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| extend_storage | Array<Storage>     | Extended storage list. For details, see <a href="#">Table 28-524</a> . Extended storage supports only <b>obsfs</b> and is available only for certain dedicated resource pools. |
| storage        | Object             | Storage path. For details, see <a href="#">Table 28-524</a> .                                                                                                                  |
| auto_stop      | Object             | Auto stop parameter. For details, see <a href="#">Table 28-527</a> .                                                                                                           |
| annotations    | Map<String,String> | Annotations<br>The generated URL cannot be directly accessed.                                                                                                                  |
| failed_reasons | Object             | Cause for a creation or startup failure. See <a href="#">Table 28-526</a> .                                                                                                    |
| extend_params  | Map<String,String> | Extended parameter                                                                                                                                                             |

**Table 28-524 storage parameters**

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                  |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | Yes       | String | Storage type. Only <b>obs</b> , <b>obsfs</b> , and <b>evs</b> are supported. Additionally, <b>obsfs</b> can only be used in certain dedicated resource pools. To mount an OBS parallel file system, submit a service ticket. |
| location  | No        | Object | Storage location. If <b>type</b> is set to <b>obs</b> , this parameter is mandatory. See <a href="#">Table 28-525</a> . By default, this parameter is left blank.                                                            |

Table 28-525 location parameters

| Parameter    | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| path         | No        | String  | Storage path. <ul style="list-style-type: none"><li>If <b>type</b> is set to <b>obs</b>, this parameter is mandatory. The value must be a valid OBS bucket path and end with a slash (/). The value must be a specific directory in an OBS bucket rather than the root directory of an OBS bucket.</li><li>If <b>type</b> is set to <b>obsfs</b>, the parameter value must be a valid bucket name of the OBS parallel file system. (CCE does not support subdirectory mounting.)</li><li>If <b>type</b> is set to <b>evs</b>, this parameter does not need to be set.</li></ul> |
| volume_size  | No        | Integer | EVS disk size. The minimum size is 5 GB and the maximum size is 4,096 GB. The default value is 5 GB. If <b>type</b> is set to <b>obs</b> , this parameter does not need to be set.                                                                                                                                                                                                                                                                                                                                                                                              |
| mount_path   | No        | String  | Mount path in a notebook instance. This parameter is valid only when <b>type</b> is set to <b>obsfs</b> .<br>The default value is <b>/home/ma-user/work</b> .<br>To mount the file system to a specified path, set the value to the subdirectory of <b>/home/ma-user/work</b> . Otherwise, the mounting may fail or read/write exceptions may occur due to permission issues.                                                                                                                                                                                                   |
| access_modes | No        | String  | Access permission for the mounted file or folder. The permission can be read/write or read-only. This parameter is valid only when <b>type</b> is set to <b>obsfs</b> . Options: <ul style="list-style-type: none"><li><b>ReadOnlyMany</b>: read-only mode</li><li><b>ReadWriteMany</b>: read/write mode (default value)</li></ul>                                                                                                                                                                                                                                              |

Table 28-526 failed\_reasons parameters

| Parameter | Type   | Description   |
|-----------|--------|---------------|
| code      | String | Error code    |
| message   | String | Error message |

| Parameter | Type               | Description   |
|-----------|--------------------|---------------|
| detail    | Map<String,String> | Error details |

**Table 28-527 auto\_stop** parameters

| Parameter       | Type    | Description                                                                           |
|-----------------|---------|---------------------------------------------------------------------------------------|
| enable          | Boolean | Whether to enable the auto stop function                                              |
| duration        | Integer | Running duration, in seconds                                                          |
| prompt          | Boolean | Whether to display a prompt again. This parameter is provided for the console to use. |
| stop_time_stamp | Integer | Time when the instance stops. The value is a 13-digit timestamp.                      |
| remain_time     | Integer | Remaining time before actual stop, in seconds                                         |

**Table 28-528 workspace** parameters

| Parameter | Type   | Description  |
|-----------|--------|--------------|
| id        | String | Workspace ID |

**Table 28-529 queuing\_info** parameters

| Parameter | Type   | Description                                                                                                                                                          |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | Instance ID                                                                                                                                                          |
| name      | String | Instance name                                                                                                                                                        |
| de_type   | String | Development environment type. By default, all types are returned.<br>Only <b>Notebook</b> is supported.                                                              |
| flavor    | String | Instance flavor. By default, all types are returned.<br>Options: <ul style="list-style-type: none"><li>modelarts.vm.cpu.free</li><li>modelarts.vm.gpu.free</li></ul> |

| Parameter       | Type    | Description                                                                                                                                                               |
|-----------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| flavor_details  | Object  | Flavor details, which display the flavor information and whether the flavor is sold out For details, see <a href="#">Table 28-519</a> .                                   |
| status          | String  | Instance status. By default, all statuses are returned, including: <ul style="list-style-type: none"><li>• <b>CREATE_QUEUING</b></li><li>• <b>START_QUEUING</b></li></ul> |
| begin_timestamp | Integer | Time when an instance starts queuing. The value is a 13-digit timestamp.                                                                                                  |
| remaining_time  | Integer | Left queuing time, in seconds                                                                                                                                             |
| end_timestamp   | Integer | Time when an instance completes queuing. The value is a 13-digit timestamp.                                                                                               |
| rank            | Integer | Ranking of an instance in a queue                                                                                                                                         |

**Table 28-530** user parameters

| Parameter | Type   | Description |
|-----------|--------|-------------|
| id        | String | User ID     |
| name      | String | Username    |

**Table 28-531** repository parameters

| Parameter       | Type   | Description                                                                  |
|-----------------|--------|------------------------------------------------------------------------------|
| id              | String | Repository ID                                                                |
| branch          | String | Repository branch                                                            |
| user_name       | String | Repository username                                                          |
| user_email      | String | Repository user mailbox                                                      |
| type            | String | Repository type. The options are <b>CodeClub</b> and <b>GitHub</b> .         |
| connection_info | Object | Repository link information. For details, see <a href="#">Table 28-532</a> . |

**Table 28-532 connection\_info** parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| protocol   | String | Repository link protocol. The options are <b>ssh</b> and <b>https</b> .  |
| url        | String | Repository link address                                                  |
| credential | Object | Certificate information. For details, see <a href="#">Table 28-533</a> . |

**Table 28-533 credential** parameters

| Parameter       | Type   | Description             |
|-----------------|--------|-------------------------|
| ssh_private_key | String | SSH private certificate |
| access_token    | String | OAuth token of GitHub   |

## Sample Request

The following shows how to obtain the list of Notebook development environments.

GET https://endpoint/v1/{project\_id}/demanager/instances?de\_type=Notebook

## Sample Response

- Successful response

```
{
 "instances": [
 {
 "ai_project": {
 "id": "default-ai-project"
 },
 "creation_timestamp": "1594887749962",
 "description": "",
 "flavor": "modelarts.bm.gpu.v100NV32",
 "flavor_details": {
 "name": "modelarts.bm.gpu.v100NV32",
 "params": {
 "CPU": 8,
 "GPU": 1,
 "gpu_type": "v100NV32",
 "memory": "64GiB"
 },
 "status": "onSale",
 "type": "GPU"
 },
 "id": "DE-7d558ef8-c73d-11ea-964c-0255ac100033",
 "latest_update_timestamp": "1594887749962",
 "name": "notebook-c6fd",
 "profile": {
 "de_type": "Notebook",
 "description": "multi engine, gpu, python 3.6 for notebook",
 "flavor_type": "GPU",
 "id": "Multi-Engine 1.0 (python3)-gpu",
 "name": "Multi-Engine 1.0 (python3)-gpu",
 "provision": {
```

```
 "annotations": {
 "category": "Multi-Engine 1.0 (python3)",
 "type": "system"
 },
 "spec": {
 "engine": "CCE",
 "params": {
 "annotations": null,
 "image_name": "mul-kernel-gpu-cuda-cp36",
 "image_tag": "2.0.5-B003",
 "namespace": "atelier"
 }
 },
 "type": "Docker"
 },
 "spec": {
 "annotations": {
 "target_domain": "https://modelarts-notebook-2.xxxxxx.com",
 "url": "https://modelarts-lvs-common-lb.xxxxxx.com:32000/modelarts/hubv100/notebook/user/DE-7d558ef8-c73d-11ea-964c-0255ac100033"
 },
 "auto_stop": {
 "duration": 3600,
 "enable": true,
 "prompt": true,
 "remain_time": 3450,
 "stop_timestamp": 1594891408723
 },
 "extend_params": null,
 "failed_reasons": null,
 "extend_storage": null,
 "storage": {
 "location": {
 "path": "/home/ma-user/work",
 "volume_size": 5
 }
 },
 "type": "evs"
 },
 "status": "RUNNING",
 "user": {
 "id": "15dda26361214ca2a5953917d2f48ffb",
 "name": "ops_dev_env"
 },
 "workspace": {
 "id": "0"
 }
},
{
 "ai_project": {
 "id": "default-ai-project"
 },
 "creation_timestamp": "1594883877728",
 "description": "",
 "flavor": "modelarts.vm.cpu.2u",
 "flavor_details": {
 "name": "modelarts.vm.cpu.2u",
 "params": {
 "CPU": 2,
 "GPU": 0,
 "memory": "8GiB"
 }
 },
 "status": "onSale",
 "type": "CPU"
},
{id": "DE-7936a360-c734-11ea-a72b-0255ac100033",
latest_update_timestamp": "1594883877728",
name": "notebook-b1b8",
```



```
{
 "profile": {
 "de_type": "Notebook",
 "description": "multi engine, cpu, python 3.6 for notebook",
 "flavor_type": "CPU",
 "id": "Multi-Engine 1.0 (python3)-cpu",
 "name": "Multi-Engine 1.0 (python3)-cpu",
 "provision": {
 "annotations": {
 "category": "Multi-Engine 1.0 (Python3, Recommended)",
 "type": "system"
 },
 "spec": {
 "engine": "CCE",
 "params": {
 "annotations": null,
 "image_name": "mul-kernel-cpu-cp36",
 "image_tag": "2.0.5-B003",
 "namespace": "atelier"
 }
 }
 },
 "type": "Docker"
 },
 "spec": {
 "annotations": {
 "target_domain": "https://modelarts-notebook.xxxxxx.com",
 "url": ""
 },
 "auto_stop": {
 "duration": 3600,
 "enable": true,
 "prompt": true
 },
 "extend_params": null,
 "failed_reasons": null,
 "storage": {
 "location": {
 "path": "/home/ma-user/work",
 "volume_size": 5
 },
 "type": "evs"
 }
 },
 "status": "STOPPED",
 "user": {
 "id": "15dda26361214ca2a5953917d2f48ffb",
 "name": "ops_dev_env"
 },
 "workspace": {
 "id": "0"
 }
},
"total_count": 2
}
```

## Status Code

For details about the status code, see [Status Code](#).

## 28.2.3 Obtaining Details About a Development Environment Instance

### Function

This API is used to obtain details about a development environment instance.

## URI

GET /v1/{project\_id}/demanager/instances/{instance\_id}

[Table 28-534](#) describes the required parameters.

**Table 28-534** Parameters

| Parameter   | Mandatory | Type   | Description                                                                                                     |
|-------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| instance_id | Yes       | String | Instance ID                                                                                                     |

## Request Body

None

## Response Body

[Table 28-535](#) describes the response parameters.

**Table 28-535** Parameters

| Parameter               | Type   | Description                                                                                   |
|-------------------------|--------|-----------------------------------------------------------------------------------------------|
| id                      | String | Instance ID                                                                                   |
| name                    | String | Instance name                                                                                 |
| description             | String | Instance description                                                                          |
| status                  | String | Instance status                                                                               |
| creation_timestamp      | String | Time when an instance is created                                                              |
| profile                 | Object | Configuration information. For details, see <a href="#">Table 28-536</a> .                    |
| flavor                  | String | Instance flavor                                                                               |
| spec                    | Object | Instance specifications of the notebook type. For details, see <a href="#">Table 28-544</a> . |
| workspace               | Object | Workspace. For details, see <a href="#">Table 28-549</a> .                                    |
| latest_update_timestamp | String | Time when an instance is modified                                                             |
| flavor_details          | Object | Flavor details. See <a href="#">Table 28-540</a> .                                            |

| Parameter    | Type   | Description                                                                                                                                                     |
|--------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| pool         | Object | Dedicated resource pool. See <a href="#">Table 28-541</a> .                                                                                                     |
| ai_project   | Object | AI project. For details, see <a href="#">Table 28-542</a> .                                                                                                     |
| error_code   | String | Error code. For details, see <a href="#">Error Codes</a> .                                                                                                      |
| queuing_info | Object | Queuing information. For details, see <a href="#">Table 28-550</a> .                                                                                            |
| user         | Object | User information. For details, see <a href="#">Table 28-551</a> .                                                                                               |
| repository   | Object | Git repository information. For details, see <a href="#">Table 28-552</a> . This parameter cannot be used. It is automatically returned when the API is called. |

**Table 28-536** profile parameters

| Parameter   | Type               | Description                                                             |
|-------------|--------------------|-------------------------------------------------------------------------|
| id          | String             | Configuration ID                                                        |
| name        | String             | Configuration name                                                      |
| description | String             | Configuration description                                               |
| de_type     | String             | Development environment type. Only <b>Notebook</b> is supported.        |
| provision   | Object             | Deployment information. For details, see <a href="#">Table 28-537</a> . |
| labels      | Map<String,String> | Label information                                                       |
| flavor_type | String             | Hardware, which can be <b>CPU</b> , <b>Ascend</b> , or <b>GPU</b>       |

**Table 28-537** provision parameters

| Parameter | Type   | Description                                       |
|-----------|--------|---------------------------------------------------|
| type      | String | Deployment type. Only <b>Docker</b> is supported. |

| Parameter | Type   | Description                                                         |
|-----------|--------|---------------------------------------------------------------------|
| spec      | Object | Deployment details. For details, see <a href="#">Table 28-538</a> . |

**Table 28-538** spec parameters

| Parameter | Type   | Description                                                                                             |
|-----------|--------|---------------------------------------------------------------------------------------------------------|
| engine    | String | Deployment engine. Only <b>CCE</b> is supported.                                                        |
| params    | Object | Deployment parameters. Only <b>Docker</b> is supported. For details, see <a href="#">Table 28-539</a> . |

**Table 28-539** Docker deployment parameters

| Parameter   | Type                | Description                                                                         |
|-------------|---------------------|-------------------------------------------------------------------------------------|
| namespace   | String              | SWR organization name, which is globally unique                                     |
| image_name  | String              | Image name                                                                          |
| image_tag   | String              | Image tag                                                                           |
| annotations | Map<String, String> | Label information, which can be extended. By default, this parameter is left blank. |

**Table 28-540** flavor\_details parameters

| Parameter       | Type    | Description                                                                                                                                      |
|-----------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| name            | String  | Flavor name                                                                                                                                      |
| status          | String  | Flavor sales status. Options: <ul style="list-style-type: none"><li>• <b>onSale</b></li><li>• <b>soldOut</b></li></ul>                           |
| queuing_num     | Integer | Mandatory when <b>promo_type</b> is set to <b>Free</b> and <b>status</b> is set to <b>soldOut</b>                                                |
| queue_left_time | Integer | Remaining time for being queued, in seconds<br>Mandatory when <b>promo_type</b> is set to <b>Free</b> and <b>status</b> is set to <b>soldOut</b> |

| Parameter      | Type                | Description                                                                                                                                                                      |
|----------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| storage_list   | Array<storageType > | Supported storage types, which default to all                                                                                                                                    |
| is_permitted   | Boolean             | Whether the current user has the permission to use this flavor                                                                                                                   |
| type           | String              | Flavor type. Options: <ul style="list-style-type: none"><li>• GPU</li><li>• CPU</li><li>• ASCEND</li></ul>                                                                       |
| params         | Dict                | Parameters that describe flavors                                                                                                                                                 |
| promo_type     | String              | Promotion type. Options: <ul style="list-style-type: none"><li>• Free</li><li>• NoDiscount</li></ul>                                                                             |
| instance_num   | Integer             | Number of instances of this flavor created by the current user                                                                                                                   |
| duration       | Integer             | Auto stop time after startup, in seconds                                                                                                                                         |
| store_time     | Integer             | Maximum retention period of an inactive instance of this flavor in the database, in hours<br><br>The default value is -1, indicating that the instance can be permanently saved. |
| billing_flavor | String              | Billing specifications. If this field is left blank, the specification name is used for billing.                                                                                 |
| billing_params | Integer             | Billing ratio. This parameter is mandatory if <b>billing_flavor</b> is specified.                                                                                                |

**Table 28-541** pool parameters

| Parameter | Type   | Description                                                                                                                  |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------|
| id        | String | ID of a resource pool                                                                                                        |
| name      | String | Name of a resource pool                                                                                                      |
| type      | String | Type of a resource pool. <b>USER_DEFINED</b> indicates a dedicated resource pool.                                            |
| owner     | Object | This parameter is mandatory when <b>type</b> is set to <b>USER_DEFINED</b> . For details, see <a href="#">Table 28-543</a> . |

**Table 28-542 AIProject** parameters

| Parameter | Type   | Description   |
|-----------|--------|---------------|
| id        | String | AI project ID |

**Table 28-543 owner** parameters

| Parameter  | Type   | Description |
|------------|--------|-------------|
| project_id | String | Project ID  |

**Table 28-544 notebook** parameters

| Parameter                    | Type           | Description                                                                                                                                                                    |
|------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| log_path                     | String         | Path for storing custom image logs                                                                                                                                             |
| custom_script_path           | String         | Path for storing custom initialization scripts used when a notebook instance is started                                                                                        |
| extend_storage               | Array<Storage> | Extended storage list. For details, see <a href="#">Table 28-484</a> . Extended storage supports only <b>obsfs</b> and is available only for certain dedicated resource pools. |
| storage                      | Object         | Storage path. For details, see <a href="#">Table 28-484</a> .                                                                                                                  |
| credential                   | Object         | AK and SK for accessing OBS. For details, see <a href="#">Table 28-510</a> .                                                                                                   |
| repository                   | Object         | Git repository information. For details, see <a href="#">Table 28-508</a> . This parameter cannot be used. It is automatically returned when the API is called.                |
| resource_reserved_time_stamp | Integer        | Time when the resource is reserved                                                                                                                                             |
| auto_stop                    | Object         | Auto stop parameter. For details, see <a href="#">Table 28-503</a> .                                                                                                           |
| failed_reasons               | Object         | Cause for a creation or startup failure. For details, see <a href="#">Table 28-502</a> .                                                                                       |

| Parameter     | Type               | Description                                                   |
|---------------|--------------------|---------------------------------------------------------------|
| annotations   | Map<String,String> | Annotations<br>The generated URL cannot be directly accessed. |
| extend_params | Map<String,String> | Extended parameters                                           |

**Table 28-545 storage parameters**

| Parameter | Type   | Description                                                                                                                                                                                                                    |
|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String | Storage type<br>Only <b>obs</b> , <b>obsfs</b> , and <b>evs</b> are supported. Additionally, <b>obsfs</b> can only be used in certain dedicated resource pools. To mount an OBS parallel file system, submit a service ticket. |
| location  | Object | Storage location. If <b>type</b> is set to <b>obs</b> , this parameter is mandatory. See <a href="#">Table 28-485</a> . By default, this parameter is left blank.                                                              |

**Table 28-546 location parameters**

| Parameter   | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| path        | String  | Storage path <ul style="list-style-type: none"><li>If <b>type</b> is set to <b>obs</b>, this parameter is mandatory. The value must be a valid OBS bucket path and end with a slash (/). The value must be a specific directory in an OBS bucket rather than the root directory of an OBS bucket.</li><li>If <b>type</b> is set to <b>obsfs</b>, the parameter value must be a valid bucket name of the OBS parallel file system. (CCE does not support subdirectory mounting.)</li><li>If <b>type</b> is set to <b>evs</b>, this parameter does not need to be set.</li></ul> |
| volume_size | Integer | EVS disk size. The minimum size is 5 GB and the maximum size is 4096 GB. The default value is 5 GB. If <b>type</b> is set to <b>obs</b> , this parameter does not need to be set.                                                                                                                                                                                                                                                                                                                                                                                              |

| Parameter    | Type   | Description                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| mount_path   | String | Mount path in a notebook instance. This parameter is valid only when <b>type</b> is set to <b>obsfs</b> .<br>The default value is <b>/home/ma-user/work</b> .<br>To mount the file system to a specified path, set the value to the subdirectory of <b>/home/ma-user/work</b> . Otherwise, the mounting may fail or read/write exceptions may occur due to permission issues. |
| access_modes | String | Access permission for the mounted file or folder. The permission can be read/write or read-only. This parameter is valid only when <b>type</b> is set to <b>obsfs</b> . Options: <ul style="list-style-type: none"><li>• <b>ReadOnlyMany</b>: read-only mode</li><li>• <b>ReadWriteMany</b>: read/write mode (default value)</li></ul>                                        |

