

DataArts Studio

# API Reference

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# 1 Before You Start

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## 1.1 Overview

Welcome to DataArts Studio. DataArts Studio is a one-stop operations platform that provides data lifecycle management and intelligent data management for enterprises' digital operations. It provides functions such as DataArts Migration, DataArts Architecture, DataArts Factory, DataArts Quality, DataArts Catalog, and DataArts DataService. DataArts Studio supports intelligent construction of industrial knowledge libraries as well as data foundations such as big data storage and big data computing and analysis engines. DataArts Studio helps you quickly construct intelligent end-to-end data systems from data ingestion to data analysis. It helps eliminate data silos, unify standards, accelerate monetization, and generally assist with digital transformation.

This document describes how to use APIs to perform operations on DataArts Studio components, such as creating clusters and connections. For details about all supported operations, see [API Overview](#).

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

## 1.2 API Calling

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

## 1.3 Concepts

- **Domain**  
A domain is created upon successful registration. The domain has full access permissions for all of its cloud services and resources. It can be used to reset user passwords and grant users permissions. The domain should not be used directly to perform routine management. For security purposes, create Identity and Access Management (IAM) users and grant them permissions for routine management.

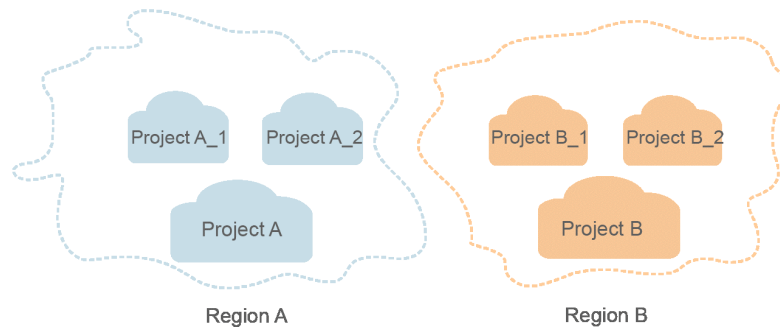
- User

A user is created in Identity and Access Management (IAM) to use cloud services. Each user has its own identity credentials (password and access keys).

You can view the account ID and user ID in [Project ID and Account ID](#). The account name, username, and password will be required for API authentication.
- Project

Projects group and isolate resources (including 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 want more refined access control, create subprojects under a project and create resources in the subprojects. Then, grant users the permissions to access only specific resources in the subprojects.

**Figure 1-1** Project isolating model



## 1.4 Endpoints

### Obtaining an Endpoint

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions.

DataArts Studio endpoints are in the following formats. Select an endpoint based on your service requirements.

- DataArts Migration (or CDM): `cdm.{region_id}.myhuaweicloud.eu`. See [Table 1-1](#) for details.
- DataArts Factory: `dayu-dlf.{region_id}.myhuaweicloud.eu`. See [Table 1-2](#) for details.
- Other DataArts Studio modules (such as DataArts Architecture, DataArts Quality, DataArts Catalog, and DataArts DataService): `dayu.{region_id}.myhuaweicloud.eu`. See [Table 1-3](#) for details.

**Table 1-1** DataArts Migration endpoints

Region Name	Region ID	Endpoint	Protocol
EU-Dublin	eu-west-101	cdm.eu-west-101.myhuaweicloud.eu	HTTPS

**Table 1-2** DataArts Factory endpoints

Region Name	Region ID	Endpoint	Protocol
EU-Dublin	eu-west-101	dayu-dlf.eu-west-101.myhuaweicloud.eu	HTTPS

**Table 1-3** Endpoints of other modules

Region Name	Region ID	Endpoint	Protocol
EU-Dublin	eu-west-101	dayu.eu-west-101.myhuaweicloud.eu	HTTPS

## 1.5 Project ID and Account ID

### Obtaining a Project ID and Account ID

You can obtain the project ID and account ID by performing the following steps:

1. Register with and log in to the management console.
2. Hover the cursor on the username in the upper right corner and select **My Credentials** from the drop-down list.
3. On the **My Credentials** page, obtain the account name and account ID, and obtain the project ID from the project list.

### Obtaining a Project ID by Calling an API

You can obtain the project ID by calling the API used to [query project information based on the specified criteria](#).