**Table 28-547 auto\_stop** parameters

| Parameter      | Type    | Description                                                                           |
|----------------|---------|---------------------------------------------------------------------------------------|
| enable         | Boolean | Whether to enable the auto stop function                                              |
| duration       | Integer | Running duration, in seconds                                                          |
| prompt         | Boolean | Whether to display a prompt again. This parameter is provided for the console to use. |
| stop_timestamp | Integer | Time when the instance stops. The value is a 13-digit timestamp.                      |
| remain_time    | Integer | Remaining time before actual stop, in seconds                                         |

**Table 28-548 failed\_reasons** parameters

| Parameter | Type               | Description   |
|-----------|--------------------|---------------|
| code      | String             | Error code    |
| message   | String             | Error message |
| detail    | Map<String,String> | Error details |



**Table 28-549 workspace** parameters

| Parameter | Type   | Description                                                                                                                         |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | Workspace ID. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value. |

**Table 28-550 queuing\_info** parameters

| Parameter       | Type    | Description                                                                                                                                                                         |
|-----------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id              | String  | Instance ID                                                                                                                                                                         |
| name            | String  | Instance name                                                                                                                                                                       |
| de_type         | String  | Development environment type. By default, all types are returned.<br>Only <b>Notebook</b> is supported.                                                                             |
| flavor          | String  | Instance flavor. By default, all types are returned. Options: <ul style="list-style-type: none"><li>• <b>modelarts.vm.cpu.free</b></li><li>• <b>modelarts.vm.gpu.free</b></li></ul> |
| flavor_details  | Object  | Flavor details, which display the flavor information and whether the flavor is sold out. For details, see <a href="#">Table 28-496</a> .                                            |
| status          | String  | Instance status. By default, all statuses are returned. Options: <ul style="list-style-type: none"><li>• <b>CREATE_QUEUING</b></li><li>• <b>START_QUEUING</b></li></ul>             |
| begin_timestamp | Integer | Time when an instance starts queuing, which is a 13-digit timestamp                                                                                                                 |
| remain_time     | Integer | Remaining time for being queued, in seconds                                                                                                                                         |
| end_timestamp   | Integer | Time when an instance completes queuing, which is a 13-digit timestamp                                                                                                              |
| rank            | Integer | Ranking of an instance in a queue                                                                                                                                                   |

**Table 28-551 user** parameters

| Parameter | Type   | Description |
|-----------|--------|-------------|
| id        | String | User ID     |

| Parameter | Type   | Description |
|-----------|--------|-------------|
| name      | String | Username    |

**Table 28-552 repository** parameters

| Parameter       | Type   | Description                                                            |
|-----------------|--------|------------------------------------------------------------------------|
| id              | String | Repository ID                                                          |
| branch          | String | Repository branch                                                      |
| user_name       | String | Repository username                                                    |
| user_email      | String | Repository user mailbox                                                |
| type            | String | Repository type, which can be <b>CodeClub</b> or <b>GitHub</b>         |
| connection_info | Object | Repository connection. For details, see <a href="#">Table 28-509</a> . |

**Table 28-553 connection\_info** parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| protocol   | String | Repository link protocol, which can be <b>ssh</b> or <b>https</b>        |
| url        | String | Repository link address                                                  |
| credential | Object | Certificate information. For details, see <a href="#">Table 28-510</a> . |

**Table 28-554 credential** parameters

| Parameter       | Type   | Description             |
|-----------------|--------|-------------------------|
| ssh_private_key | String | SSH private certificate |
| access_token    | String | OAuth token of GitHub   |

## Sample Request

The following shows how to obtain the details about instance **6fa459ea-ee8a-3ca4-894e-db77e160355e**.

```
GET https://endpoint/v1/{project_id}/demanager/instances/6fa459ea-ee8a-3ca4-894e-db77e160355e
```

## Sample Response

- Successful response

```
{
 "ai_project": {
 "id": "default-ai-project"
 },
 "creation_timestamp": "1594887749962",
 "description": "",
 "flavor": "modelarts.bm.gpu.v100NV32",
 "flavor_details": {
 "name": "modelarts.bm.gpu.v100NV32",
 "params": {
 "CPU": 8,
 "GPU": 1,
 "gpu_type": "v100NV32",
 "memory": "64GiB"
 },
 "status": "onSale",
 "type": "GPU"
 },
 "id": "DE-7d558ef8-c73d-11ea-964c-0255ac100033",
 "latest_update_timestamp": "1594888070775",
 "name": "notebook-c6fd",
 "profile": {
 "de_type": "Notebook",
 "description": "multi engine, gpu, python 3.6 for notebook",
 "flavor_type": "GPU",
 "id": "Multi-Engine 1.0 (python3)-gpu",
 "name": "Multi-Engine 1.0 (python3)-gpu",
 "provision": {
 "spec": {
 "engine": "CCE",
 "params": {
 "annotations": null,
 "image_name": "mul-kernel-gpu-cuda-cp36",
 "image_tag": "2.0.5-B003",
 "namespace": "atelier"
 }
 },
 "type": "Docker"
 },
 "spec": {
 "annotations": {
 "target_domain": "https://modelarts-notebook-2.xxxxxx.com",
 "url": "https://modelarts-lvs-common-lb.xxxxxx.com:32000/modelarts/hubv100/notebook/user/DE-7d558ef8-c73d-11ea-964c-0255ac100033"
 },
 "auto_stop": {
 "duration": 3600,
 "enable": true,
 "prompt": true,
 "remain_time": 3336,
 "stop_timestamp": 1594891408723
 },
 "extend_params": null,
 "failed_reasons": null,
 "repository": null,
 "extend_storage": null,
 "storage": {
 "location": {
 "path": "/home/ma-user/work",
 "volume_size": 5
 },
 "type": "evs"
 }
 },
 "status": "RUNNING",
```

```
"user": {
 "id": "15dda26361214ca2a5953917d2f48ffb",
 "name": "ops_dev_env"
},
"workspace": {
 "id": "0"
}
}
```

- Failed response

```
{
 "error_message": "The instance does not exist.",
 "error_code": "ModelArts.6309"
}
```

## Status Code

For details about the status code, see [Status Code](#).

## 28.2.4 Modifying the Description of a Development Environment Instance

### Function

This API is used to modify the description of a development environment instance or information about the auto stop function.

### URI

PUT /v1/{project\_id}/demanager/instances/{instance\_id}

[Table 28-555](#) describes the required parameters.

**Table 28-555** Parameters

| Parameter   | Mandatory | Type   | Description                                                                                                     |
|-------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| instance_id | Yes       | String | Instance ID                                                                                                     |

### Request Body

[Table 28-556](#) describes the request parameters.

Table 28-556 Parameters

| Parameter   | Mandatory | Type   | Description                                                                                                                            |
|-------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| description | No        | String | Configuration description. The value contains a maximum of 512 characters and cannot contain the following special characters: &<>'"/. |
| spec        | No        | Object | Instance definition. For details, see <a href="#">Table 28-557</a> .                                                                   |

Table 28-557 spec parameters

| Parameter | Mandatory | Type   | Description                                                          |
|-----------|-----------|--------|----------------------------------------------------------------------|
| auto_stop | No        | Object | Auto stop parameter. For details, see <a href="#">Table 28-558</a> . |

Table 28-558 auto\_stop parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                            |
|-----------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| enable    | No        | Boolean | Whether to enable the auto stop function. The value <b>true</b> indicates that the function is enabled and the instance will automatically stop when the running duration is reached. The value <b>false</b> indicates that the function is disabled. The default value is <b>false</b> .                                              |
| duration  | No        | Integer | Running duration, in seconds. The value ranges from 3,600 to 86,400. After this parameter is set, it is valid for each startup. This parameter is mandatory when <b>enable</b> is set to <b>true</b> . If the current instance status is <b>Running</b> , the modifications of this parameter take effect only after the next startup. |
| prompt    | No        | Boolean | Whether to display a prompt again. This parameter is provided for the console to determine whether to display a prompt again. The default value is <b>true</b> .                                                                                                                                                                       |

## Response Body

[Table 28-559](#) describes the response parameters.

**Table 28-559** Response parameters

| Parameter               | Type   | Description                                                                                                                                         |
|-------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| id                      | String | Instance ID                                                                                                                                         |
| name                    | String | Instance name                                                                                                                                       |
| description             | String | Instance description                                                                                                                                |
| status                  | String | Instance status                                                                                                                                     |
| creation_timestamp      | String | Time when an instance is created                                                                                                                    |
| latest_update_timestamp | String | Time when an instance is modified                                                                                                                   |
| profile                 | Object | Configurations. For details, see <a href="#">Table 28-492</a> .                                                                                     |
| flavor                  | String | Instance flavor                                                                                                                                     |
| flavor_details          | Object | Flavor details. For details, see <a href="#">Table 28-496</a> .                                                                                     |
| pool                    | Object | Dedicated resource pool. For details, see <a href="#">Table 28-497</a> .                                                                            |
| spec                    | Object | Instance specifications. For details about notebook, see <a href="#">Table 28-494</a> .                                                             |
| workspace               | Object | Workspace. For details, see <a href="#">Table 28-487</a> .                                                                                          |
| ai_project              | Object | AI project. For details, see <a href="#">Table 28-566</a> .                                                                                         |
| error_code              | String | Error code. For details, see <a href="#">Error Codes</a> .                                                                                          |
| queuing_info            | Object | Queuing information. For details, see <a href="#">Table 28-506</a> .                                                                                |
| user                    | Object | User information. For details, see <a href="#">Table 28-507</a> .                                                                                   |
| repository              | Object | Git repository. For details, see <a href="#">Table 28-508</a> . This parameter cannot be used. It is automatically returned when the API is called. |

**Table 28-560** profile parameters

| Parameter   | Type               | Description                                                             |
|-------------|--------------------|-------------------------------------------------------------------------|
| id          | String             | Configuration ID                                                        |
| name        | String             | Configuration name                                                      |
| description | String             | Configuration description                                               |
| de_type     | String             | Development environment type. Only <b>Notebook</b> is supported.        |
| provision   | Object             | Deployment information. For details, see <a href="#">Table 28-537</a> . |
| labels      | Map<String,String> | Labels                                                                  |
| flavor_type | String             | Hardware, which can be <b>CPU</b> , <b>Ascend</b> , or <b>GPU</b>       |

**Table 28-561** provision parameters

| Parameter | Type   | Description                                                         |
|-----------|--------|---------------------------------------------------------------------|
| type      | String | Deployment type. Only <b>Docker</b> is supported.                   |
| spec      | Object | Deployment details. For details, see <a href="#">Table 28-562</a> . |

**Table 28-562** spec parameters

| Parameter | Type   | Description                                                                                             |
|-----------|--------|---------------------------------------------------------------------------------------------------------|
| engine    | String | Deployment engine. Only <b>CCE</b> is supported.                                                        |
| params    | Object | Deployment parameters. Only <b>Docker</b> is supported. For details, see <a href="#">Table 28-563</a> . |

**Table 28-563** Docker deployment parameters

| Parameter  | Type   | Description                                     |
|------------|--------|-------------------------------------------------|
| namespace  | String | SWR organization name, which is globally unique |
| image_name | String | Image name                                      |

| Parameter   | Type               | Description                                                                         |
|-------------|--------------------|-------------------------------------------------------------------------------------|
| image_tag   | String             | Image tag                                                                           |
| annotations | Map<String,String> | Label information, which can be extended. By default, this parameter is left blank. |

**Table 28-564** flavor\_details parameters

| Parameter       | Type                | Description                                                                                                                                      |
|-----------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| name            | String              | Flavor name                                                                                                                                      |
| status          | String              | Flavor sales status. Options: <ul style="list-style-type: none"><li>• <b>onSale</b></li><li>• <b>soldOut</b></li></ul>                           |
| queuing_num     | Integer             | Mandatory when <b>promo_type</b> is set to <b>Free</b> and <b>status</b> is set to <b>soldOut</b>                                                |
| queue_left_time | Integer             | Remaining time for being queued, in seconds<br>Mandatory when <b>promo_type</b> is set to <b>Free</b> and <b>status</b> is set to <b>soldOut</b> |
| storage_list    | Array<storageType > | Supported storage types, which default to all <ul style="list-style-type: none"><li>• obs</li><li>• evs</li><li>• efs</li></ul>                  |
| is_permitted    | Boolean             | Whether the current user has the permission to use this flavor                                                                                   |
| type            | String              | Flavor type. Options: <ul style="list-style-type: none"><li>• <b>GPU</b></li><li>• <b>CPU</b></li><li>• <b>ASCEND</b></li></ul>                  |
| params          | Dict                | Parameters that describe flavors                                                                                                                 |
| promo_type      | String              | Promotion type. Options: <ul style="list-style-type: none"><li>• <b>Free</b></li><li>• <b>NoDiscount</b></li></ul>                               |
| instance_num    | Integer             | Number of instances of this flavor created by the current user                                                                                   |
| duration        | Integer             | Auto stop time after startup, in seconds                                                                                                         |



| Parameter      | Type    | Description                                                                                                                                                                          |
|----------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| store_time     | Integer | Maximum retention period of an inactive instance of this flavor in the database, in hours<br>The default value is <b>-1</b> , indicating that the instance can be permanently saved. |
| billing_flavor | String  | Billing specifications. If this field is left blank, the specification name is used for billing.                                                                                     |
| billing_params | Integer | Billing ratio. This parameter is mandatory if <b>billing_flavor</b> is specified.                                                                                                    |

**Table 28-565 pool** parameters

| Parameter | Type   | Description                                                                                                                  |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------|
| id        | String | ID of a resource pool                                                                                                        |
| name      | String | Name of a resource pool                                                                                                      |
| type      | String | Type of a resource pool. <b>USER_DEFINED</b> indicates a dedicated resource pool.                                            |
| owner     | Object | This parameter is mandatory when <b>type</b> is set to <b>USER_DEFINED</b> . For details, see <a href="#">Table 28-567</a> . |

**Table 28-566 AIProject** parameters

| Parameter | Type   | Description    |
|-----------|--------|----------------|
| id        | String | AI project ID. |

**Table 28-567 owner** parameters

| Parameter  | Mandatory | Type   | Description |
|------------|-----------|--------|-------------|
| project_id | Yes       | String | Project ID  |

**Table 28-568 notebook** parameters

| Parameter                    | Type               | Description                                                                                                                                                                    |
|------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| log_path                     | String             | Path for storing custom image logs                                                                                                                                             |
| custom_script_path           | String             | Path for storing custom initialization scripts used when a notebook instance is started                                                                                        |
| extend_storage               | Array<Storage>     | Extended storage list. For details, see <a href="#">Table 28-484</a> . Extended storage supports only <b>obsfs</b> and is available only for certain dedicated resource pools. |
| storage                      | Object             | Storage path. For details, see <a href="#">Table 28-484</a> .                                                                                                                  |
| credential                   | Object             | AK and SK for accessing OBS. For details, see <a href="#">Table 28-510</a> .                                                                                                   |
| repository                   | Object             | Git repository information. For details, see <a href="#">Table 28-508</a> . This parameter cannot be used. It is automatically returned when the API is called.                |
| resource_reserved_time_stamp | Integer            | Time when the resource is reserved                                                                                                                                             |
| auto_stop                    | Object             | Auto stop parameter. For details, see <a href="#">Table 28-486</a> .                                                                                                           |
| failed_reasons               | Object             | Cause for a creation or startup failure. For details, see <a href="#">Table 28-502</a> .                                                                                       |
| annotations                  | Map<String,String> | Annotations<br>The generated URL cannot be directly accessed.                                                                                                                  |
| extend_params                | Map<String,String> | Extended parameters                                                                                                                                                            |

Table 28-569 storage parameters

| Parameter | Type   | Description                                                                                                                                                                                                                  |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String | Storage type. Only <b>obs</b> , <b>obsfs</b> , and <b>evs</b> are supported. Additionally, <b>obsfs</b> can only be used in certain dedicated resource pools. To mount an OBS parallel file system, submit a service ticket. |
| location  | Object | Storage location. If <b>type</b> is set to <b>obs</b> , this parameter is mandatory. See <a href="#">Table 28-570</a> . By default, this parameter is left blank.                                                            |

Table 28-570 location parameters

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| path        | No        | String  | Storage path <ul style="list-style-type: none"><li>If <b>type</b> is set to <b>obs</b>, this parameter is mandatory. The value must be a valid OBS bucket path and end with a slash (/). The value must be a specific directory in an OBS bucket rather than the root directory of an OBS bucket.</li><li>If <b>type</b> is set to <b>obsfs</b>, the parameter value must be a valid bucket name of the OBS parallel file system. (CCE does not support subdirectory mounting.)</li><li>If <b>type</b> is set to <b>evs</b>, this parameter does not need to be set.</li></ul> |
| volume_size | No        | Integer | EVS disk size. The minimum size is 5 GB and the maximum size is 4096 GB. The default value is 5 GB. If <b>type</b> is set to <b>obs</b> , this parameter does not need to be set.                                                                                                                                                                                                                                                                                                                                                                                              |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                               |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| mount_path   | No        | String | <p>Mount path in a notebook instance. This parameter is valid only when <b>type</b> is set to <b>obsfs</b>.</p> <p>The default value is <b>/home/ma-user/work</b>.</p> <p>To mount the file system to a specified path, set the value to the subdirectory of <b>/home/ma-user/work</b>. Otherwise, the mounting may fail or read/write exceptions may occur due to permission issues.</p> |
| access_modes | No        | String | <p>Access permission for the mounted file or folder. The permission can be read/write or read-only. This parameter is valid only when <b>type</b> is set to <b>obsfs</b>.</p> <p>Options:</p> <ul style="list-style-type: none"><li>• <b>ReadOnlyMany</b>: read-only mode</li><li>• <b>ReadWriteMany</b>: read/write mode (default value)</li></ul>                                       |

Table 28-571 auto\_stop parameters

| Parameter      | Type    | Description                                                                           |
|----------------|---------|---------------------------------------------------------------------------------------|
| enable         | Boolean | Whether to enable the auto stop function                                              |
| duration       | Integer | Running duration, in seconds                                                          |
| prompt         | Boolean | Whether to display a prompt again. This parameter is provided for the console to use. |
| stop_timestamp | Integer | Time when the instance stops. The value is a 13-digit timestamp.                      |
| remain_time    | Integer | Remaining time before actual stop, in seconds                                         |

Table 28-572 failed\_reasons parameters

| Parameter | Type   | Description |
|-----------|--------|-------------|
| code      | String | Error code  |

| Parameter | Type               | Description   |
|-----------|--------------------|---------------|
| message   | String             | Error message |
| detail    | Map<String,String> | Error details |

**Table 28-573 workspace** parameters

| Parameter | Type   | Description                                                                                                                         |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | Workspace ID. If no workspace is created, the default value is <b>0</b> . If a workspace is created and used, use the actual value. |

**Table 28-574 queuing\_info** parameters

| Parameter       | Type    | Description                                                                                                                                                                         |
|-----------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id              | String  | Instance ID                                                                                                                                                                         |
| name            | String  | Instance name                                                                                                                                                                       |
| de_type         | String  | Development environment type. By default, all types are returned.<br>Only <b>Notebook</b> is supported.                                                                             |
| flavor          | String  | Instance flavor. By default, all types are returned. Options: <ul style="list-style-type: none"><li>• <b>modelarts.vm.cpu.free</b></li><li>• <b>modelarts.vm.gpu.free</b></li></ul> |
| flavor_details  | Object  | Flavor details, which display the flavor information and whether the flavor is sold out. For details, see <a href="#">Table 28-496</a> .                                            |
| status          | String  | Instance status. By default, all statuses are returned. Options: <ul style="list-style-type: none"><li>• <b>CREATE_QUEUING</b></li><li>• <b>START_QUEUING</b></li></ul>             |
| begin_timestamp | Integer | Time when an instance starts queuing, which is a 13-digit timestamp                                                                                                                 |
| remain_time     | Integer | Remaining time for being queued, in seconds                                                                                                                                         |
| end_timestamp   | Integer | Time when an instance completes queuing, which is a 13-digit timestamp                                                                                                              |

| Parameter | Type    | Description                       |
|-----------|---------|-----------------------------------|
| rank      | Integer | Ranking of an instance in a queue |

**Table 28-575 user** parameters

| Parameter | Type   | Description |
|-----------|--------|-------------|
| id        | String | User ID     |
| name      | String | Username    |

**Table 28-576 repository** parameters

| Parameter       | Type   | Description                                                            |
|-----------------|--------|------------------------------------------------------------------------|
| id              | String | Repository ID                                                          |
| branch          | String | Repository branch                                                      |
| user_name       | String | Repository username                                                    |
| user_email      | String | Repository user mailbox                                                |
| type            | String | Repository type, which can be <b>CodeClub</b> or <b>GitHub</b>         |
| connection_info | Object | Repository connection. For details, see <a href="#">Table 28-509</a> . |

**Table 28-577 connection\_info** parameters

| Parameter  | Type   | Description                                                              |
|------------|--------|--------------------------------------------------------------------------|
| protocol   | String | Repository link protocol, which can be <b>ssh</b> or <b>https</b>        |
| url        | String | Repository link address                                                  |
| credential | Object | Certificate information. For details, see <a href="#">Table 28-510</a> . |

**Table 28-578 credential** parameters

| Parameter       | Type   | Description             |
|-----------------|--------|-------------------------|
| ssh_private_key | String | SSH private certificate |
| access_token    | String | OAuth token of GitHub   |

## Sample Request

The following shows how to modify the details about instance **6fa459ea-ee8a-3ca4-894e-db77e160355e**.

```
{
 "description": "machine learning python2.7 notebook"
}
```

## Sample Response

- Successful response

```
{
 "ai_project": {
 "id": "default-ai-project"
 },
 "creation_timestamp": "1594887749962",
 "description": "update notebook",
 "flavor": "modelarts.bm.gpu.v100NV32",
 "flavor_details": {
 "name": "modelarts.bm.gpu.v100NV32",
 "params": {
 "CPU": 8,
 "GPU": 1,
 "gpu_type": "v100NV32",
 "memory": "64GiB"
 },
 "status": "onSale",
 "type": "GPU"
 },
 "id": "DE-7d558ef8-c73d-11ea-964c-0255ac100033",
 "latest_update_timestamp": "1594888143062",
 "name": "notebook-c6fd",
 "profile": {
 "de_type": "Notebook",
 "description": "multi engine, gpu, python 3.6 for notebook",
 "flavor_type": "GPU",
 "id": "Python3-gpu",
 "name": "Python3",
 "provision": {
 "spec": {
 "engine": "CCE",
 "params": {
 "annotations": null,
 "image_name": "mul-kernel-gpu-cuda-cp36",
 "image_tag": "2.0.5-B003",
 "namespace": "atelier"
 }
 }
 },
 "type": "Docker"
 },
 "status": "RUNNING",
 "user": {
 "id": "15dda26361214ca2a5953917d2f48ffb",
 "name": "ops_dev_env"
 },
 "workspace": {
 "id": "0"
 }
}
```

- Failed response

```
{
 "error_message": "The instance does not exist."
}
```

```
{
 "error_code": "ModelArts.6309"
}
```

## Status Code

For details about the status code, see [Status Code](#).

## 28.2.5 Deleting a Development Environment Instance

### Function

This API is used to delete a development environment instance.

### URI

DELETE /v1/{project\_id}/demanager/instances/{instance\_id}

[Table 28-579](#) describes the required parameters.

**Table 28-579** Parameter description

| Parameter   | Mandatory | Type   | Description                                                                                                     |
|-------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| instance_id | Yes       | String | Instance ID                                                                                                     |

### Request Body

None

### Response Body

[Table 28-580](#) describes the response parameters.

**Table 28-580** Parameter description

| Parameter   | Type   | Description |
|-------------|--------|-------------|
| instance_id | String | Instance ID |

### Sample Request

The following shows how to delete instance **6fa459ea-ee8a-3ca4-894e-db77e160355e**.

```
DELETE https://endpoint/v1/{project_id}/demanager/instances/6fa459ea-ee8a-3ca4-894e-db77e160355e
```



## Sample Response

- Successful response

```
{
 "instance_id": "6fa459ea-ee8a-3ca4-894e-db77e160355e"
}
```
- Failed response

```
{
 "error_message": "The instance does not exist.",
 "error_code": "ModelArts.6309"
}
```

## Status Code

For details about the status code, see [Status Code](#).

## 28.2.6 Managing a Development Environment Instance

### Function

This API is used to start, restart, queue, cancel queuing of, or stop a notebook instance.

### URI

POST /v1/{project\_id}/demanager/instances/{instance\_id}/action

[Table 28-581](#) describes the required parameters.

**Table 28-581** Parameters

| Parameter   | Mandator<br>y | Type   | Description                                                                                                     |
|-------------|---------------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id  | Yes           | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| instance_id | Yes           | String | Instance ID                                                                                                     |

### Request Body

[Table 28-582](#) describes the request parameters.

**Table 28-582** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                    |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| action    | Yes       | String | Operation on a development environment instance. The options are as follows: <ul style="list-style-type: none"><li>• <b>start</b></li><li>• <b>stop</b></li><li>• <b>restart</b></li><li>• <b>queue</b></li><li>• <b>dequeue</b></li></ul> <b>queue</b> and <b>dequeue</b> operations can be performed only on free resources. |

## Response Body

[Table 28-583](#) describes the response parameters.

**Table 28-583** Parameters

| Parameter      | Type   | Description                    |
|----------------|--------|--------------------------------|
| current_status | String | Current status of an instance  |
| previous_state | String | Previous status of an instance |

## Sample Request

The following shows how to start instance **6fa459ea-ee8a-3ca4-894e-db77e160355e**.

```
{
 "action": "start"
}
```

## Sample Response

- Successful response

```
{
 "current_status": "STARTING",
 "previous_state": "STOPPED"
}
```

- Failed response

```
{
 "error_message": "The instance does not exist.",
 "error_code": "ModelArts.6309"
}
```

## Status Code

For details about the status code, see [Status Code](#).

# 28.3 Training Management (Old Version)

## 28.3.1 Training Jobs

### 28.3.1.1 Creating a Training Job

#### Function

This API is used to create a training job.

Calling this API is an asynchronous operation. The job status can be obtained by calling the APIs described in [Querying a Training Job List](#) and [Querying the Details About a Training Job Version](#).

#### URI

POST /v1/{project\_id}/training-jobs

[Table 28-584](#) describes the required parameters.

**Table 28-584** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

#### Request Body

[Table 28-585](#) describes the request parameters.

**Table 28-585** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                        |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| job_name  | Yes       | String | Training job name. The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-). |
| job_desc  | No        | String | Description of a training job. The value must contain 0 to 256 characters. By default, this parameter is left blank.               |

| Parameter    | Mandatory | Type   | Description                                                                            |
|--------------|-----------|--------|----------------------------------------------------------------------------------------|
| config       | Yes       | Object | Parameters for creating a training job For details, see <a href="#">Table 28-586</a> . |
| workspace_id | No        | String | Workspace where a job resides. Default value: <b>0</b>                                 |

**Table 28-586** config parameters

| Parameter         | Mandatory | Type          | Description                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|-----------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| worker_server_num | Yes       | Integer       | Number of workers in a training job. Obtain the maximum value from the <b>max_num</b> value returned by the API in <a href="#">Querying Job Resource Specifications</a> .                                                                                                                                                                                           |
| app_url           | Yes       | String        | Code directory of a training job, for example, <b>/usr/app/</b> . This parameter must be used together with <b>boot_file_url</b> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> .                                                                                                           |
| boot_file_url     | Yes       | String        | Boot file of a training job, which needs to be stored in the code directory. Example value: <b>/usr/app/boot.py</b> This parameter must be used together with <b>app_url</b> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> .                                                               |
| parameter         | No        | Array<Object> | Running parameters of a training job. It is a collection of label-value pairs. Values can be customized. <b>label</b> is a parameter name and <b>value</b> is the parameter value. For details, see the sample request. This parameter is a container environment variable when a training job uses a custom image. For details, see <a href="#">Table 28-591</a> . |
| data_url          | No        | String        | OBS URL of the dataset required by a training job. By default, this parameter is left blank. For example, <b>/usr/data/</b> . This parameter cannot be used together with <b>data_source</b> or <b>dataset_id</b> and <b>dataset_version_id</b> . However, one of the parameters must exist.                                                                        |

| Parameter          | Mandatory | Type          | Description                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------|-----------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dataset_id         | No        | String        | Dataset ID of a training job. This parameter must be used together with <b>dataset_version_id</b> , but cannot be used together with <b>data_url</b> or <b>data_source</b> .                                                                                                                                                                                                     |
| dataset_version_id | No        | String        | Dataset version ID of a training job. This parameter must be used together with <b>dataset_id</b> , but cannot be used together with <b>data_url</b> or <b>data_source</b> .                                                                                                                                                                                                     |
| data_source        | No        | Array<Object> | Dataset of a training job. This parameter cannot be used together with <b>data_url</b> or <b>dataset_id</b> and <b>dataset_version_id</b> . For details, see <a href="#">Table 28-587</a> .                                                                                                                                                                                      |
| spec_id            | Yes       | Long          | ID of the resource specifications selected for a training job. Obtain the ID by calling the API described in <a href="#">Querying Job Resource Specifications</a> . When creating a public pool job, ensure that <b>spec_id</b> is mandatory and cannot be used with <b>pool_id</b> .                                                                                            |
| pool_id            | Yes       | String        | ID of a dedicated resource pool. To obtain the ID, do as follows: Log in to the ModelArts management console, choose <b>Dedicated Resource Pools</b> in the navigation pane on the left, and view the resource pool ID in the dedicated resource pool list. When creating a dedicated pool job, ensure that <b>pool_id</b> is mandatory and cannot be used with <b>spec_id</b> . |
| engine_id          | Yes       | Long          | ID of the engine selected for a training job. The default value is <b>1</b> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> . Obtain the ID by calling the API described in <a href="#">Querying Job Engine Specifications</a> .                                                                          |
| model_id           | Yes       | Long          | ID of the built-in model of a training job. Obtain <b>model_id</b> by calling the API described in <a href="#">Querying a Built-in Algorithm</a> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> .                                                                                                        |
| train_url          | No        | String        | OBS URL of the output file of a training job. By default, this parameter is left blank. Example value: <b>/usr/train/</b>                                                                                                                                                                                                                                                        |

| Parameter      | Mandatory | Type       | Description                                                                                                                                                                                                                                                                     |
|----------------|-----------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| log_url        | No        | String     | OBS URL of the logs of a training job. By default, this parameter is left blank.<br>Example value: <b>/usr/log/</b>                                                                                                                                                             |
| user_image_url | No        | String     | SWR URL of a custom image used by a training job. Example value:<br><b>100.125.5.235:20202/jobmng/custom-cpu-base:1.0</b>                                                                                                                                                       |
| user_command   | No        | String     | Boot command used to start the container of a custom image of a training job. The format is <b>bash /home/work/run_train.sh python /home/work/user-job-dir/app/train.py {python_file_parameter}</b> .                                                                           |
| create_version | No        | Boolean    | Whether a version is created when a training job is created <ul style="list-style-type: none"><li>• <b>true</b>: Default value. A version is created when a training job is created.</li><li>• <b>false</b>: A version is not created when a training job is created.</li></ul> |
| volumes        | No        | JSON Array | Storage volume that can be used by a training job. For details, see <a href="#">Table 28-588</a> .                                                                                                                                                                              |

Table 28-587 data\_source parameters

| Parameter       | Mandatory | Type   | Description                                                                                                                                            |
|-----------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| dataset_id      | No        | String | Dataset ID of a training job. This parameter must be used together with <b>dataset_version_id</b> , but cannot be used together with <b>data_url</b> . |
| dataset_version | No        | String | Dataset version ID of a training job. This parameter must be used together with <b>dataset_id</b> , but cannot be used together with <b>data_url</b> . |
| type            | No        | String | Dataset type. The value can be <b>obs</b> or <b>dataset</b> . <b>obs</b> and <b>dataset</b> cannot be used at the same time.                           |

| Parameter | Mandatory | Type   | Description                                                                                                |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------|
| data_url  | No        | String | OBS bucket path. This parameter cannot be used together with <b>dataset_id</b> or <b>dataset_version</b> . |

Table 28-588 volumes parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                  |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| nfs       | No        | Object | Storage volume of the shared file system type. Only the training jobs running in a resource pool with the shared file system network connected support such storage volumes. For details, see <a href="#">Table 28-589</a> . |
| host_path | No        | Object | Storage volume of the host file system type. Only training jobs running in a dedicated resource pool support such storage volumes. For details, see <a href="#">Table 28-590</a> .                                           |

Table 28-589 nfs parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                              |
|-----------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | Yes       | String  | ID of an SFS Turbo file system                                                                                                                                                                                                           |
| src_path  | Yes       | String  | Address of an SFS Turbo file system                                                                                                                                                                                                      |
| dest_path | Yes       | String  | Local path to a training job                                                                                                                                                                                                             |
| read_only | No        | Boolean | Whether <b>dest_path</b> is read-only. The default value is <b>false</b> . <ul style="list-style-type: none"><li>• <b>true</b>: read-only permission</li><li>• <b>false</b>: read/write permission. This is the default value.</li></ul> |

Table 28-590 host\_path parameters

| Parameter | Mandatory | Type   | Description          |
|-----------|-----------|--------|----------------------|
| src_path  | Yes       | String | Local path to a host |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                              |
|-----------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dest_path | Yes       | String  | Local path to a training job                                                                                                                                                                                                             |
| read_only | No        | Boolean | Whether <b>dest_path</b> is read-only. The default value is <b>false</b> . <ul style="list-style-type: none"><li>• <b>true</b>: read-only permission</li><li>• <b>false</b>: read/write permission. This is the default value.</li></ul> |

**Table 28-591** parameter parameters

| Parameter | Mandatory | Type   | Description     |
|-----------|-----------|--------|-----------------|
| label     | No        | String | Parameter name  |
| value     | No        | String | Parameter value |

## Response Body

[Table 28-592](#) describes the response parameters.

**Table 28-592** Parameters

| Parameter     | Type    | Description                                                                                                                                   |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                                                             |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |
| job_id        | Long    | ID of a training job                                                                                                                          |
| job_name      | String  | Name of a training job                                                                                                                        |
| status        | Int     | Status of a training job. For details about the job statuses, see <a href="#">Job Statuses</a> .                                              |
| create_time   | Long    | Timestamp when a training job is created                                                                                                      |
| version_id    | Long    | Version ID of a training job                                                                                                                  |
| resource_id   | String  | Charged resource ID of a training job                                                                                                         |



| Parameter    | Type   | Description                    |
|--------------|--------|--------------------------------|
| version_name | String | Version name of a training job |

## Sample Request

- The following shows how to create training job **TestModelArtsJob** with **This is a ModelArts job** as its description.

```
POST https://endpoint/v1/{project_id}/training-jobs
{
 "job_name": "TestModelArtsJob",
 "job_desc": "This is a ModelArts job",
 "workspace_id": "af261af2218841ec960b01ab3cf1a5fa",
 "config": {
 "worker_server_num": 1,
 "app_url": "/usr/app/",
 "boot_file_url": "/usr/app/boot.py",
 "parameter": [
 {
 "label": "learning_rate",
 "value": "0.01"
 },
 {
 "label": "batch_size",
 "value": "32"
 }
]
 },
 "dataset_id": "38277e62-9e59-48f4-8d89-c8cf41622c24",
 "dataset_version_id": "2ff0d6ba-c480-45ae-be41-09a8369bfc90",
 "spec_id": 1,
 "engine_id": 1,
 "train_url": "/usr/train/",
 "log_url": "/usr/log/",
 "model_id": 1,
 "pool_id": "testpool"
}
```

- The following shows how to create training job **TestModelArtsJob2** using a custom image.

```
POST https://endpoint/v1/{project_id}/training-jobs
{
 "job_name": "TestModelArtsJob2",
 "job_desc": "This is a ModelArts job",
 "workspace_id": "af261af2218841ec960b01ab3cf1a5fa",
 "config": {
 "worker_server_num": 1,
 "data_url": "/usr/data/",
 "app_url": "/usr/app/",
 "boot_file_url": "/usr/app/boot.py",
 "parameter": [
 {
 "label": "CUSTOM_PARAM1",
 "value": "1"
 }
]
 },
 "spec_id": 1,
 "user_command": "bash -x /home/work/run_train.sh python /home/work/user-job-dir/app/mnist/mnist_softmax.py --data_url /home/work/user-job-dir/app/mnist_data",
 "user_image_url": "100.125.5.235:2020/jobmng/custom-cpu-base:1.0",
 "train_url": "/usr/train/",
 "log_url": "/usr/log/",
 "model_id": 1,
 "pool_id": "testpool",
}
```

```
 "engine_id": 1
 }
}
```

- The following shows how to create training job **TestModelArtsJob3** using disk storage.

```
POST https://endpoint/v1/{project_id}/training-jobs
{
 "job_name": "TestModelArtsJob3",
 "job_desc": "This is a ModelArts job",
 "workspace_id": "af261af2218841ec960b01ab3cf1a5fa",
 "config": {
 "worker_server_num": 1,
 "app_url": "/usr/app/",
 "boot_file_url": "/usr/app/boot.py",
 "parameter": [
 {
 "label": "learning_rate",
 "value": "0.01"
 },
 {
 "label": "batch_size",
 "value": "32"
 }
],
 "dataset_id": "38277e62-9e59-48f4-8d89-c8cf41622c24",
 "dataset_version_id": "2ff0d6ba-c480-45ae-be41-09a8369bfc90",
 "spec_id": 1,
 "engine_id": 1,
 "train_url": "/usr/train/",
 "log_url": "/usr/log/",
 "model_id": 1,
 "pool_id": "testpool",
 "volumes": [
 {
 "nfs": {
 "id": "43b37236-9afa-4855-8174-32254b9562e7",
 "src_path": "192.168.8.150:/",
 "dest_path": "/home/work/nas",
 "read_only": false
 }
 },
 {
 "host_path": {
 "src_path": "/root/work",
 "dest_path": "/home/mind",
 "read_only": false
 }
 }
]
 }
}
```

## Sample Response

- Successful response

```
{
 "is_success": true,
 "job_id": "10",
 "job_name": "TestModelArtsJob",
 "status": "1",
 "create_time": "1524189990635",
 "version_id": "10",
 "version_name": "V0001",
 "resource_id": "jobafd08896"
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "Job name:TestModelArtsJob is existed",
 "error_code": "ModelArts.0103"
}
```

## Status Code

For details about the status code, see [Status Code](#).

### 28.3.1.2 Querying a Training Job List

## Function

This API is used to obtain the created training jobs that meet the search criteria.

## URI

GET /v1/{project\_id}/training-jobs

[Table 28-593](#) describes the required parameters.

**Table 28-593** URI parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-594** Query parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                         |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | No        | String  | Job status. By default, all job statuses are returned. For example, to obtain failed jobs, set the value of <b>status</b> to <b>3</b> , <b>5</b> , <b>6</b> , or <b>13</b> . For details about the job statuses, see <a href="#">Job Statuses</a> . |
| per_page  | No        | Integer | Number of jobs displayed on each page. The value range is [1, 1000]. Default value: <b>10</b>                                                                                                                                                       |
| page      | No        | Integer | Index of the page to be queried. Default value: <b>1</b> The value range is [1, 65535].                                                                                                                                                             |

| Parameter      | Mandatory | Type   | Description                                                                                                                                                                                     |
|----------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sortBy         | No        | String | Sorting mode of the query. The value can be <b>job_name</b> , <b>job_desc</b> , <b>status</b> , <b>duration</b> , <b>version_count</b> , or <b>create_time</b> . Default value: <b>job_name</b> |
| order          | No        | String | Sorting order. Options: <ul style="list-style-type: none"><li>• <b>asc</b>: ascending order. It is the default value.</li><li>• <b>desc</b>: descending order</li></ul>                         |
| search_content | No        | String | Search content, for example, a training job name. The value must contain 0 to 64 characters. By default, this parameter is left blank.                                                          |
| workspace_id   | No        | String | Workspace where a job resides. Default value: <b>0</b>                                                                                                                                          |

## Request Body

None

## Response Body

[Table 28-595](#) describes the response parameters.