The API for obtaining a project ID is **GET https://{Endpoint}/v3/projects/**, where *{Endpoint}* indicates the endpoint of IAM.

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions. You can obtain endpoints from [Endpoints](#).

For details about API authentication, see [Authentication](#).

The following is a response example. The value of **id** under **projects** is the project ID. If multiple IDs are returned, obtain the desired one based on your actual region (name).

```
{
  "projects": [
    {
      "domain_id": "65382450e8f64ac0870cd180d14e684b",
      "is_domain": false,
      "parent_id": "65382450e8f64ac0870cd180d14e684b",
      "name": "region-name",
      "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"
  }
}
```

## 1.6 DataArts Studio Instance ID and Workspace ID

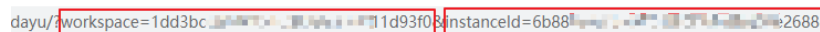
### Obtaining a DataArts Studio Instance ID and Workspace ID

To obtain a DataArts Studio instance ID and workspace ID, perform the following steps:

1. On the DataArts Studio console, locate a workspace and click any module, such as **Management Center**.
2. On the **Management Center** page, obtain the values of **instanceId** and **workspace** in the browser address bar, which are the instance ID and workspace ID, respectively.

As shown in [Figure 1-2](#), the instance ID is **6b88...2688**, and the workspace ID is **1dd3bc...d93f0**.

**Figure 1-2** Obtaining the instance ID and workspace ID



dayu/?workspace=1dd3bc...d93f0&instanceId=6b88...2688

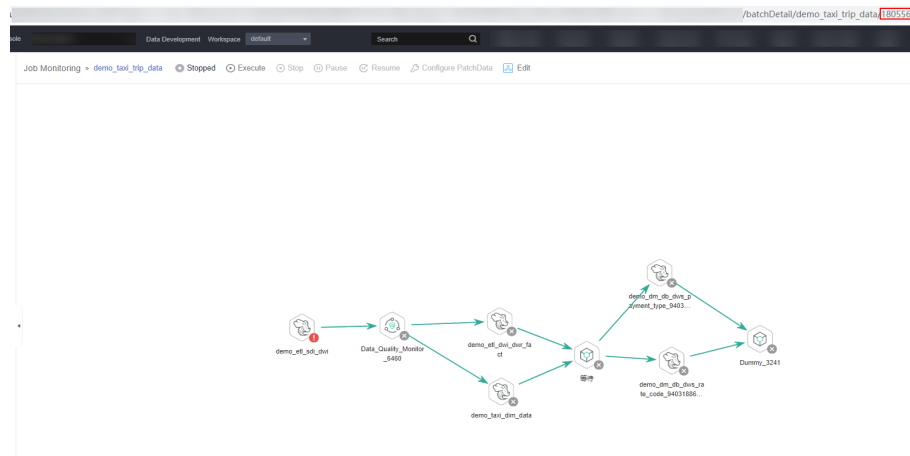
## 1.7 Data Development Job ID

A job ID (**jobid**) is required for some URLs when an API is called. To obtain a job ID, perform the following operations:

1. Log in to the DataArts Studio console. Locate an instance and click **Access**. On the displayed page, locate a workspace and click **DataArts Factory**.
2. In the navigation pane, choose **Monitoring > Monitor Job**, and click **Batch Job Monitoring** or **Real-Time Job Monitoring** based on the job type.

3. Click a job name to go to the job monitoring page.  
In the URL of the page, the job ID is after the job type (**batchJobDetail** or **realTimeJobDetail**) and job name, as shown in the following figure.

**Figure 1-3** Obtaining a job ID



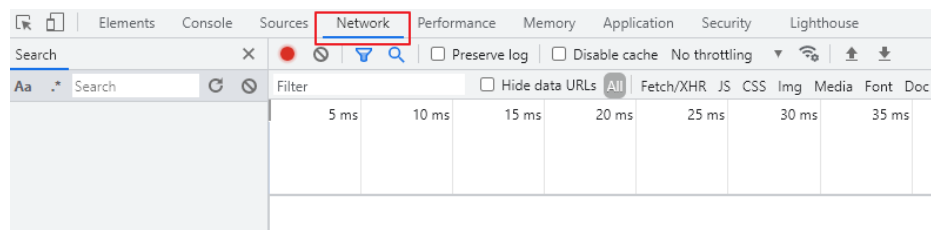
## 1.8 DataArts Catalog GUID

Each logical, technical, or metric asset has a GUID, which is the unique identifier of the asset. Some URLs in the calls to DataArts Catalog APIs require the GUID.