**Table 28-595** Parameters

| Parameter       | Type              | Description                                                                                                                                   |
|-----------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| is_success      | Boolean           | Whether the request is successful                                                                                                             |
| error_message   | String            | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |
| error_code      | String            | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |
| job_total_count | Integer           | Total number of created jobs                                                                                                                  |
| job_count_limit | Integer           | Number of training jobs that can be created                                                                                                   |
| jobs            | <b>jobs</b> array | Attributes of a training job. For details, see <a href="#">Table 28-596</a> .                                                                 |

| Parameter | Type    | Description                     |
|-----------|---------|---------------------------------|
| quotas    | Integer | Maximum number of training jobs |

**Table 28-596 jobs** parameters

| Parameter     | Type   | Description                                                                                      |
|---------------|--------|--------------------------------------------------------------------------------------------------|
| job_id        | Long   | ID of a training job                                                                             |
| job_name      | String | Name of a training job                                                                           |
| version_id    | Long   | Version ID of a training job                                                                     |
| status        | Int    | Status of a training job. For details about the job statuses, see <a href="#">Job Statuses</a> . |
| create_time   | Long   | Timestamp when a training job is created                                                         |
| duration      | Long   | Training job running duration, in milliseconds                                                   |
| job_desc      | String | Description of a training job                                                                    |
| version_count | Long   | Number of versions of a training job                                                             |

## Sample Request

The following shows how to obtain training jobs in the **7** state and with name containing **job** on the first page. Each page displays 10 records sorted by **job\_name** in ascending order.

```
GET https://endpoint/v1/{project_id}/training-jobs?
status=7&per_page=10&page=1&sortBy=job_name&order=asc&search_content=job
```

## Sample Response

- Successful response

```
{
 "is_success": true,
 "quotas": 5,
 "job_total_count": 1,
 "job_count_limit": 3,
 "jobs": [
 {
 "job_id": 10,
 "job_name": "testModelArtsJob",
 "version_id": 10,
 "status": 10,
 "create_time": 1524189990635,
 "duration": 532003,
 "job_desc": "This is ModelArts job",
 "version_count": 5
 }
]
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Status Code](#).

### 28.3.1.3 Querying the Details About a Training Job Version

## Function

This API is used to obtain the details about a specified training job based on the job ID.

## URI

GET /v1/{project\_id}/training-jobs/{job\_id}/versions/{version\_id}

[Table 28-597](#) describes the required parameters.

**Table 28-597** Parameters

| Parameter  | Mandator<br>y | Type   | Description                                                                                                     |
|------------|---------------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes           | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes           | Long   | ID of a training job                                                                                            |
| version_id | Yes           | Long   | Version ID of a training job                                                                                    |

## Request Body

None

## Response Body

[Table 28-598](#) describes the response parameters.

**Table 28-598** Parameters

| Parameter  | Type    | Description                       |
|------------|---------|-----------------------------------|
| is_success | Boolean | Whether the request is successful |
| job_id     | Long    | ID of a training job              |

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_name       | String  | Name of a training job                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| job_desc       | String  | Description of a training job                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| version_id     | Long    | Version ID of a training job                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| version_name   | String  | Version name of a training job                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| pre_version_id | Long    | Name of the previous version of a training job                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| engine_type    | Integer | Engine type of a training job. The mapping between <b>engine_type</b> and <b>engine_name</b> is as follows: <ul style="list-style-type: none"><li>• <b>engine_type: 1, engine_name: TensorFlow</b></li><li>• <b>engine_type: 2, engine_name: MXNet</b></li><li>• <b>engine_type: 3, engine_name: Ray</b></li><li>• <b>engine_type: 4, engine_name: Caffe</b></li><li>• <b>engine_type: 5, engine_name: Spark_MLLib</b></li><li>• <b>engine_type: 9, engine_name: XGBoost-Sklearn</b></li><li>• <b>engine_type: 10, engine_name: PyTorch</b></li><li>• <b>engine_type: 12, engine_name: Horovod</b></li></ul> |
| engine_name    | String  | Name of the engine selected for a training job. Currently, the following engines are supported: <ul style="list-style-type: none"><li>• Ascend-Powered-Engine</li><li>• Caffe</li><li>• Horovod</li><li>• MXNet</li><li>• PyTorch</li><li>• Ray</li><li>• Spark_MLLib</li><li>• TensorFlow</li><li>• XGBoost-Sklearn</li><li>• MindSpore-GPU</li></ul>                                                                                                                                                                                                                                                       |
| engine_id      | Long    | ID of the engine selected for a training job                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| engine_version | String  | Version of the engine selected for a training job                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| status         | Integer | Status of a training job. For details about the job statuses, see <a href="#">Job Statuses</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| app_url        | String  | Code directory of a training job                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| boot_file_url  | String  | Boot file of a training job                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| Parameter          | Type          | Description                                                                                                                                                                       |
|--------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| create_time        | Long          | Time when a training job is created                                                                                                                                               |
| parameter          | Array<Object> | Running parameters of a training job. This parameter is a container environment variable when a training job uses a custom image. For details, see <a href="#">Table 28-599</a> . |
| duration           | Long          | Training job running duration, in milliseconds                                                                                                                                    |
| spec_id            | Long          | ID of the resource specifications selected for a training job                                                                                                                     |
| core               | String        | Number of cores of the resource specifications                                                                                                                                    |
| cpu                | String        | CPU memory of the resource specifications                                                                                                                                         |
| gpu_num            | Integer       | Number of GPUs of the resource specifications                                                                                                                                     |
| gpu_type           | String        | GPU type of the resource specifications                                                                                                                                           |
| worker_server_num  | Integer       | Number of workers in a training job                                                                                                                                               |
| data_url           | String        | Dataset of a training job                                                                                                                                                         |
| train_url          | String        | OBS path of the training job output file                                                                                                                                          |
| log_url            | String        | OBS URL of the logs of a training job. By default, this parameter is left blank. Example value: <b>/usr/train/</b>                                                                |
| dataset_version_id | String        | Dataset version ID of a training job                                                                                                                                              |
| dataset_id         | String        | Dataset ID of a training job                                                                                                                                                      |
| data_source        | Array<Object> | Dataset of a training job. For details, see <a href="#">Table 28-600</a> .                                                                                                        |
| model_id           | Long          | Model ID of a training job                                                                                                                                                        |
| model_metric_list  | String        | Model metrics of a training job. For details, see <a href="#">Table 28-601</a> .                                                                                                  |
| system_metric_list | Object        | System monitoring metrics of a training job. For details, see <a href="#">Table 28-602</a> .                                                                                      |
| user_image_url     | String        | SWR URL of a custom image used by a training job                                                                                                                                  |
| user_command       | String        | Boot command used to start the container of a custom image of a training job                                                                                                      |
| resource_id        | String        | Charged resource ID of a training job                                                                                                                                             |
| dataset_name       | String        | Dataset of a training job                                                                                                                                                         |



| Parameter            | Type          | Description                                                                                        |
|----------------------|---------------|----------------------------------------------------------------------------------------------------|
| spec_code            | String        | Resource specifications selected for a training job                                                |
| start_time           | Long          | Training start time                                                                                |
| volumes              | Array<Object> | Storage volume that can be used by a training job. For details, see <a href="#">Table 28-607</a> . |
| dataset_version_name | String        | Dataset of a training job                                                                          |
| pool_name            | String        | Name of a resource pool                                                                            |
| pool_id              | String        | ID of a resource pool                                                                              |
| nas_mount_path       | String        | Local mount path of SFS Turbo (NAS). Example value: <b>/home/work/nas</b>                          |
| nas_share_addr       | String        | Shared path of SFS Turbo (NAS). Example value: <b>192.168.8.150:/</b>                              |
| nas_type             | String        | Only NFS is supported. Example value: <b>nfs</b>                                                   |

**Table 28-599 parameter** parameters

| Parameter | Type   | Description     |
|-----------|--------|-----------------|
| label     | String | Parameter name  |
| value     | String | Parameter value |

**Table 28-600 data\_source** parameters

| Parameter       | Type   | Description                                                                                                                                                        |
|-----------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dataset_id      | String | Dataset ID of a training job                                                                                                                                       |
| dataset_version | String | Dataset version ID of a training job                                                                                                                               |
| type            | String | Dataset type <ul style="list-style-type: none"><li>• <b>obs</b>: Data from OBS is used.</li><li>• <b>dataset</b>: Data from a specified dataset is used.</li></ul> |
| data_url        | String | OBS bucket path                                                                                                                                                    |

**Table 28-601 model\_metric\_list** parameters

| Parameter    | Type       | Description                                                                                               |
|--------------|------------|-----------------------------------------------------------------------------------------------------------|
| metric       | JSON Array | Validation metrics of a classification of a training job. For details, see <a href="#">Table 28-603</a> . |
| total_metric | JSON       | Overall validation parameters of a training job. For details, see <a href="#">Table 28-605</a> .          |

**Table 28-602 system\_metric\_list** parameters

| Parameter | Type  | Description                    |
|-----------|-------|--------------------------------|
| cpuUsage  | Array | CPU usage of a training job    |
| memUsage  | Array | Memory usage of a training job |
| gpuUtil   | Array | GPU usage of a training job    |

**Table 28-603 metric** parameters

| Parameter       | Type | Description                                                                                               |
|-----------------|------|-----------------------------------------------------------------------------------------------------------|
| metric_values   | JSON | Validation metrics of a classification of a training job. For details, see <a href="#">Table 28-604</a> . |
| reserved_data   | JSON | Reserved parameter                                                                                        |
| metric_metadata | JSON | Classification of a training job, including the classification ID and name                                |

**Table 28-604 metric\_values** parameters

| Parameter | Type  | Description                                     |
|-----------|-------|-------------------------------------------------|
| recall    | Float | Recall of a classification of a training job    |
| precision | Float | Precision of a classification of a training job |
| accuracy  | Float | Accuracy of a classification of a training job  |

**Table 28-605 total\_metric** parameters

| Parameter             | Type | Description        |
|-----------------------|------|--------------------|
| total_metric_metadata | JSON | Reserved parameter |

| Parameter           | Type | Description                                                                                   |
|---------------------|------|-----------------------------------------------------------------------------------------------|
| total_reserved_data | JSON | Reserved parameter                                                                            |
| total_metric_values | JSON | Overall validation metrics of a training job. For details, see <a href="#">Table 28-606</a> . |

**Table 28-606 total\_metric\_values** parameters

| Parameter | Type  | Description                       |
|-----------|-------|-----------------------------------|
| f1_score  | Float | F1 score of a training job        |
| recall    | Float | Total recall of a training job    |
| precision | Float | Total precision of a training job |
| accuracy  | Float | Total accuracy of a training job  |

**Table 28-607 volumes** parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                  |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| nfs       | No        | Object | Storage volume of the shared file system type. Only the training jobs running in the resource pool with a shared file system network connected support such storage volumes. For details, see <a href="#">Table 28-589</a> . |
| host_path | No        | Object | Storage volume of the host file system type. Only training jobs running in a dedicated resource pool support such storage volumes. For details, see <a href="#">Table 28-590</a> .                                           |

**Table 28-608 nfs** parameters

| Parameter | Mandatory | Type   | Description                      |
|-----------|-----------|--------|----------------------------------|
| id        | Yes       | String | ID of an SFS Turbo file system   |
| src_path  | Yes       | String | Path to an SFS Turbo file system |
| dest_path | Yes       | String | Local path to a training job     |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                              |
|-----------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| read_only | No        | Boolean | Whether <b>dest_path</b> is read-only. The default value is <b>false</b> . <ul style="list-style-type: none"><li>• <b>true</b>: read-only permission</li><li>• <b>false</b>: read/write permission. This is the default value.</li></ul> |

Table 28-609 host\_path parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                              |
|-----------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| src_path  | Yes       | String  | Local path to a host                                                                                                                                                                                                                     |
| dest_path | Yes       | String  | Local path to a training job                                                                                                                                                                                                             |
| read_only | No        | Boolean | Whether <b>dest_path</b> is read-only. The default value is <b>false</b> . <ul style="list-style-type: none"><li>• <b>true</b>: read-only permission</li><li>• <b>false</b>: read/write permission. This is the default value.</li></ul> |

## Sample Request

The following shows how to obtain the details about the job whose **job\_id** is **10** and **version\_id** is **10**.

```
GET https://endpoint/v1/{project_id}/training-jobs/10/versions/10
```

## Sample Response

- Successful response

```
{
 "is_success": true,
 "job_id": 10,
 "job_name": "TestModelArtsJob",
 "job_desc": "TestModelArtsJob desc",
 "version_id": 10,
 "version_name": "jobVersion",
 "pre_version_id": 5,
 "engine_type": 1,
 "engine_name": "TensorFlow",
 "engine_id": 1,
 "engine_version": "TF-1.4.0-python2.7",
 "status": 10,
 "app_url": "/usr/app/",
 "boot_file_url": "/usr/app/boot.py",
 "create_time": 1524189990635,
 "parameter": [
 {
 "label": "learning_rate",
 "value": 0.01
 }
]
}
```

```
,
"duration": 532003,
"spec_id": 1,
"core": 2,
"cpu": 8,
"gpu_num": 2,
"gpu_type": "Pnt1",
"worker_server_num": 1,
"data_url": "/usr/data/",
"train_url": "/usr/train/",
"log_url": "/usr/log/",
"dataset_version_id": "2ff0d6ba-c480-45ae-be41-09a8369bfc90",
"dataset_id": "38277e62-9e59-48f4-8d89-c8cf41622c24",
"data_source": [
 {
 "type": "obs",
 "data_url": "/qianjiajun-test/minst/data/"
 }
],
"user_image_url": "100.125.5.235:20202/jobmng/custom-cpu-base:1.0",
"user_command": "bash -x /home/work/run_train.sh python /home/work/user-job-dir/app/mnist/
mnist_softmax.py --data_url /home/work/user-job-dir/app/mnist_data",
"model_id": 1,
"model_metric_list": "{\\\"metric\\\":{\\\"metric_values\\\":{\\\"recall\\\":0.005833,\\\"precision
\\\":0.000178,\\\"accuracy\\\":0.000937},\\\"reserved_data\\\":{\\\"metric_meta\\\":{\\\"class_name\\\":0,\\\"class_id
\\\":0}}},\\\"total_metric\\\":{\\\"total_metric_meta\\\":{\\\"total_reserved_data\\\":{\\\"total_metric_values\\\":
{\\\"recall\\\":0.005833,\\\"id\\\":0,\\\"precision\\\":0.000178,\\\"accuracy\\\":0.000937}}}}",
"system_metric_list": {
 "cpuUsage": [
 "0",
 "3.10",
 "5.76",
 "0",
 "0",
 "0",
 "0"
],
 "memUsage": [
 "0",
 "0.77",
 "2.09",
 "0",
 "0",
 "0",
 "0"
],
 "gpuUtil": [
 "0",
 "0.25",
 "0.88",
 "0",
 "0",
 "0",
 "0"
]
},
"dataset_name": "dataset-test",
"dataset_version_name": "dataset-version-test",
"spec_code": "xxxxxxx",
"start_time": 1563172362000,
"volumes": [
 {
 "nfs": {
 "id": "43b37236-9afa-4855-8174-32254b9562e7",
 "src_path": "192.168.8.150:/",
 "dest_path": "/home/work/nas",
 "read_only": false
 }
 }
],
}
```

```
{
 "host_path": {
 "src_path": "/root/work",
 "dest_path": "/home/mind",
 "read_only": false
 }
},
"pool_id": "pool9928813f",
"pool_name": "pnt1",
"nas_mount_path": "/home/work/nas",
"nas_share_addr": "192.168.8.150:/",
"nas_type": "nfs"
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Status Code](#).

### 28.3.1.4 Deleting a Version of a Training Job

#### Function

This API is used to delete a version of a training job.

Calling this API is an asynchronous operation. The job status can be obtained by calling the APIs described in [Querying a Training Job List](#) and [Querying the Details About a Training Job Version](#).

#### URI

DELETE /v1/{project\_id}/training-jobs/{job\_id}/versions/{version\_id}

[Table 28-610](#) describes the required parameters.

**Table 28-610** Parameters

| Parameter  | Mandator<br>y | Type   | Description                                                                                                     |
|------------|---------------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes           | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes           | Long   | ID of a training job                                                                                            |
| version_id | Yes           | Long   | Version ID of a training job                                                                                    |

#### Request Body

None

## Response Body

[Table 28-611](#) describes the response parameters.

**Table 28-611** Parameters

| Parameter     | Type    | Description                                                                                                                                |
|---------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                                                          |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                          |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> . This parameter is not included when the API call succeeds. |

## Sample Request

```
DELETE https://endpoint/v1/{project_id}/training-jobs/10/versions/10
```

## Sample Response

- Successful response

```
{
 "is_success": true
}
```
- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Status Code](#).

### 28.3.1.5 Obtaining Training Job Versions

#### Function

This API is used to obtain the version of a specified training job based on the job ID.

#### URI

```
GET /v1/{project_id}/training-jobs/{job_id}/versions
```

[Table 28-612](#) describes the required parameters.

**Table 28-612** URI parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes       | Long   | ID of a training job                                                                                            |

**Table 28-613** Query parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                        |
|-----------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| per_page  | No        | Integer | Number of job parameters displayed on each page. The value range is [1, 1000]. Default value: <b>10</b>                                                                                                                            |
| page      | No        | Integer | Index of the page to be queried <ul style="list-style-type: none"><li>If paging is required, set <b>page</b> to <b>1</b>.</li><li>The default value of <b>page</b> is <b>0</b>, indicating that paging is not supported.</li></ul> |

## Request Body

None

## Response Body

[Table 28-614](#) describes the response parameters.

**Table 28-614** Parameters

| Parameter     | Type    | Description                                                                                                                                   |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                                                             |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |
| job_id        | Long    | ID of a training job                                                                                                                          |



| Parameter     | Type       | Description                                                                                                                                      |
|---------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| job_name      | String     | Name of a training job                                                                                                                           |
| job_desc      | String     | Description of a training job                                                                                                                    |
| version_count | Long       | Number of versions of a training job                                                                                                             |
| versions      | JSON Array | Version parameters of a training job. For details, see the sample response. For details about the attributes, see <a href="#">Table 28-615</a> . |

**Table 28-615** versions parameters

| Parameter      | Type       | Description                                                                                                                                                                       |
|----------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| version_id     | Long       | Version ID of a training job                                                                                                                                                      |
| version_name   | String     | Version name of a training job                                                                                                                                                    |
| pre_version_id | Long       | ID of the previous version of a training job                                                                                                                                      |
| engine_type    | Long       | Engine type of a training job                                                                                                                                                     |
| engine_name    | String     | Name of the engine selected for a training job                                                                                                                                    |
| engine_id      | Long       | ID of the engine selected for a training job                                                                                                                                      |
| engine_version | String     | Version of the engine selected for a training job                                                                                                                                 |
| status         | Int        | Status of a training job                                                                                                                                                          |
| app_url        | String     | Code directory of a training job                                                                                                                                                  |
| boot_file_url  | String     | Boot file of a training job                                                                                                                                                       |
| create_time    | Long       | Time when a training job is created                                                                                                                                               |
| parameter      | JSON Array | Running parameters of a training job. This parameter is a container environment variable when a training job uses a custom image. For details, see <a href="#">Table 28-616</a> . |
| duration       | Long       | Training job running duration, in milliseconds                                                                                                                                    |
| spec_id        | Long       | ID of the resource specifications selected for a training job                                                                                                                     |
| core           | String     | Number of cores of the resource specifications                                                                                                                                    |
| cpu            | String     | CPU memory of the resource specifications                                                                                                                                         |

| Parameter            | Type       | Description                                                                                                      |
|----------------------|------------|------------------------------------------------------------------------------------------------------------------|
| gpu                  | Boolean    | Whether to use GPUs                                                                                              |
| gpu_num              | Integer    | Number of GPUs of the resource specifications                                                                    |
| gpu_type             | String     | GPU type of the resource specifications                                                                          |
| worker_server_num    | Integer    | Number of workers in a training job                                                                              |
| data_url             | String     | Dataset of a training job                                                                                        |
| train_url            | String     | OBS path of the training job output file                                                                         |
| log_url              | String     | OBS URL of the logs of a training job. By default, this parameter is left blank. Example value: <b>/usr/log/</b> |
| dataset_version_id   | String     | Dataset version ID of a training job                                                                             |
| dataset_id           | String     | Dataset ID of a training job                                                                                     |
| data_source          | JSON Array | Dataset of a training job. For details, see <a href="#">Table 28-617</a> .                                       |
| model_id             | Long       | Model ID of a training job                                                                                       |
| model_metric_list    | String     | Model metrics of a training job. For details, see <a href="#">Table 28-618</a> .                                 |
| system_metric_list   | String     | System monitoring metrics of a training job. For details, see <a href="#">Table 28-619</a> .                     |
| user_image_url       | String     | SWR URL of a custom image used by a training job                                                                 |
| user_command         | String     | Boot command used to start the container of a custom image of a training job                                     |
| resource_id          | String     | Charged resource ID of a training job                                                                            |
| dataset_name         | String     | Dataset of a training job                                                                                        |
| start_time           | Long       | Training start time                                                                                              |
| volumes              | JSON Array | Storage volume that can be used by a training job. For details, see <a href="#">Table 28-624</a> .               |
| dataset_version_name | String     | Dataset of a training job                                                                                        |
| pool_name            | String     | Name of a resource pool                                                                                          |
| pool_id              | String     | ID of a resource pool                                                                                            |
| nas_mount_path       | String     | Local mount path of SFS Turbo (NAS). Example value: <b>/home/work/nas</b>                                        |

| Parameter         | Type   | Description                                                           |
|-------------------|--------|-----------------------------------------------------------------------|
| nas_share_address | String | Shared path of SFS Turbo (NAS). Example value: <b>192.168.8.150:/</b> |
| nas_type          | String | Only NFS is supported. Example value: <b>nfs</b>                      |

**Table 28-616 parameter** parameters

| Parameter | Type   | Description     |
|-----------|--------|-----------------|
| label     | String | Parameter name  |
| value     | String | Parameter value |

**Table 28-617 data\_source** parameters

| Parameter       | Type   | Description                                                                                                                                                        |
|-----------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dataset_id      | String | Dataset ID of a training job                                                                                                                                       |
| dataset_version | String | Dataset version ID of a training job                                                                                                                               |
| type            | String | Dataset type <ul style="list-style-type: none"><li>• <b>obs</b>: Data from OBS is used.</li><li>• <b>dataset</b>: Data from a specified dataset is used.</li></ul> |
| data_url        | String | OBS bucket path                                                                                                                                                    |

**Table 28-618 model\_metric\_list** parameters

| Parameter    | Type       | Description                                                                                      |
|--------------|------------|--------------------------------------------------------------------------------------------------|
| metric       | JSON Array | Validation metrics of a classification of a training job.                                        |
| total_metric | JSON       | Overall validation parameters of a training job. For details, see <a href="#">Table 28-622</a> . |

**Table 28-619 system\_metric\_list** parameters

| Parameter | Type  | Description                    |
|-----------|-------|--------------------------------|
| cpuUsage  | Array | CPU usage of a training job    |
| memUsage  | Array | Memory usage of a training job |

| Parameter | Type  | Description                 |
|-----------|-------|-----------------------------|
| gpuUtil   | Array | GPU usage of a training job |

**Table 28-620** metric parameters

| Parameter       | Type | Description                                                                                               |
|-----------------|------|-----------------------------------------------------------------------------------------------------------|
| metric_values   | JSON | Validation metrics of a classification of a training job. For details, see <a href="#">Table 28-621</a> . |
| reserved_data   | JSON | Reserved parameter                                                                                        |
| metric_metadata | JSON | Classification of a training job, including the classification ID and name                                |

**Table 28-621** metric\_values parameters

| Parameter | Type  | Description                                     |
|-----------|-------|-------------------------------------------------|
| recall    | Float | Recall of a classification of a training job    |
| precision | Float | Precision of a classification of a training job |
| accuracy  | Float | Accuracy of a classification of a training job  |

**Table 28-622** total\_metric parameters

| Parameter             | Type       | Description                                                                                   |
|-----------------------|------------|-----------------------------------------------------------------------------------------------|
| total_metric_metadata | JSON Array | Reserved parameter                                                                            |
| total_reserved_data   | JSON Array | Reserved parameter                                                                            |
| total_metric_values   | JSON Array | Overall validation metrics of a training job. For details, see <a href="#">Table 28-623</a> . |

**Table 28-623** total\_metric\_values parameters

| Parameter | Type  | Description                                                                                                                                 |
|-----------|-------|---------------------------------------------------------------------------------------------------------------------------------------------|
| f1_score  | Float | F1 score of a training job. This parameter is used only by some preset algorithms and is automatically generated. It is for reference only. |

| Parameter | Type  | Description                       |
|-----------|-------|-----------------------------------|
| recall    | Float | Total recall of a training job    |
| precision | Float | Total precision of a training job |
| accuracy  | Float | Total accuracy of a training job  |

**Table 28-624 volumes** parameters

| Parameter | Type   | Description                                                                                                                                                                                                                  |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| nfs       | object | Storage volume of the shared file system type. Only the training jobs running in a resource pool with the shared file system network connected support such storage volumes. For details, see <a href="#">Table 28-625</a> . |
| host_path | object | Storage volume of the host file system type. Only training jobs running in a dedicated resource pool support such storage volumes. For details, see <a href="#">Table 28-626</a> .                                           |

**Table 28-625 nfs** parameters

| Parameter | Type    | Description                                                                                                                                                                                                                              |
|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String  | ID of an SFS Turbo file system                                                                                                                                                                                                           |
| src_path  | String  | Address of an SFS Turbo file system                                                                                                                                                                                                      |
| dest_path | String  | Local path to a training job                                                                                                                                                                                                             |
| read_only | Boolean | Whether <b>dest_path</b> is read-only. The default value is <b>false</b> . <ul style="list-style-type: none"><li>• <b>true</b>: read-only permission</li><li>• <b>false</b>: read/write permission. This is the default value.</li></ul> |

**Table 28-626 host\_path** parameters

| Parameter | Type   | Description                  |
|-----------|--------|------------------------------|
| src_path  | String | Local path to a host         |
| dest_path | String | Local path to a training job |

| Parameter | Type    | Description                                                                                                                                                                                                                              |
|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| read_only | Boolean | Whether <b>dest_path</b> is read-only. The default value is <b>false</b> . <ul style="list-style-type: none"><li>• <b>true</b>: read-only permission</li><li>• <b>false</b>: read/write permission. This is the default value.</li></ul> |

## Sample Request

The following shows how to obtain the job version details on the first page when **job\_id** is set to **10** and five records are displayed on each page.

```
GET https://endpoint/v1/{project_id}/training-jobs/10/versions?per_page=5&page=1
```

## Sample Response

- Successful response

```
{
 "is_success": true,
 "job_id": 10,
 "job_name": "testModelArtsJob",
 "job_desc": "testModelArtsJob desc",
 "version_count": 2,
 "versions": [
 {
 "version_id": 10,
 "version_name": "V0004",
 "pre_version_id": 5,
 "engine_type": 1,
 "engine_name": "TensorFlow",
 "engine_id": 1,
 "engine_version": "TF-1.4.0-python2.7",
 "status": 10,
 "app_url": "/usr/app/",
 "boot_file_url": "/usr/app/boot.py",
 "create_time": 1524189990635,
 "parameter": [
 {
 "label": "learning_rate",
 "value": 0.01
 }
],
 "duration": 532003,
 "spec_id": 1,
 "core": 2,
 "cpu": 8,
 "gpu": true,
 "gpu_num": 2,
 "gpu_type": "Pnt1",
 "worker_server_num": 1,
 "data_url": "/usr/data/",
 "train_url": "/usr/train/",
 "log_url": "/usr/log/",
 "dataset_version_id": "2ff0d6ba-c480-45ae-be41-09a8369bfc90",
 "dataset_id": "38277e62-9e59-48f4-8d89-c8cf41622c24",
 "data_source": [
 {
 "type": "obs",
 "data_url": "/qianjiajun-test/minst/data/"
 }
]
 }
],
}
```

```
"user_image_url": "100.125.5.235:20202/jobmng/custom-cpu-base:1.0",
"user_command": "bash -x /home/work/run_train.sh python /home/work/user-job-dir/app/
mnist/mnist_softmax.py --data_url /home/work/user-job-dir/app/mnist_data",
"model_id": 1,
"model_metric_list": [{"metric": {"metric_values": {"recall": 0.005833, "precision
": 0.000178, "accuracy": 0.000937}, "reserved_data": {}, "metric_meta": {"class_name": 0, "class_id
": 0}}, "total_metric": {"total_metric_meta": {}, "total_reserved_data": {}, "total_metric_values":
{"recall": 0.005833, "id": 0, "precision": 0.000178, "accuracy": 0.000937}}}],
"system_metric_list": {"cpuUsage":
["0", "3.10", "5.76", "0", "0", "0", "0"], "memUsage":
["0", "0.77", "2.09", "0", "0", "0", "0"], "gpuUtil":
["0", "0.25", "0.88", "0", "0", "0", "0"], "gpuMemUsage":
["0", "0.65", "6.01", "0", "0", "0", "0"], "diskReadRate":
["0", "91811.07", "38846.63", "0", "0", "0", "0"], "diskWriteRate":
["0", "2.23", "0.94", "0", "0", "0", "0"], "recvBytesRate":
["0", "5770405.50", "2980077.75", "0", "0", "0", "0"], "sendBytesRate":
["0", "12607.17", "10487410.00", "0", "0", "0", "0"], "interval": 1},
"dataset_name": "dataset-test",
"dataset_version_name": "dataset-version-test",

"start_time": 1563172362000,
"volumes": [
{
 "nfs": {
 "id": "43b37236-9afa-4855-8174-32254b9562e7",
 "src_path": "192.168.8.150:/",
 "dest_path": "/home/work/nas",
 "read_only": false
 }
},
{
 "host_path": {
 "src_path": "/root/work",
 "dest_path": "/home/mind",
 "read_only": false
 }
}
],
"pool_id": "pool9928813f",
"pool_name": "pnt1",
"nas_mount_path": "/home/work/nas",
"nas_share_addr": "192.168.8.150:/",
"nas_type": "nfs"
}
]
```

- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Status Code](#).

### 28.3.1.6 Creating a Version of a Training Job

#### Function

This API is used to create a version of a training job.

Calling this API is an asynchronous operation. The job status can be obtained by calling the APIs described in [Querying a Training Job List](#) and [Querying the Details About a Training Job Version](#).

## URI

POST /v1/{project\_id}/training-jobs/{job\_id}/versions

[Table 28-627](#) describes the required parameters.

**Table 28-627** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes       | Long   | ID of a training job                                                                                            |

## Request Body

[Table 28-628](#) describes the request parameters.

**Table 28-628** Request parameters

| Parameter | Mandatory | Type   | Description                                                                                                          |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------|
| job_desc  | No        | String | Description of a training job. The value must contain 0 to 256 characters. By default, this parameter is left blank. |
| config    | Yes       | Object | Parameters for creating a training job For details, see <a href="#">Table 28-629</a> .                               |

**Table 28-629** config parameters

| Parameter         | Mandatory | Type    | Description                                                                                                               |
|-------------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------|
| worker_server_num | Yes       | Integer | Number of workers in a training job. Obtain the maximum value from <a href="#">Querying Job Resource Specifications</a> . |



| Parameter          | Mandatory | Type          | Description                                                                                                                                                                                                                                                                                             |
|--------------------|-----------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| app_url            | Yes       | String        | Code directory of a training job, for example, <b>/usr/app/</b> . This parameter must be used together with <b>boot_file_url</b> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> .                                               |
| boot_file_url      | Yes       | String        | Boot file of a training job, which needs to be stored in the code directory. Example value: <b>/usr/app/boot.py</b> . This parameter must be used together with <b>app_url</b> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> . |
| parameter          | No        | Array<Object> | Running parameters of a training job. It is a collection of label-value pairs. For details, see the sample request. This parameter is a container environment variable when a training job uses a custom image. For details, see <a href="#">Table 28-631</a> .                                         |
| data_url           | No        | String        | OBS URL of the dataset required by a training job. By default, this parameter is left blank. For example, <b>/usr/data/</b> . This parameter cannot be used together with <b>data_source</b> or <b>dataset_id</b> and <b>dataset_version_id</b> . However, one of the parameters must exist.            |
| dataset_id         | No        | String        | Dataset ID of a training job. This parameter must be used together with <b>dataset_version_id</b> , but cannot be used together with <b>data_url</b> or <b>data_source</b> .                                                                                                                            |
| dataset_version_id | No        | String        | Dataset version ID of a training job. This parameter must be used together with <b>dataset_id</b> , but cannot be used together with <b>data_url</b> or <b>data_source</b> .                                                                                                                            |
| data_source        | No        | JSON Array    | Dataset of a training job. This parameter cannot be used with <b>data_url</b> , <b>dataset_id</b> , or <b>dataset_version_id</b> . For details, see <a href="#">Table 28-630</a> .                                                                                                                      |

| Parameter      | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                      |
|----------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| spec_id        | Yes       | Long   | ID of the resource specifications selected for a training job. Obtain the ID by calling the API described in <a href="#">Querying Job Resource Specifications</a> . When creating a public pool job, ensure that <b>spec_id</b> is mandatory and cannot be used with <b>pool_id</b> .                                                                                            |
| pool_id        | Yes       | String | ID of a dedicated resource pool. To obtain the ID, do as follows: Log in to the ModelArts management console, choose <b>Dedicated Resource Pools</b> in the navigation pane on the left, and view the resource pool ID in the dedicated resource pool list. When creating a dedicated pool job, ensure that <b>pool_id</b> is mandatory and cannot be used with <b>spec_id</b> . |
| engine_id      | Yes       | Long   | ID of the engine selected for a training job. The default value is <b>1</b> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> . Obtain the ID by calling the API described in <a href="#">Querying Job Engine Specifications</a> .                                                                          |
| model_id       | Yes       | Long   | ID of the built-in model of a training job. Obtain <b>model_id</b> by calling the API described in <a href="#">Querying a Built-in Algorithm</a> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> .                                                                                                        |
| train_url      | Yes       | String | OBS URL of the output file of a training job. By default, this parameter is left blank. Example value: <b>/bucket/trainUrl/</b>                                                                                                                                                                                                                                                  |
| log_url        | No        | String | OBS URL of the logs of a training job. By default, this parameter is left blank. Example value: <b>/usr/train/</b>                                                                                                                                                                                                                                                               |
| pre_version_id | Yes       | Long   | ID of the previous version of a training job. You can obtain the value of <b>version_id</b> by calling the API described in <a href="#">Obtaining Training Job Versions</a> .                                                                                                                                                                                                    |
| user_image_url | No        | String | SWR URL of a custom image used by a training job. Example value: <b>100.125.5.235:20202/jobmng/custom-cpu-base:1.0</b>                                                                                                                                                                                                                                                           |

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                           |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| user_command | No        | String | Boot command used to start the container of a custom image of a training job. The format is <b>bash /home/work/run_train.sh python /home/work/user-job-dir/app/train.py {python_file_parameter}</b> . |

**Table 28-630 data\_source** parameters

| Parameter       | Mandatory | Type   | Description                                                                                                                                            |
|-----------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| dataset_id      | No        | String | Dataset ID of a training job. This parameter must be used together with <b>dataset_version_id</b> , but cannot be used together with <b>data_url</b> . |
| dataset_version | No        | String | Dataset version ID of a training job. This parameter must be used together with <b>dataset_id</b> , but cannot be used together with <b>data_url</b> . |
| type            | No        | String | Dataset type. The value can be <b>obs</b> or <b>dataset</b> . <b>obs</b> and <b>dataset</b> cannot be used at the same time.                           |
| data_url        | No        | String | OBS bucket path. This parameter cannot be used together with <b>dataset_id</b> or <b>dataset_version</b> .                                             |

**Table 28-631 parameter** parameters

| Parameter | Mandatory | Type   | Description     |
|-----------|-----------|--------|-----------------|
| label     | No        | String | Parameter name  |
| value     | No        | String | Parameter value |

## Response Body

[Table 28-632](#) describes the response parameters.

**Table 28-632** Parameters

| Parameter     | Type    | Description                                                                                                                                |
|---------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                                                          |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                          |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> . This parameter is not included when the API call succeeds. |
| job_id        | Long    | ID of a training job                                                                                                                       |
| job_name      | String  | Name of a training job                                                                                                                     |
| status        | Int     | Status of a training job. For details about the job statuses, see <a href="#">Job Statuses</a> .                                           |
| create_time   | Long    | Timestamp when a training job is created                                                                                                   |
| version_id    | Long    | Version ID of a training job                                                                                                               |
| version_name  | String  | Version name of a training job                                                                                                             |

## Sample Request

The following shows how to create a job whose **job\_id** is **10** and **pre\_version\_id** is **20**.

```
POST https://endpoint/v1/{project_id}/training-jobs/10/versions/
{
 "job_desc": "This is a ModelArts job",
 "config": {
 "worker_server_num": 1,
 "app_url": "/usr/app/",
 "boot_file_url": "/usr/app/boot.py",
 "parameter": [
 {
 "label": "learning_rate",
 "value": "0.01"
 },
 {
 "label": "batch_size",
 "value": "32"
 }
],
 "dataset_id": "38277e62-9e59-48f4-8d89-c8cf41622c24",
 "dataset_version_id": "2ff0d6ba-c480-45ae-be41-09a8369bfc90",
 "spec_id": 1,
 "engine_id": 1,
 "train_url": "/usr/train/",
 "log_url": "/usr/log/",
 "pre_version_id": 20,
 "model_id": 1,
 "pool_id": "test-pool"
 }
}
```

```
}
}
```

## Sample Response

- Successful response

```
{
 "is_success": true,
 "job_id": 10,
 "job_name": "TestModelArtsJob",
 "status": 1,
 "create_time": 1524189990635,
 "version_id": 10,
 "version_name": "V0001"
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Status Code](#).

### 28.3.1.7 Stopping a Training Job

#### Function

This API is used to stop a training job.

Calling this API is an asynchronous operation. The job status can be obtained by calling the APIs described in [Querying a Training Job List](#) and [Querying the Details About a Training Job Version](#).

#### URI

POST /v1/{project\_id}/training-jobs/{job\_id}/versions/{version\_id}/stop

[Table 28-633](#) describes the required parameters.

**Table 28-633** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes       | Long   | ID of a training job                                                                                            |
| version_id | Yes       | Long   | Version ID of a training job                                                                                    |

## Request Body

None

## Response Body

[Table 28-634](#) describes the response parameters.

**Table 28-634** Parameters

| Parameter     | Type    | Description                                                                                                                                   |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                                                             |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |

## Sample Request

The following shows how to stop a version of the job whose **job\_id** is **10** and **version\_id** is **10**.

```
POST https://endpoint/v1/{project_id}/training-jobs/10/versions/10/stop
```

## Sample Response

- Successful response

```
{
 "is_success": true
}
```
- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Status Code](#).

### 28.3.1.8 Modifying the Description of a Training Job

## Function

This API is used to modify the description of a training job.

## URI

PUT /v1/{project\_id}/training-jobs/{job\_id}

[Table 28-635](#) describes the required parameters.

**Table 28-635** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes       | Long   | ID of a training job                                                                                            |

## Request Body

[Table 28-636](#) describes the request parameters.

**Table 28-636** Parameters

| Parameter | Mandatory | Type   | Description                                                                |
|-----------|-----------|--------|----------------------------------------------------------------------------|
| job_desc  | Yes       | String | Description of a training job. The value must contain 0 to 256 characters. |

## Response Body

[Table 28-637](#) describes the response parameters.

**Table 28-637** Parameters

| Parameter     | Type    | Description                                                                                                                                |
|---------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful.                                                                                                         |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                          |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> . This parameter is not included when the API call succeeds. |

## Sample Request

The following shows how to modify the description of the job whose **job\_id** is **10**.