To obtain the DataArts Catalog GUID, perform the following steps:

1. On the DataArts Studio console, locate an instance and click **Access**. On the displayed page, locate a workspace and click **DataArts Catalog**.
2. Press **F12** to open the developer debugging tool and click the **Network** tab.

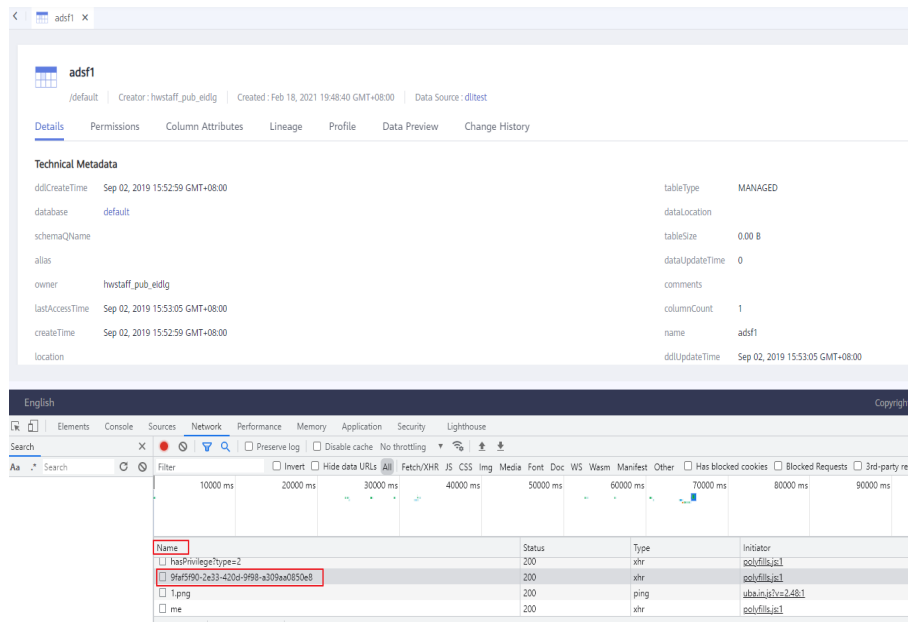
**Figure 1-4** Network



3. On the **Dashboard** or **Data Catalog** page of the DataArts Catalog console, click the name of an asset to view its details.
  - a. In the network request, search for a long character string whose name is similar to **09318f28-939f-4ab6-a374-9e621096652c**.

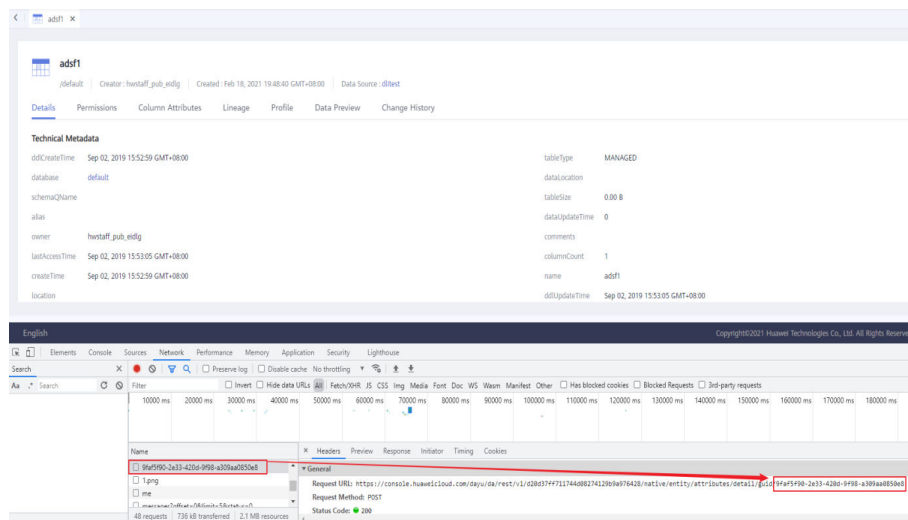


**Figure 1-5** Searching for a long character string



b. Click the character string and obtain the GUID from **Request URL**.

**Figure 1-6** Obtaining the GUID



## 1.9 Constraints

- The restrictions on DataArts Catalog APIs are as follows:
  - CDM jobs carry large volumes of data, which increases the database load. You are advised to periodically delete unused jobs.
  - If a large number of jobs are delivered in a short period, cluster resources may be exhausted.
  - CDM is a batch offline migration tool. You are advised not to create a large number of small jobs using CDM.
- For the constraints of other modules' APIs, see their API descriptions.

# 2 API Overview

DataArts Studio provides self-developed APIs that comply with RESTful API design specifications. You can call those APIs to perform operations on DataArts Studio.

**Table 2-1** DataArts Migration APIs

Type	API	Description	Maximum Number of Requests Made Per User Per Minute
<b>Cluster Management</b>	Creating a Cluster	Used to create a CDM cluster.	5
	Querying the Cluster List	Used to query the list of CDM clusters.	120
	Querying Cluster Details	Used to query the details of a CDM cluster.	120
	Restarting a Cluster	Used to restart a CDM cluster.	20
	Deleting a Cluster	Used to delete a CDM cluster.	20
	Stopping a Cluster	Used to stop a CDM cluster.	20
	Starting a Cluster	Used to start a CDM cluster.	20
<b>Job Management</b>	Creating a Link	Used to connect to a data source.	120
	Querying a Link	Used to query the link list.	120
	Modifying a Link	Used to modify the link configuration.	120

Type	API	Description	Maximum Number of Requests Made Per User Per Minute
	Deleting a Link	Used to delete a link.	120
<b>Job Management</b>	Creating a Job in a Specific Cluster	Used to create a data migration job in a specific CDM cluster. The job will not automatically start.	1200
	Creating and Executing a Job in a Random Cluster	Used to select a random cluster in the running state from the specified clusters and create and execute a data migration job.	120
	Querying a Job	Used to query the job list.	120
	Modifying a Job	Used to modify the job configuration.	120
	Starting a Job	Used to start a data migration job.	1200
	Stopping a Job	Used to stop a running job.	1200
	Querying Job Status	Used to query the running status of a job.	120
	Querying Job Execution History	Used to query the historical status of job execution.	120
	Deleting a job	Used to delete a job.	120

**Table 2-2** DataArts Factory APIs

Type	Description
<b>Connection Management APIs</b>	Used to create, edit, delete, and export data connections, query the data connection list, and query data connection details. For details, see <b>DataArts Factory &gt; Data Management &gt; Creating a Data Connection</b> in the <i>User Guide</i> .

Type	Description
<a href="#">Script Development APIs</a>	Used to delete and execute scripts. For details, see <b>DataArts Factory &gt; Script Development</b> in the <i>User Guide</i> .
<a href="#">Resource Management APIs</a>	Used to perform operations such as deleting resources. For details, see <b>DataArts Factory &gt; Configuration and Management &gt; Managing a Resource</b> in the <i>User Guide</i> .
<a href="#">Job Development APIs</a>	Used to delete jobs and query job files. For details, see <b>DataArts Factory &gt; Job Development</b> in the <i>User Guide</i> .
<a href="#">APIs to Be Taken Offline</a>	A collection of data development APIs that need to be optimized. Currently, these APIs work properly, including the APIs used to create, query, and modify scripts, create, query, and modify resources, and create and edit jobs.

**Table 2-3** DataArts Architecture APIs

Type	Description
<a href="#">Overview APIs</a>	Used to view the overall statistics.
<a href="#">Data Standard APIs</a>	Used to create and manage data standards, and associate attributes with data standards.
<a href="#">Lookup Table Management APIs</a>	Used to create and manage lookup tables.
<a href="#">Catalog APIs</a>	Used to create and manage catalogs, and search for processes.
<a href="#">Data Standard Template APIs</a>	Used to create and manage data standard templates.
<a href="#">Approval Management APIs</a>	Used to manage reviewers and create and process applications.
<a href="#">Subject Management APIs</a>	Used to create and manage subjects.
<a href="#">Subject Level APIs</a>	Used to obtain, modify, and delete subject levels.