```
PUT https://endpoint/v1/{project_id}/training-jobs/10
{
 "job_desc": "This is a ModelArts job"
}
```

## Sample Response

- Successful response

```
{
 "is_success": true
}
```
- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Status Code](#).

### 28.3.1.9 Deleting a Training Job

## Function

This API is used to delete a training job.

Calling this API is an asynchronous operation. The job status can be obtained by calling the APIs described in [Querying a Training Job List](#) and [Querying the Details About a Training Job Version](#).

## URI

DELETE /v1/{project\_id}/training-jobs/{job\_id}

[Table 28-638](#) describes the required parameters.

**Table 28-638** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes       | Long   | ID of a training job                                                                                            |

## Request Body

None



## Response Body

[Table 28-639](#) describes the response parameters.

**Table 28-639** Parameters

| Parameter     | Type    | Description                                                                                                                                   |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                                                             |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |

## Sample Request

The following shows how to delete the job whose **job\_id** is **10**.

```
DELETE https://endpoint/v1/{project_id}/training-jobs/10
```

## Sample Response

- Successful response

```
{
 "is_success": true
}
```
- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Status Code](#).

### 28.3.1.10 Obtaining the Name of a Training Job Log File

#### Function

This API is used to obtain the name of a training job log file.

#### URI

GET /v1/{project\_id}/training-jobs/{job\_id}/versions/{version\_id}/log/file-names

[Table 28-640](#) describes the required parameters.

**Table 28-640** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes       | Long   | ID of a training job                                                                                            |
| version_id | Yes       | Long   | Version ID of a training job                                                                                    |

## Request Body

None

## Response Body

[Table 28-641](#) describes the response parameters.

**Table 28-641** Parameters

| Parameter     | Type    | Description                                                                                                                                |
|---------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                                                          |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                          |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> . This parameter is not included when the API call succeeds. |
| log_file_list | String  | Log file name of a training job. A single-node job has only one log file, and a distributed job has multiple log files.                    |

## Sample Request

The following shows how to obtain the log files of the job whose **job\_id** is **10** and **version\_id** is **10**.

```
GET https://endpoint/v1/{project_id}/training-jobs/10/versions/10/log/file-names
```

## Sample Response

- Successful response

```
{
 "is_success": true,
 "log_file_list": [
```

```
"teseJob.0"
]
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Status Code](#).

### 28.3.1.11 Querying a Built-in Algorithm

## Function

This API is used to obtain the details about a built-in model.

## URI

GET /v1/{project\_id}/built-in-algorithms

[Table 28-642](#) describes the required parameters.

**Table 28-642** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Body

[Table 28-643](#) describes the request parameters.

**Table 28-643** Query parameters

| Parameter | Mandatory | Type    | Description                                                                                            |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------|
| per_page  | No        | Integer | Number of job parameters displayed on each page. The value range is [1, 100]. Default value: <b>10</b> |
| page      | No        | Integer | Index of the page to be queried. Default value: <b>1</b>                                               |

| Parameter      | Mandatory | Type   | Description                                                                                                                                                                                                                                        |
|----------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sortBy         | No        | String | Sorting mode of the query. The value can be <b>engine</b> , <b>model_name</b> , <b>model_precision</b> , <b>model_usage</b> , <b>model_precision</b> , <b>model_size</b> , <b>create_time</b> , or <b>parameter</b> . Default value: <b>engine</b> |
| order          | No        | String | Sorting order. Options: <ul style="list-style-type: none"><li>• <b>asc</b>: ascending order</li><li>• <b>desc</b>: descending order. The default value is <b>desc</b>.</li></ul>                                                                   |
| search_content | No        | String | Search content, for example, a parameter name. By default, this parameter is left blank.                                                                                                                                                           |

## Response Body

[Table 28-644](#) describes the response parameters.

**Table 28-644** Parameters

| Parameter         | Type          | Description                                                                                                                                |
|-------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| is_success        | Boolean       | Whether the request is successful                                                                                                          |
| error_message     | String        | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                          |
| error_code        | String        | Error code of a failed API call. For details, see <a href="#">Error Codes</a> . This parameter is not included when the API call succeeds. |
| model_total_count | Integer       | Number of models                                                                                                                           |
| models            | Array<Object> | Model parameter list. For details, see <a href="#">Table 28-645</a> .                                                                      |

**Table 28-645** models structure data

| Parameter  | Type    | Description |
|------------|---------|-------------|
| model_id   | Integer | Model ID    |
| model_name | String  | Model name  |

| Parameter              | Type    | Description                                                                                                                                                                                                                                           |
|------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| model_usage            | Integer | Model usage. Options: <ul style="list-style-type: none"><li>• 1: image classification</li><li>• 2: object class and location</li><li>• 3: image semantic segmentation</li><li>• 4: natural language processing</li><li>• 5: image embedding</li></ul> |
| model_precision        | String  | Model precision                                                                                                                                                                                                                                       |
| model_size             | Long    | Model size, in bytes                                                                                                                                                                                                                                  |
| model_training_dataset | String  | Model training dataset                                                                                                                                                                                                                                |
| model_dataset_format   | String  | Dataset format required by a model                                                                                                                                                                                                                    |
| model_description_url  | String  | URL of the model description                                                                                                                                                                                                                          |
| parameter              | String  | Running parameters of a model. This parameter is a container environment variable when a training job uses a custom image. For details, see the sample request.                                                                                       |
| create_time            | Long    | Time when a model is created                                                                                                                                                                                                                          |
| engine_id              | Long    | Engine ID of a model                                                                                                                                                                                                                                  |
| engine_name            | String  | Engine name of a model                                                                                                                                                                                                                                |
| engine_version         | String  | Engine version of a model                                                                                                                                                                                                                             |

**Table 28-646 parameter** parameters

| Parameter | Type    | Description                      |
|-----------|---------|----------------------------------|
| label     | String  | Parameter name                   |
| value     | String  | Parameter value                  |
| required  | Boolean | Whether a parameter is mandatory |

## Sample Request

The following shows how to obtain the algorithm whose name contains **configname**.

```
GET https://endpoint/v1/{project_id}/built-in-algorithms?
per_page=10&page=1&sortBy=engine&order=asc&search_content=model
```

## Sample Response

- Successful response

```
{
 "models": [
 {
 "model_id": 4,
 "model_name": "ResNet_v2_50",
 "model_usage": 1,
 "model_precision": "75.55%(top1), 92.6%(top5)",
 "model_size": 102503801,
 "model_train_dataset": "ImageNet, 1,000 classes for image classification",
 "model_dataset_format": "shape: [H>=32, W>=32, C>=1]; type: int8",
 "model_description_url": "https://github.com/apache/incubator-mxnet/blob/master/example/
image-classification/symbols/resnet.py",
 "parameter": "[{\\"label\\":\\"batch_size\\",\\"value\\":\\"4\\",\\"placeholder_cn\\":\\"Total number of
training images updated each time\\",\\"placeholder_en\\":\\"\\",\\"required\\":true},{\\"label\\":\\"lr\\",\\"value
\\":\\"0.0001\\",\\"placeholder_cn\\":\\"Learning rate\\",\\"placeholder_en\\":\\"\\",\\"required\\":true},{\\"label
\\":\\"save_frequency\\",\\"value\\":\\"1\\",\\"placeholder_cn\\":\\"Interval for saving the model, indicating that
the model is saved every N epochs\\",\\"placeholder_en\\":\\"\\",\\"required\\":true},{\\"label\\":\\"num_classes
\\",\\"value\\":\\"\\",\\"placeholder_cn\\":\\"Total number of image classes in training\\",\\"placeholder_en
\\":\\"\\",\\"required\\":true},{\\"label\\":\\"num_epoch\\",\\"value\\":\\"10\\",\\"placeholder_cn\\":\\"Number of
training epochs\\",\\"placeholder_en\\":\\"\\",\\"required\\":true}]",
 "create_time": 1522218780025,
 "engine_id": 501,
 "engine_name": "MXNet",
 "engine_version": "MXNet-1.2.1-python2.7"
 },
 {
 "model_id": 5,
 "model_name": "Faster_RCNN_ResNet_v2_101",
 "model_usage": 2,
 "model_precision": "80.05%(mAP)",
 "model_size": 190936449,
 "model_train_dataset": "PASCAL VOC2007, 20 classes for object detection",
 "model_dataset_format": "shape: [H, W, C==3]; type: int8",
 "model_description_url": "https://github.com/apache/incubator-mxnet/tree/master/example/
rcnn",
 "parameter": "[{\\"label\\":\\"lr\\",\\"value\\":\\"0.0001\\",\\"placeholder_cn\\":\\"Learning rate
\\",\\"placeholder_en\\":\\"\\",\\"required\\":true},{\\"label\\":\\"eval_frequency\\",\\"value
\\":\\"1\\",\\"placeholder_cn\\":\\"Frequency for validating the model. By default, validation is performed
every epoch\\",\\"placeholder_en\\":\\"\\",\\"required\\":true},{\\"label\\":\\"mom\\",\\"value
\\":\\"0.9\\",\\"placeholder_cn\\":\\"Momentum of the training network\\",\\"placeholder_en\\":\\"\\",\\"required
\\":true},{\\"label\\":\\"wd\\",\\"value\\":\\"0.0005\\",\\"placeholder_cn\\":\\"Weight decay coefficient
\\",\\"placeholder_en\\":\\"\\",\\"required\\":true},{\\"label\\":\\"num_classes\\",\\"value\\":\\"\\",\\"placeholder_cn
\\":\\"Total number of image classes in training. The value must plus 1 because there is a background
class.\\",\\"placeholder_en\\":\\"\\",\\"required\\":true}]",
 "create_time": 1525313224596,
 "engine_id": 501,
 "engine_name": "MXNet",
 "engine_version": "MXNet-1.2.1-python2.7"
 }
],
 "model_total_count": 41,
 "is_success": true
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Status Code](#).

### 28.3.1.12 Querying Training Job Logs

#### Function

This API is used to obtain detailed information about training job logs by row.

#### URI

GET /v1/{project\_id}/training-jobs/{job\_id}/versions/{version\_id}/aom-log

[Table 28-647](#) describes the required parameters.

**Table 28-647** URI parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes       | Long   | ID of a training job                                                                                            |
| version_id | Yes       | Long   | Version ID of a training job                                                                                    |

**Table 28-648** Query parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                               |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| base_line | No        | String  | Base line of the log, which is obtained from an API response. If the value is empty, the latest log is obtained.                                          |
| lines     | No        | Integer | Length of the obtained log. The default value is 50 lines. The value range is [0, 500].                                                                   |
| log_file  | Yes       | String  | Name of the log file to be viewed. For details about how to obtain the log file name, see <a href="#">Obtaining the Name of a Training Job Log File</a> . |
| order     | No        | String  | Log query direction <ul style="list-style-type: none"><li><b>desc</b>: Query next records.</li><li><b>asc</b>: Query previous records.</li></ul>          |

## Request Body

None

## Response Body

[Table 28-649](#) describes the response parameters.

**Table 28-649** Parameters

| Parameter     | Type    | Description                                                                                                                                   |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |
| content       | String  | Content of the requested log                                                                                                                  |
| lines         | Integer | Lines of the obtained logs                                                                                                                    |
| start_line    | String  | Start position of the obtained log                                                                                                            |
| end_line      | String  | End position of the obtained log                                                                                                              |
| is_success    | Boolean | Whether the request is successful                                                                                                             |

## Sample Request

The following shows how to obtain the logs contained in **log1.log** of the job whose **job\_id** is **10** and **version\_id** is **10**.

```
GET https://endpoint/v1/{project_id}/training-jobs/10/versions/10/aom-log?log_file=log1.log&base_line=1551252759254000002&lines=50&order=desc
```

## Sample Response

- Successful response

```
{
 "is_success": true,
 "start_line": 1551252759254000002,
 "content": "Log string",
 "end_line": "1551252759254000003",
 "lines": "1"
}
```
- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```



## Status Code

For details about the status code, see [Status Code](#).

## 28.3.2 Training Job Parameter Configuration

### 28.3.2.1 Creating a Training Job Configuration

#### Function

This API is used to create a training job configuration.

#### URI

POST /v1/{project\_id}/training-job-configs

[Table 28-650](#) describes the required parameters.

**Table 28-650** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

#### Request Body

[Table 28-651](#) describes the request parameters.

**Table 28-651** Parameters

| Parameter         | Mandatory | Type    | Description                                                                                                                                           |
|-------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| config_name       | Yes       | String  | Name of a training job configuration. The value must contain 1 to 64 characters consisting of only digits, letters, underscores (_), and hyphens (-). |
| config_desc       | No        | String  | Description of a training job configuration. The value must contain 0 to 256 characters. By default, this parameter is left blank.                    |
| worker_server_num | Yes       | Integer | Number of workers in a training job. Obtain the maximum value from <a href="#">Querying Job Resource Specifications</a> .                             |

| Parameter          | Mandatory | Type          | Description                                                                                                                                                                                                                                                                                           |
|--------------------|-----------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| app_url            | Yes       | String        | Code directory of a training job, for example, <b>/usr/app/</b> . This parameter must be used together with <b>boot_file_url</b> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> .                                             |
| boot_file_url      | Yes       | String        | Boot file of a training job, which needs to be stored in the code directory, for example, <b>/usr/app/boot.py</b> . This parameter must be used together with <b>app_url</b> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> . |
| model_id           | Yes       | Long          | Model ID of a training job. Obtain <b>model_id</b> by calling the API described in <a href="#">Querying a Built-in Algorithm</a> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> .                                             |
| parameter          | No        | Array<Object> | Running parameters of a training job. It is a collection of label-value pairs. For details, see the sample request. This parameter is a container environment variable when a training job uses a custom image. For details, see <a href="#">Table 28-653</a> .                                       |
| spec_id            | Yes       | Long          | ID of the resource specifications selected for a training job. Obtain the ID by calling the API described in <a href="#">Querying Job Resource Specifications</a> .                                                                                                                                   |
| data_url           | No        | String        | OBS URL of the dataset required by a training job, for example, <b>/usr/data/</b> . This parameter cannot be used together with <b>data_source</b> or <b>dataset_id</b> and <b>dataset_version_id</b> . However, one of the parameters must exist.                                                    |
| dataset_id         | No        | String        | Dataset ID of a training job. This parameter must be used together with <b>dataset_version_id</b> , but cannot be used together with <b>data_url</b> or <b>data_source</b> .                                                                                                                          |
| dataset_version_id | No        | String        | Dataset version ID of a training job. This parameter must be used together with <b>dataset_id</b> , but cannot be used together with <b>data_url</b> or <b>data_source</b> .                                                                                                                          |

| Parameter      | Mandatory | Type       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------|-----------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data_source    | No        | JSON Array | Dataset of a training job. This parameter cannot be used together with <b>data_url</b> or <b>dataset_id</b> and <b>dataset_version_id</b> . For details, see <a href="#">Table 28-652</a> .                                                                                                                                                                                                                                                                                                             |
| engine_id      | Yes       | Long       | ID of the engine selected for a training job. The default value is <b>1</b> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> . Obtain the ID by calling the API described in <a href="#">Querying Job Engine Specifications</a> .                                                                                                                                                                                                 |
| train_url      | No        | String     | OBS URL of the output file of a training job. By default, this parameter is left blank. Example value: <b>/usr/train/</b>                                                                                                                                                                                                                                                                                                                                                                               |
| log_url        | No        | String     | OBS URL of the logs of a training job. By default, this parameter is left blank. Example value: <b>/usr/train/</b>                                                                                                                                                                                                                                                                                                                                                                                      |
| user_image_url | No        | String     | SWR URL of a custom image used by a training job. Example value: <b>100.125.5.235:20202/jobmng/custom-cpu-base:1.0</b>                                                                                                                                                                                                                                                                                                                                                                                  |
| user_command   | No        | String     | Boot command used to start the container of a custom image of a training job. The format is <b>bash /home/work/run_train.sh python /home/work/user-job-dir/app/train.py {python_file_parameter}</b> . The boot script <b>run_train.sh</b> must be invoked to initialize variables, such as the AK/SK. The <b>run_train.sh</b> script is followed by <b>python</b> to ensure that the Python files can be executed in the initialized variable environment. <b>run_train.sh</b> is used to start Python. |

Table 28-652 data\_source parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                                            |
|------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| dataset_id | No        | String | Dataset ID of a training job. This parameter must be used together with <b>dataset_version_id</b> , but cannot be used together with <b>data_url</b> . |

| Parameter       | Mandatory | Type   | Description                                                                                                                                            |
|-----------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| dataset_version | No        | String | Dataset version ID of a training job. This parameter must be used together with <b>dataset_id</b> , but cannot be used together with <b>data_url</b> . |
| type            | No        | String | Dataset type. The value can be <b>obs</b> or <b>dataset</b> . <b>obs</b> and <b>dataset</b> cannot be used at the same time.                           |
| data_url        | No        | String | OBS bucket path. This parameter cannot be used together with <b>dataset_id</b> or <b>dataset_version</b> .                                             |

Table 28-653 parameter parameters

| Parameter | Mandatory | Type   | Description      |
|-----------|-----------|--------|------------------|
| label     | No        | String | Parameter name.  |
| value     | No        | String | Parameter value. |

## Response Body

[Table 28-654](#) describes the response parameters.

Table 28-654 Parameters

| Parameter     | Type    | Description                                                                                                                                   |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                                                             |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |

## Sample Request

The following shows how to create a training job configuration whose name is **testConfig** and description is **This is config**.

```
POST https://endpoint/v1/{project_id}/training-job-configs
{
```

```
{
 "config_name": "testConfig",
 "config_desc": "This is config",
 "worker_server_num": 1,
 "app_url": "/usr/app/",
 "boot_file_url": "/usr/app/boot.py",
 "parameter": [
 {
 "label": "learning_rate",
 "value": "0.01"
 },
 {
 "label": "batch_size",
 "value": "32"
 }
],
 "spec_id": 1,
 "dataset_id": "38277e62-9e59-48f4-8d89-c8cf41622c24",
 "dataset_version_id": "2ff0d6ba-c480-45ae-be41-09a8369bfc90",
 "engine_id": 1,
 "train_url": "/usr/train/",
 "log_url": "/usr/log/",
 "model_id": 1
}
```

## Sample Response

- Successful response

```
{
 "is_success": true
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Status Code](#).

### 28.3.2.2 Querying a List of Training Job Configurations

#### Function

This API is used to obtain the created training job configurations that meet the search criteria.

#### URI

GET /v1/{project\_id}/training-job-configs

[Table 28-655](#) describes the required parameters.

**Table 28-655** Parameters

| Parameter  | Mandator y | Type   | Description                                                                                                     |
|------------|------------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes        | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

## Request Body

[Table 28-656](#) describes the request parameters.

**Table 28-656** Parameters

| Parameter      | Mandator y | Type    | Description                                                                                                                                                                                                                                |
|----------------|------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| per_page       | No         | Integer | Number of job parameters displayed on each page. The value range is [1, 1000]. Default value: <b>10</b>                                                                                                                                    |
| page           | No         | Integer | Index of the page to be queried. Default value: <b>1</b>                                                                                                                                                                                   |
| sortBy         | No         | String  | Sorting mode of the query. The value can be <b>config_name</b> , <b>config_desc</b> , or <b>create_time</b> . The default value is <b>config_name</b> . <b>create_time</b> is not supported for <b>sample</b> sorting.                     |
| order          | No         | String  | Sorting order. Options: <ul style="list-style-type: none"><li>• <b>asc</b>: ascending order</li><li>• <b>desc</b>: descending order. The default value is <b>desc</b>.</li></ul>                                                           |
| search_content | No         | String  | Search content, for example, a parameter name. By default, this parameter is left blank.                                                                                                                                                   |
| config_type    | No         | String  | Configuration type to be queried. Options: <ul style="list-style-type: none"><li>• <b>custom</b>: Query the custom configurations.</li><li>• <b>sample</b>: Query the sample configurations. The default value is <b>custom</b>.</li></ul> |

## Response Body

[Table 28-657](#) describes the response parameters.

**Table 28-657** Parameters

| Parameter          | Type                                            | Description                                                                                                                                |
|--------------------|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| is_success         | Boolean                                         | Whether the request is successful                                                                                                          |
| error_message      | String                                          | Error message of a failed API call. This parameter is not included when the API call succeeds.                                             |
| error_code         | String                                          | Error code of a failed API call. For details, see <a href="#">Error Codes</a> . This parameter is not included when the API call succeeds. |
| config_total_count | Integer                                         | Total number of the queried training job configurations                                                                                    |
| configs            | Array of <a href="#">ConfigResponse</a> objects | <b>configs</b> parameters                                                                                                                  |

**Table 28-658** configs parameters

| Parameter      | Type    | Description                                                                                                                                                                                           |
|----------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| config_name    | String  | Name of a training job configuration                                                                                                                                                                  |
| config_desc    | String  | Description of a training job configuration                                                                                                                                                           |
| create_time    | Long    | Time when a training job is created                                                                                                                                                                   |
| engine_type    | Integer | Engine type of a training job                                                                                                                                                                         |
| engine_name    | String  | Name of the engine selected for a training job                                                                                                                                                        |
| engine_id      | Long    | ID of the engine selected for a training job                                                                                                                                                          |
| engine_version | String  | Version of the engine selected for a training job                                                                                                                                                     |
| user_image_url | String  | SWR URL of a custom image used by a training job. Example value: <b>100.125.5.235:20202/jobmng/custom-cpu-base:1.0</b>                                                                                |
| user_command   | String  | Boot command used to start the container of a custom image of a training job. The format is <b>bash /home/work/run_train.sh python /home/work/user-job-dir/app/train.py {python_file_parameter}</b> . |

## Sample Request

```
GET https://endpoint/v1/{project_id}/training-job-configs?
per_page=10&page=1&sortBy=create_time&order=asc&search_content=configname
```

## Sample Response

- Successful response

```
{
 "is_success": true,
 "config_total_count": 3,
 "configs": [
 {
 "config_name": "testConfig",
 "config_desc": "This is config",
 "create_time": 1524189990635,
 "engine_type": 1,
 "engine_name": "TensorFlow",
 "engine_id": 1,
 "engine_version": "TF-1.4.0-python2.7",
 "user_image_url": "100.125.5.235:20202/jobmng/custom-cpu-base:1.0",
 "user_command": "bash -x /home/work/run_train.sh python /home/work/user-job-dir/app/
mnist/mnist_softmax.py --data_url /home/work/user-job-dir/app/mnist_data"
 }
]
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Status Code](#).

### 28.3.2.3 Modifying a Training Job Configuration

#### Function

This API is used to modify a training job configuration.

#### URI

PUT /v1/{project\_id}/training-job-configs/{config\_name}

[Table 28-659](#) describes the required parameters.

**Table 28-659** Parameters

| Parameter  | Mandator<br>y | Type   | Description                                                                                                     |
|------------|---------------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes           | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |



| Parameter   | Mandatory | Type   | Description                          |
|-------------|-----------|--------|--------------------------------------|
| config_name | Yes       | String | Name of a training job configuration |

## Request Body

[Table 28-660](#) describes the request parameters.

**Table 28-660** Parameters

| Parameter         | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                           |
|-------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| config_desc       | No        | String  | Description of a training job configuration. The value must contain 0 to 256 characters. By default, this parameter is left blank.                                                                                                                                                                    |
| worker_server_num | Yes       | Integer | Number of workers in a training job. Obtain the maximum value from <a href="#">Querying Job Resource Specifications</a> .                                                                                                                                                                             |
| app_url           | Yes       | String  | Code directory of a training job, for example, <b>/usr/app/</b> . This parameter must be used together with <b>boot_file_url</b> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> .                                             |
| boot_file_url     | Yes       | String  | Boot file of a training job, which needs to be stored in the code directory, for example, <b>/usr/app/boot.py</b> . This parameter must be used together with <b>app_url</b> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> . |
| model_id          | Yes       | Long    | Model ID of a training job. Obtain <b>model_id</b> by calling the API described in <a href="#">Querying a Built-in Algorithm</a> . After setting <b>model_id</b> , you do not need to set <b>app_url</b> or <b>boot_file_url</b> , and <b>engine_id</b> .                                             |

| Parameter          | Mandatory | Type          | Description                                                                                                                                                                                                                                        |
|--------------------|-----------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| parameter          | No        | Array<Object> | Running parameters of a training job. It is a collection of label-value pairs. This parameter is a container environment variable when a training job uses a custom image. For details, see <a href="#">Table 28-662</a> .                         |
| spec_id            | Yes       | Long          | ID of the resource specifications selected for a training job. Obtain the ID by calling the API described in <a href="#">Querying Job Resource Specifications</a> .                                                                                |
| data_url           | No        | String        | OBS URL of the dataset required by a training job, for example, <b>/usr/data/</b> . This parameter cannot be used together with <b>data_source</b> or <b>dataset_id</b> and <b>dataset_version_id</b> . However, one of the parameters must exist. |
| dataset_id         | No        | String        | Dataset ID of a training job. This parameter must be used together with <b>dataset_version_id</b> , but cannot be used together with <b>data_url</b> or <b>data_source</b> .                                                                       |
| dataset_version_id | No        | String        | Dataset version ID of a training job. This parameter must be used together with <b>dataset_id</b> , but cannot be used together with <b>data_url</b> or <b>data_source</b> .                                                                       |
| data_source        | No        | JSON Array    | Dataset of a training job. This parameter cannot be used together with <b>data_url</b> or <b>dataset_id</b> and <b>dataset_version_id</b> . For details, see <a href="#">Table 28-661</a> .                                                        |
| engine_id          | Yes       | Long          | ID of the engine selected for a training job. The default value is <b>1</b> . Obtain the ID by calling the API described in <a href="#">Querying Job Engine Specifications</a> .                                                                   |
| train_url          | No        | String        | OBS URL of the output file of a training job. By default, this parameter is left blank. Example value: <b>/usr/train/</b>                                                                                                                          |

| Parameter      | Mandatory | Type   | Description                                                                                                                                                                                             |
|----------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| log_url        | No        | String | OBS URL of the logs of a training job. By default, this parameter is left blank. Example value: <b>/usr/train/</b>                                                                                      |
| user_image_url | No        | String | SWR URL of a custom image used by a training job. Example value: <b>100.125.5.235:20202/jobmng/custom-cpu-base:1.0</b>                                                                                  |
| user_command   | No        | String | Boot command used to start the container of a custom image of a training job. The format is <b>bash / home/work/run_train.sh python / home/work/user-job-dir/app/train.py {python_file_parameter}</b> . |

**Table 28-661 data\_source** parameters

| Parameter       | Mandatory | Type   | Description                                                                                                                                            |
|-----------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| dataset_id      | No        | String | Dataset ID of a training job. This parameter must be used together with <b>dataset_version_id</b> , but cannot be used together with <b>data_url</b> . |
| dataset_version | No        | String | Dataset version ID of a training job. This parameter must be used together with <b>dataset_id</b> , but cannot be used together with <b>data_url</b> . |
| type            | No        | String | Dataset type. The value can be <b>obs</b> or <b>dataset</b> . <b>obs</b> and <b>dataset</b> cannot be used at the same time.                           |
| data_url        | No        | String | OBS bucket path. This parameter cannot be used together with <b>dataset_id</b> or <b>dataset_version</b> .                                             |

**Table 28-662 parameter** parameters

| Parameter | Mandatory | Type   | Description      |
|-----------|-----------|--------|------------------|
| label     | No        | String | Parameter name.  |
| value     | No        | String | Parameter value. |

## Response Body

**Table 28-663** describes the response parameters.

**Table 28-663** Parameters

| Parameter     | Type    | Description                                                                                                                                |
|---------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                                                          |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                          |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> . This parameter is not included when the API call succeeds. |

## Sample Request

The following shows how to modify the job parameter configuration named **config**.

PUT [https://endpoint/v1/{project\\_id}/training-job-configs/config](https://endpoint/v1/{project_id}/training-job-configs/config)

```
{
 "config_desc": "This is config",
 "worker_server_num": 1,
 "app_url": "/usr/app/",
 "boot_file_url": "/usr/app/boot.py",
 "parameter": [
 {
 "label": "learning_rate",
 "value": 0.01
 },
 {
 "label": "batch_size",
 "value": 32
 }
],
 "spec_id": 1,
 "dataset_id": "38277e62-9e59-48f4-8d89-c8cf41622c24",
 "dataset_version_id": "2ff0d6ba-c480-45ae-be41-09a8369bfc90",
 "engine_id": 1,
 "train_url": "/usr/train/",
 "log_url": "/usr/log/",
 "model_id": 1
}
```

## Sample Response

- Successful response

```
{
 "is_success": true
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
}
```

```
}
 "error_code": "ModelArts.0105"
```

## Status Code

For details about the status code, see [Table 27-1](#).

### 28.3.2.4 Deleting a Training Job Configuration

## Function

This API is used to delete a training job configuration.

## URI

DELETE /v1/{project\_id}/training-job-configs/{config\_name}

[Table 28-664](#) describes the required parameters.

**Table 28-664** Parameters

| Parameter   | Mandatory | Type   | Description                                                                                                     |
|-------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id  | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| config_name | Yes       | String | Name of a training job configuration                                                                            |

## Request Body

None

## Response Body

[Table 28-665](#) describes the response parameters.

**Table 28-665** Parameters

| Parameter     | Type    | Description                                                                                                                                |
|---------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                                                          |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                          |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> . This parameter is not included when the API call succeeds. |

### Sample Request

The following shows how to delete the job configuration named **test-trainconfig**.

```
DELETE https://endpoint/v1/{project_id}/training-job-configs/test-trainconfig
```

### Sample Response

- Successful response

```
{
 "is_success": true
}
```
- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

### Status Code

For details about the status code, see [Table 27-1](#).

## 28.3.2.5 Querying the Details About a Training Job Configuration

### Function

This API is used to obtain the details about a specified training job configuration.

### URI

GET /v1/{project\_id}/training-job-configs/{config\_name}

[Table 28-666](#) describes the required parameters.

**Table 28-666** URI parameters

| Parameter       | Mandator<br>y | Type   | Description                                                                                                     |
|-----------------|---------------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id      | Yes           | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| config_nam<br>e | Yes           | String | Name of a training job configuration                                                                            |

**Table 28-667** Query parameters

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                |
|-------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| config_type | No        | String | Configuration type to be queried. Options: <ul style="list-style-type: none"><li>• <b>custom</b>: Query the custom configurations.</li><li>• <b>sample</b>: Query the sample configurations. The default value is <b>custom</b>.</li></ul> |

## Request Body

None

## Response Body

[Table 28-668](#) describes the response parameters.

**Table 28-668** Parameters

| Parameter         | Type       | Description                                                                                                                                                                                                                |
|-------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_success        | Boolean    | Whether the request is successful                                                                                                                                                                                          |
| error_message     | String     | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                                                                                                          |
| error_code        | String     | Error code of a failed API call. For details, see <a href="#">Error Codes</a> . This parameter is not included when the API call succeeds.                                                                                 |
| config_name       | String     | Name of a training job configuration                                                                                                                                                                                       |
| config_desc       | String     | Description of a training job configuration                                                                                                                                                                                |
| worker_server_num | Integer    | Number of workers in a training job                                                                                                                                                                                        |
| app_url           | String     | Code directory of a training job                                                                                                                                                                                           |
| boot_file_url     | String     | Boot file of a training job                                                                                                                                                                                                |
| model_id          | Long       | Model ID of a training job                                                                                                                                                                                                 |
| parameter         | JSON Array | Running parameters of a training job. It is a collection of label-value pairs. This parameter is a container environment variable when a training job uses a custom image. For details, see <a href="#">Table 28-673</a> . |

| Parameter            | Type       | Description                                                                                                               |
|----------------------|------------|---------------------------------------------------------------------------------------------------------------------------|
| spec_id              | Long       | ID of the resource specifications selected for a training job                                                             |
| data_url             | String     | Dataset of a training job                                                                                                 |
| dataset_id           | String     | Dataset ID of a training job                                                                                              |
| dataset_version_id   | String     | Dataset version ID of a training job                                                                                      |
| data_source          | JSON Array | Dataset of a training job For details, see <a href="#">Table 28-669</a> .                                                 |
| engine_type          | Integer    | Engine type of a training job                                                                                             |
| engine_name          | String     | Name of the engine selected for a training job                                                                            |
| engine_id            | Long       | ID of the engine selected for a training job                                                                              |
| engine_version       | String     | Version of the engine selected for a training job                                                                         |
| train_url            | String     | OBS URL of the output file of a training job. By default, this parameter is left blank. Example value: <b>/usr/train/</b> |
| log_url              | String     | OBS URL of the logs of a training job. By default, this parameter is left blank. Example value: <b>/usr/train/</b>        |
| user_image_url       | String     | SWR URL of a custom image used by a training job                                                                          |
| user_command         | String     | Boot command used to start the container of a custom image of a training job                                              |
| spec_code            | String     | Resource specifications selected for a training job                                                                       |
| gpu_type             | String     | GPU type of the resource specifications                                                                                   |
| create_time          | Long       | Time when a training job parameter configuration is created                                                               |
| cpu                  | String     | CPU memory of the resource specifications                                                                                 |
| gpu_num              | Integer    | Number of GPUs of the resource specifications                                                                             |
| core                 | String     | Number of cores of the resource specifications                                                                            |
| dataset_name         | String     | Dataset of a training job                                                                                                 |
| dataset_version_name | String     | Dataset of a training job                                                                                                 |
| pool_id              | String     | ID of a resource pool                                                                                                     |



| Parameter         | Type       | Description                                                                                        |
|-------------------|------------|----------------------------------------------------------------------------------------------------|
| pool_name         | String     | Name of a resource pool                                                                            |
| volumes           | JSON Array | Storage volume that can be used by a training job. For details, see <a href="#">Table 28-670</a> . |
| nas_mount_path    | String     | Local mount path of SFS Turbo (NAS). Example value: <b>/home/work/nas</b>                          |
| nas_share_address | String     | Shared path of SFS Turbo (NAS). Example value: <b>192.168.8.150:/</b>                              |
| nas_type          | String     | Only NFS is supported. Example value: <b>nfs</b>                                                   |

**Table 28-669 data\_source** parameters

| Parameter       | Type   | Description                                                                                                                                                                  |
|-----------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dataset_id      | String | Dataset ID of a training job                                                                                                                                                 |
| dataset_version | String | Dataset version ID of a training job                                                                                                                                         |
| type            | String | Dataset type. Options: <ul style="list-style-type: none"><li>• <b>obs</b>: Data from OBS is used.</li><li>• <b>dataset</b>: Data from a specified dataset is used.</li></ul> |
| data_url        | String | OBS bucket path                                                                                                                                                              |

**Table 28-670 volumes** parameters

| Parameter | Type   | Description                                                                                                                                                                                                                  |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| nfs       | Object | Storage volume of the shared file system type. Only the training jobs running in a resource pool with the shared file system network connected support such storage volumes. For details, see <a href="#">Table 28-671</a> . |
| host_path | Object | Storage volume of the host file system type. Only training jobs running in a dedicated resource pool support such storage volumes. For details, see <a href="#">Table 28-672</a> .                                           |

**Table 28-671 nfs** parameters

| Parameter | Type   | Description                    |
|-----------|--------|--------------------------------|
| id        | String | ID of an SFS Turbo file system |

| Parameter | Type    | Description                                                                                                                                                                                                                              |
|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| src_path  | String  | Address of an SFS Turbo file system                                                                                                                                                                                                      |
| dest_path | String  | Local path to a training job                                                                                                                                                                                                             |
| read_only | Boolean | Whether <b>dest_path</b> is read-only. The default value is <b>false</b> . <ul style="list-style-type: none"><li>• <b>true</b>: read-only permission</li><li>• <b>false</b>: read/write permission. This is the default value.</li></ul> |

Table 28-672 **host\_path** parameters

| Parameter | Type    | Description                                                                                                                                                                                                                              |
|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| src_path  | String  | Local path to a host                                                                                                                                                                                                                     |
| dest_path | String  | Local path to a training job                                                                                                                                                                                                             |
| read_only | Boolean | Whether <b>dest_path</b> is read-only. The default value is <b>false</b> . <ul style="list-style-type: none"><li>• <b>true</b>: read-only permission</li><li>• <b>false</b>: read/write permission. This is the default value.</li></ul> |

Table 28-673 **parameter** parameters

| Parameter | Type   | Description     |
|-----------|--------|-----------------|
| label     | String | Parameter name  |
| value     | String | Parameter value |

## Sample Request

The following shows how to obtain the details about the job configuration named **config123**.

```
GET https://endpoint/v1/{project_id}/training-job-configs/config123
```

## Sample Response

- Successful response

```
{
 "spec_code": "modelarts.vm.gpu.v100",
 "user_image_url": "100.125.5.235:20202/jobmng/custom-cpu-base:1.0",
 "user_command": "bash -x /home/work/run_train.sh python /home/work/user-job-dir/app/mnist/
mnist_softmax.py --data_url /home/work/user-job-dir/app/mnist_data",
 "gpu_type": "nvidia-v100",
 "dataset_version_id": "2ff0d6ba-c480-45ae-be41-09a8369bfc90",
```

```
"engine_name": "TensorFlow",
"is_success": true,
"nas_mount_path": "/home/work/nas",
"worker_server_num": 1,
"nas_share_addr": "192.168.8.150:/",
"train_url": "/test/minst/train_out/out1/",
"nas_type": "nfs",
"spec_id": 4,
"parameter": [
 {
 "label": "learning_rate",
 "value": 0.01
 }
],
"log_url": "/usr/log/",
"config_name": "config123",
"app_url": "/usr/app/",
"create_time": 1559045426000,
"dataset_id": "38277e62-9e59-48f4-8d89-c8cf41622c24",
"volumes": [
 {
 "nfs": {
 "id": "43b37236-9afa-4855-8174-32254b9562e7",
 "src_path": "192.168.8.150:/",
 "dest_path": "/home/work/nas",
 "read_only": false
 }
 },
 {
 "host_path": {
 "src_path": "/root/work",
 "dest_path": "/home/mind",
 "read_only": false
 }
 }
],
"cpu": "64",
"model_id": 4,
"boot_file_url": "/usr/app/boot.py",
"dataset_name": "dataset-test",
"pool_id": "pool9928813f",
"config_desc": "This is a config desc test",
"gpu_num": 1,
"data_source": [
 {
 "type": "obs",
 "data_url": "/test/minst/data/"
 }
],
"pool_name": "pnt1",
"dataset_version_name": "dataset-version-test",
"core": "8",
"engine_type": 1,
"engine_id": 3,
"engine_version": "TF-1.8.0-python2.7",
"data_url": "/test/minst/data/"
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Table 27-1](#).

## 28.3.3 Visualization Jobs

### 28.3.3.1 Creating a Visualization Job

#### Function

This API is used to create a visualization job.

Calling this API is an asynchronous operation. The job status can be obtained by calling the APIs described in [Querying a Visualization Job List](#) and [Querying the Details About a Visualization Job](#).

#### URI

POST /v1/{project\_id}/visualization-jobs

[Table 28-674](#) describes the required parameters.

**Table 28-674** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

#### Request Body

[Table 28-675](#) describes the request parameters.

**Table 28-675** Parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                  |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------|
| job_name  | Yes       | String | Name of a visualization job. The value must contain 1 to 20 characters consisting of only digits, letters, underscores (_), and hyphens (-). |
| job_desc  | No        | String | Description of a visualization job. The value must contain 0 to 256 characters. By default, this parameter is left blank.                    |
| train_url | Yes       | String | OBS path                                                                                                                                     |

| Parameter | Mandatory | Type   | Description                                                                                                                                |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------|
| job_type  | No        | String | Type of a visualization job. You can create visualization jobs of TensorBoard and MindInsight types. The default type is TensorBoard.      |
| flavor    | No        | Object | Specifications when a visualization job is created. You do not need to set this parameter. For details, see <a href="#">Table 28-676</a> . |
| schedule  | No        | Object | Auto stop setting. For details, see <a href="#">Table 28-677</a> .                                                                         |

**Table 28-676** flavor parameters

| Parameter | Mandatory | Type   | Description                                                                                                      |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------|
| code      | Yes       | String | Resource specification code of a visualization job. You can obtain the code through the <b>flavor</b> parameter. |

**Table 28-677** schedule parameters

| Parameter | Mandatory | Type   | Description                                             |
|-----------|-----------|--------|---------------------------------------------------------|
| type      | Yes       | String | Set this parameter to <b>stop</b> .                     |
| time_unit | Yes       | String | Unit of auto stop duration. The value is <b>HOURS</b> . |
| duration  | Yes       | Int    | Auto stop duration. The value ranges from 0 to 24.      |

## Response Body

[Table 28-678](#) describes the response parameters.

**Table 28-678** Parameters

| Parameter  | Type    | Description                       |
|------------|---------|-----------------------------------|
| is_success | Boolean | Whether the request is successful |

| Parameter     | Type    | Description                                                                                                                                   |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |
| job_id        | Long    | ID of a visualization job                                                                                                                     |
| job_name      | String  | Name of a visualization job                                                                                                                   |
| status        | Integer | Status of a visualization job. For details about the job statuses, see <a href="#">Job Statuses</a> .                                         |
| create_time   | Long    | Time when a visualization job is created, in timestamp format                                                                                 |
| service_url   | String  | Endpoint of a visualization job                                                                                                               |

## Sample Request

The following shows how to create a visualization job whose name is **visualization-job**, description is **this is a visualization job**, and OBS path is **/obs/name/**.

```
POST https://endpoint/v1/{project_id}/visualization-jobs
{
 "job_name": "visualization-job",
 "job_desc": "this is a visualization job",
 "train_url": "/obs/name/",
 "job_type": "mindinsight",
 "schedule": [
 {
 "type": "stop",
 "time_unit": "HOURS",
 "duration": 1
 }
]
}
```

## Sample Response

- Successful response

```
{
 "is_success": true,
 "job_id": "10",
 "job_name": "visualization-job",
 "status": "1",
 "create_time": "1524189990635"
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "error message",
}
```

```
{
 "error_code": "ModelArts.0103"
}
```

### Status Code

For details about the status code, see [Table 27-1](#).

### 28.3.3.2 Querying a Visualization Job List

#### Function

This API is used to obtain the visualization jobs that meet the search criteria.

#### URI

GET /v1/{project\_id}/visualization-jobs

[Table 28-679](#) describes the required parameters.

**Table 28-679** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-680** Query parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                         |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | No        | String  | Job status. By default, all job statuses are returned. For example, to obtain failed jobs, set the value of <b>status</b> to <b>3</b> , <b>5</b> , <b>6</b> , or <b>13</b> . For details about the job statuses, see <a href="#">Job Statuses</a> . |
| per_page  | No        | Integer | Number of jobs displayed on each page. The value range is [1, 1000]. Default value: <b>10</b>                                                                                                                                                       |
| page      | No        | Integer | Index of the page to be queried. Default value: <b>1</b>                                                                                                                                                                                            |
| sortBy    | No        | String  | Sorting mode of the query. The value can be <b>job_id</b> , <b>job_name</b> , <b>job_desc</b> , <b>create_time</b> , or <b>status</b> . Default value: <b>job_id</b>                                                                                |

| Parameter      | Mandatory | Type   | Description                                                                                                                                                             |
|----------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| order          | No        | String | Sorting order. Options: <ul style="list-style-type: none"><li>• <b>asc</b>: ascending order. It is the default value.</li><li>• <b>desc</b>: descending order</li></ul> |
| search_content | No        | String | Search content, for example, a visualization job name. The value must contain 0 to 64 characters. By default, this parameter is left blank.                             |
| workspace_id   | No        | String | Workspace where a job resides. Default value: <b>0</b>                                                                                                                  |

## Request Body

None

## Response Body

[Table 28-681](#) describes the response parameters.

**Table 28-681** Parameters

| Parameter       | Type              | Description                                                                                                                                   |
|-----------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| is_success      | Boolean           | Whether the request is successful                                                                                                             |
| error_code      | String            | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |
| error_message   | String            | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |
| job_total_count | Integer           | Total number of the queried visualization jobs                                                                                                |
| job_count_limit | Integer           | Number of visualization jobs that can be created                                                                                              |
| jobs            | <b>jobs</b> array | Visualization job attributes. For details, see <a href="#">Table 28-682</a> .                                                                 |
| quotas          | Integer           | Maximum number of training jobs                                                                                                               |



**Table 28-682 jobs parameters**

| Parameter   | Type    | Description                                                                                           |
|-------------|---------|-------------------------------------------------------------------------------------------------------|
| job_name    | String  | Name of a visualization job                                                                           |
| status      | Integer | Status of a visualization job. For details about the job statuses, see <a href="#">Job Statuses</a> . |
| create_time | Long    | Time when a visualization job is created                                                              |
| duration    | Long    | Visualization job running duration, in milliseconds                                                   |
| job_desc    | String  | Description of a visualization job                                                                    |
| service_url | String  | Endpoint of a visualization job                                                                       |
| train_url   | String  | Path for storing visualization job logs                                                               |
| job_id      | Long    | ID of a visualization job                                                                             |
| resource_id | String  | Charged resource ID of a visualization job                                                            |

## Sample Request

The following shows how to obtain the top 10 visualization jobs that are being deployed on the first page in ascending order.

```
GET https://endpoint/v1/{project_id}/visualization-jobs ?
status=7&per_page=10&page=1&sortBy=status&order=asc& search_content=job_name
```

## Sample Response

- Successful response

```
{
 "quotas": 100,
 "is_success": true,
 "job_total_count": 1,
 "job_count_limit": 999,
 "jobs": [
 {
 "job_id": 1,
 "job_name": "visualization-job",
 "status": 1,
 "create_time": 15099239923,
 "resource_id": "4787c885-e18d-4ef1-aa12-c4ed0c364b27",
 "duration": 1502323,
 "job_desc": "This is a visualization job",
 "service_url": "https://console.huaweicloud.com/modelarts/tensoarbod/xxxx/111",
 "train_url": "/obs/name/"
 }
]
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "error message",
 "error_code": "ModelArts.0103"
}
```

## Status Code

For details about the status code, see [Table 27-1](#).

### 28.3.3.3 Querying the Details About a Visualization Job

## Function

This API is used to obtain the details about a specified visualization job based on the job name.

## URI

GET /v1/{project\_id}/visualization-jobs/{job\_id}

[Table 28-683](#) describes the required parameters.

**Table 28-683** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes       | String | ID of a visualization job                                                                                       |

## Request Body

None

## Response Body

[Table 28-684](#) describes the response parameters.

**Table 28-684** Parameters

| Parameter     | Type   | Description                                                                                                                                   |
|---------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| error_message | String | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |
| error_code    | String | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |
| job_name      | String | Name of a visualization job                                                                                                                   |
| service_url   | String | Endpoint of a visualization job                                                                                                               |

| Parameter   | Type   | Description                                                                                           |
|-------------|--------|-------------------------------------------------------------------------------------------------------|
| resource_id | String | Charged resource ID of a visualization job                                                            |
| job_id      | Long   | ID of a visualization job                                                                             |
| job_desc    | String | Description of a visualization job                                                                    |
| duration    | Long   | Visualization job running duration, in milliseconds                                                   |
| create_time | Long   | Time when a visualization job is created, in timestamp format                                         |
| train_url   | String | OBS path of the visualization job output file                                                         |
| status      | Int    | Status of a visualization job. For details about the job statuses, see <a href="#">Job Statuses</a> . |

## Sample Request

The following shows how to obtain the visualization job whose ID is 10.

```
GET https://endpoint/v1/{project_id}/visualization-jobs/10
```

## Sample Response

- Successful response

```
{
 "duration": 33000,
 "service_url": "https://console.huaweicloud.com/modelarts2/tensorboard/04f679b17380d32a2f32c00335c4b5ba/197/",
 "job_name": "apiTest-11",
 "create_time": 1565149736000,
 "train_url": "/wph-test/zl-test/Flowers-Set/ApiTest/",
 "job_id": 197,
 "job_desc": "ModelArts API Dialtest",
 "resource_id": "e17dd874-b5e0-4e9b-aaf0-22b045ad8571",
 "status": 7
}
```
- Failed response

```
{
 "error_message": "The length of search content should be in [0,100]",
 "error_code": "ModelArts.0104"
}
```

## Status Code

For details about the status code, see [Table 27-1](#).

### 28.3.3.4 Modifying the Description of a Visualization Job

#### Function

This API is used to modify the description of a visualization job.

## URI

PUT /v1/{project\_id}/visualization-jobs/{job\_id}

[Table 28-685](#) describes the required parameters.

**Table 28-685** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes       | String | ID of a visualization job                                                                                       |

## Request Body

[Table 28-686](#) describes the request parameters.

**Table 28-686** Parameters

| Parameter | Mandatory | Type   | Description                                                                     |
|-----------|-----------|--------|---------------------------------------------------------------------------------|
| job_desc  | Yes       | String | Description of a visualization job. The value must contain 0 to 256 characters. |

## Response Body

[Table 28-687](#) describes the response parameters.

**Table 28-687** Parameters

| Parameter     | Type    | Description                                                                                                                                   |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                                                             |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |

## Sample Request

The following shows how to modify the description of the visualization job whose ID is **10** to **This is a ModelArts job**.

```
PUT https://endpoint/v1/{project_id}/visualization-jobs/10
{
 "job_desc": "This is a ModelArts job"
}
```

## Sample Response

- Successful response

```
{
 "is_success": true
}
```
- Failed response

```
{
 "is_success": false,
 "error_message": "Illegal name: %%123",
 "error_code": "ModelArts.0104"
}
```

## Status Code

For details about the status code, see [Table 27-1](#).

### 28.3.3.5 Deleting a Visualization Job

#### Function

This API is used to delete a visualization job. Calling this API is an asynchronous operation. The job status can be obtained by calling the APIs described in [Querying a Visualization Job List](#) and [Querying the Details About a Visualization Job](#).

#### URI

DELETE /v1/{project\_id}/visualization-jobs/{job\_id}

[Table 28-688](#) describes the required parameters.

**Table 28-688** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes       | String | ID of a visualization job                                                                                       |

## Request Body

None

## Response Body

[Table 28-689](#) describes the response parameters.

**Table 28-689** Parameters

| Parameter     | Type    | Description                                                                                                                                   |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                                                             |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |

## Sample Request

The following shows how to delete the visualization job whose ID is 10.

```
DELETE https://endpoint/v1/{project_id}/visualization-jobs/10
```

## Sample Response

- Successful response

```
{
 "is_success": true
}
```
- Failed response

```
{
 "is_success": false,
 "error_message": "This job can't be delete. job status: 9",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Table 27-1](#).

### 28.3.3.6 Stopping a Visualization Job

#### Function

This API is used to stop a visualization job. Calling this API is an asynchronous operation. The job status can be obtained by calling the APIs described in [Querying a Visualization Job List](#) and [Querying the Details About a Visualization Job](#).

## URI

POST /v1/{project\_id}/visualization-jobs/{job\_id}/stop

[Table 28-690](#) describes the required parameters.

**Table 28-690** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes       | String | ID of a visualization job                                                                                       |

## Request Body

None

## Response Body

[Table 28-691](#) describes the response parameters.

**Table 28-691** Parameters

| Parameter     | Type    | Description                                                                                                                                   |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                                                             |
| error_code    | String  | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |

## Sample Request

The following shows how to stop the visualization job whose ID is 10.

```
POST https://endpoint/v1/{project_id}/visualization-jobs/10/stop
```

## Sample Response

- Successful response

```
{
 "is_success": true
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "This job can't be stop. job status: 10",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Table 27-1](#).

### 28.3.3.7 Restarting a Visualization Job

## Function

This API is used to restart a visualization job. Calling this API is an asynchronous operation. The job status can be obtained by calling the APIs described in [Querying a Visualization Job List](#) and [Querying the Details About a Visualization Job](#).

## URI

POST /v1/{project\_id}/visualization-jobs/{job\_id}/restart

[Table 28-692](#) describes the required parameters.

**Table 28-692** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |
| job_id     | Yes       | String | ID of a visualization job                                                                                       |

## Request Body

None

## Response Body

[Table 28-693](#) describes the response parameters.

**Table 28-693** Parameters

| Parameter  | Type    | Description                       |
|------------|---------|-----------------------------------|
| is_success | Boolean | Whether the request is successful |



| Parameter     | Type   | Description                                                                                                                                   |
|---------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| error_code    | String | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |
| error_message | String | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |

## Sample Request

The following shows how to restart the visualization job whose ID is 10.

```
POST https://endpoint/v1/{project_id}/visualization-jobs/10/restart
```

## Sample Response

- Successful response

```
{
 "is_success": true
}
```
- Failed response

```
{
 "is_success": false,
 "error_message": "This job can't be resubmit. job status: 8",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Table 27-1](#).

## 28.3.4 Resource and Engine Specifications

### 28.3.4.1 Querying Job Resource Specifications

#### Function

This API is used to obtain the resource specifications of a specified job.

You must specify the resource specifications when creating a training job or an inference job.

#### URI

```
GET /v1/{project_id}/job/resource-specs
```

[Table 28-694](#) describes the required parameters.

**Table 28-694** Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                     |
|------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-695** Parameters

| Parameter    | Mandatory | Type    | Description                                                                                                                                                                                                                                                                  |
|--------------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| job_type     | No        | String  | Job type. The value can be <b>train</b> or <b>inference</b> . This parameter is not required for querying the specifications of ExeML resources.                                                                                                                             |
| engine_id    | No        | Long    | Engine ID of a job. Default value: <b>0</b> This parameter is not required for querying the specifications of ExeML resources.                                                                                                                                               |
| project_type | No        | Integer | Project type. Default value: <b>0</b> <ul style="list-style-type: none"><li><b>0</b>: non-ExeML project</li><li><b>1</b>: ExeML job for image classification</li><li><b>2</b>: ExeML job for object detection</li><li><b>3</b>: ExeML job for predictive analytics</li></ul> |

## Request Body

None

## Response Body

[Table 28-696](#) describes the response parameters.

**Table 28-696** Parameters

| Parameter     | Type    | Description                                                                                       |
|---------------|---------|---------------------------------------------------------------------------------------------------|
| is_success    | Boolean | Whether the request is successful                                                                 |
| error_message | String  | Error message of a failed API call.<br>This parameter is not included when the API call succeeds. |

| Parameter        | Type               | Description                                                                                                                                   |
|------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| error_code       | String             | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |
| spec_total_count | Integer            | Total number of job resource specifications                                                                                                   |
| specs            | <b>specs</b> array | List of resource specifications attributes. For details, see <a href="#">Table 28-697</a> .                                                   |

**Table 28-697** specs parameters

| Parameter      | Type    | Description                                                                                                        |
|----------------|---------|--------------------------------------------------------------------------------------------------------------------|
| spec_id        | Long    | ID of the resource specifications                                                                                  |
| core           | String  | Number of cores of the resource specifications                                                                     |
| cpu            | String  | CPU memory of the resource specifications                                                                          |
| gpu_num        | Integer | Number of GPUs of the resource specifications                                                                      |
| gpu_type       | String  | GPU type of the resource specifications                                                                            |
| spec_code      | String  | Type of the resource specifications                                                                                |
| max_num        | Integer | Maximum number of nodes that can be selected                                                                       |
| unit_num       | Integer | Number of pricing units                                                                                            |
| storage        | String  | SSD size of a resource flavor                                                                                      |
| interface_type | Integer | Interface type                                                                                                     |
| no_resource    | Boolean | Whether the resources of the selected specifications are sufficient. True indicates that no resource is available. |

## Sample Request

The following shows how to obtain the resource specifications of a training job.

```
GET https://endpoint/v1/{project_id}/job/resource-specs?job_type=train
```

## Sample Response

- Successful response

```
{
 "specs": [
 {
```

```
"spec_id": 2,
"core": "2",
"cpu": "8",
"gpu_num": 0,
"gpu_type": "",
"spec_code": "modelarts.vm.cpu.2u",
"unit_num": 1,
"max_num": 2,
"storage": "",
"interface_type": 1,
"no_resource": false
}
],
"is_success": true,
"spec_total_count": 1
}
```

- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Table 27-1](#).

### 28.3.4.2 Querying Job Engine Specifications

## Function

This API is used to obtain the engine type and version of a specified job.

You must specify the engine specifications when creating a training job or an inference job.

## URI

GET /v1/{project\_id}/job/ai-engines

[Table 28-698](#) describes the required parameters.

**Table 28-698** Parameters

| Parameter  | Mandator<br>y | Type   | Description                                                                                                     |
|------------|---------------|--------|-----------------------------------------------------------------------------------------------------------------|
| project_id | Yes           | String | Project ID. For details about how to obtain a project ID, see <a href="#">Obtaining a Project ID and Name</a> . |

**Table 28-699** Parameters

| Parameter | Mandatory | Type   | Description                                                   |
|-----------|-----------|--------|---------------------------------------------------------------|
| job_type  | No        | String | Job type. The value can be <b>train</b> or <b>inference</b> . |

## Request Body

None

## Response Body

[Table 28-700](#) describes the response parameters.

**Table 28-700** Parameters

| Parameter     | Type                 | Description                                                                                                                                   |
|---------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| is_success    | Boolean              | Whether the request is successful                                                                                                             |
| error_message | String               | Error message of a failed API call.<br>This parameter is not included when the API call succeeds.                                             |
| error_code    | String               | Error code of a failed API call. For details, see <a href="#">Error Codes</a> .<br>This parameter is not included when the API call succeeds. |
| engines       | <b>engines</b> array | List of engine specifications attributes. For details, see <a href="#">Table 28-701</a> .                                                     |

**Table 28-701 engines** parameters

| Parameter      | Type    | Description                                                                                                                                                                                                                                                                             |
|----------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| engine_type    | Integer | Engine type of a training job <ul style="list-style-type: none"><li>1: TensorFlow</li><li>2: MXNet</li><li>4: Caffe</li><li>5: Spark_MLLib</li><li>6: Scikit Learn</li><li>9: XGBoost-Sklearn</li><li>10: PyTorch</li><li>13: Ascend-Powered-Engine</li><li>17: MindSpore-GPU</li></ul> |
| engine_id      | Long    | ID of the engine selected for a training job                                                                                                                                                                                                                                            |
| engine_name    | String  | Name of the engine selected for a training job                                                                                                                                                                                                                                          |
| engine_version | String  | Version of the engine selected for a training job                                                                                                                                                                                                                                       |

## Sample Request

The following shows how to obtain the engine specifications of a training job.

```
GET https://endpoint/v1/{project_id}/job/ai-engines?job_type=train
```

## Sample Response

- Successful response

```
{
 "is_success": true,
 "engines": [
 {
 "engine_type": 1,
 "engine_name": "TensorFlow",
 "engine_id": 1,
 "engine_version": "TF-1.4.0-python2.7"
 }
]
}
```
- Failed response

```
{
 "is_success": false,
 "error_message": "Error string",
 "error_code": "ModelArts.0105"
}
```

## Status Code

For details about the status code, see [Table 27-1](#).

## 28.3.5 Job Statuses

[Table 28-702](#) describes the job statuses.

**Table 28-702** Job statuses

| Status Value | Description                                                     |
|--------------|-----------------------------------------------------------------|
| 0            | JOBSTAT_UNKNOWN: Unknown status.                                |
| 1            | JOBSTAT_INIT: The job is being initialized.                     |
| 2            | JOBSTAT_IMAGE_CREATING: The job image is being created.         |
| 3            | JOBSTAT_IMAGE_FAILED: Failed to create the job image.           |
| 4            | JOBSTAT_SUBMIT_TRYING: The job is being submitted.              |
| 5            | JOBSTAT_SUBMIT_FAILED: Failed to submit the job.                |
| 6            | JOBSTAT_DELETE_FAILED: Failed to delete the job.                |
| 7            | JOBSTAT_WAITING: The job is queuing.                            |
| 8            | JOBSTAT_RUNNING: The job is running.                            |
| 9            | JOBSTAT_KILLING: The job is being canceled.                     |
| 10           | JOBSTAT_COMPLETED: The job has been completed.                  |
| 11           | JOBSTAT_FAILED: Failed to run the job.                          |
| 12           | JOBSTAT_KILLED: Job canceled successfully.                      |
| 13           | JOBSTAT_CANCELED: Job canceled.                                 |
| 14           | JOBSTAT_LOST: Job lost.                                         |
| 15           | JOBSTAT_SCALING: The job is being scaled.                       |
| 16           | JOBSTAT_SUBMIT_MODEL_FAILED: Failed to submit the model.        |
| 17           | JOBSTAT_DEPLOY_SERVICE_FAILED: Failed to deploy the service.    |
| 18           | JOBSTAT_CHECK_INIT: The job review is being initialized.        |
| 19           | JOBSTAT_CHECK_RUNNING: The job is being reviewed.               |
| 20           | JOBSTAT_CHECK_RUNNING_COMPLETED: The approval job is completed. |
| 21           | JOBSTAT_CHECK_FAILED: Failed to review the job.                 |