Type	Description
<b>Catalog Management APIs</b>	Used to perform operations such as obtaining directories.
<b>Atomic Metric APIs</b>	Used to perform operations such as querying atomic metrics.
<b>Derivative Metric APIs</b>	Used to perform operations such as querying derivative metrics.
<b>Compound Metric APIs</b>	Used to perform operations such as querying compound metrics.
<b>Dimension APIs</b>	Used to perform operations such as querying dimensions and dimension details.
<b>Filter APIs</b>	Used to perform operations such as querying filters and filter details.
<b>Dimension Table APIs</b>	Used to perform operations such as querying dimension tables and dimension table details.
<b>Fact Table APIs</b>	Used to perform operations such as querying fact tables and fact table details.
<b>Summary Table APIs</b>	Used to perform operations such as querying summary tables and summary table details.
<b>Business Metric APIs</b>	Used to perform operations such as querying business metrics and business metric details.
<b>Version Information APIs</b>	Used to query versions based on the name, creator, and modification time.
<b>ER Modeling APIs</b>	Used to perform operations such as querying model entities, relationship details, and table models.
<b>Import/Export APIs</b>	Used to import ER models, dimensional models, lookup tables, business metrics, and process architecture, and query the import result.

**Table 2-4** DataArts Quality APIs

Type	Description
<b>Catalog APIs</b>	Used to obtain the directory list.
<b>Rule Template APIs</b>	Used to obtain the rule template list and details about a specified rule template.
<b>Quality Job APIs</b>	Used to obtain the quality job list and job details.
<b>Comparison Job APIs</b>	Used to obtain the comparison job list and job details.
<b>O&amp;M APIs</b>	Used to perform operations such as obtaining task execution results.

**Table 2-5** DataArts Catalog APIs

Type	Description
<b>Logical Asset APIs</b>	Used to perform operations such as querying logical assets.
<b>Metric Asset APIs</b>	Used to perform operations such as querying metric assets.
<b>Asset Statistics APIs</b>	Used to perform operations such as obtaining statistics of logical assets or technical assets.
<b>Asset Management APIs</b>	Used to query asset details and technical assets.
<b>Asset Classification APIs</b>	Used to associate or remove asset classifications.
<b>Asset Security Level APIs</b>	Used to associate or remove asset security levels.

**Table 2-6** DataArts DataService APIs

Type	Description
<b>API Management</b>	Used to create, debug, publish, manage, and authorize APIs.

Type	Description
<b>Authorization Management</b>	Used to perform operations such as querying authorized apps of an API and querying authorized APIs of an app.
<b>Application Management</b>	Used to query the application list in the Review Center, review applications, and obtain application details.
<b>Message Management</b>	Used to query the message list, process messages, and obtain message details.
<b>Service Catalog Management</b>	Used to create and manage service catalogs.
<b>Gateway Management</b>	Used to obtain the gateway instance list and gateway group list.
<b>App Management</b>	Used to create and manage apps.
<b>Overview APIs</b>	Used to query API development and calling metrics, and query top N APIs.

# 3 Calling APIs

## 3.1 Making an API Request

This section describes the structure of a REST API, 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

A request URI is in the following format:

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

Although a request URI is included in the request header, most programming languages or frameworks require the request URI to be transmitted separately.

**Table 3-1** URI parameter description

Parameter	Description
URI-scheme	Protocol used to transmit requests. All APIs use HTTPS.
Endpoint	Domain name or IP address of the server bearing the REST service endpoint. The endpoint varies between services in different regions. An endpoint is the <b>request address</b> for calling an API. Endpoints vary depending on services and regions. You can obtain endpoints from <b>Endpoints</b> . For example, the endpoint of IAM in the <b>EU-Dublin</b> region is <b>iam.eu-west-101.myhuaweicloud.eu</b> .
resource-path	Access path of an API for performing a specified operation. Obtain the value from the URI of an API. For example, the <b>resource-path</b> of the API used to obtain a user token is <b>/v3/auth/tokens</b> .



Parameter	Description
query-string	Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of " <i>Parameter name=Parameter value</i> ", for example, <b>?limit=10</b> , it indicates that a maximum of 10 data records are allowed.

For example, to obtain an IAM token in the **EU-Dublin** region, obtain the endpoint of IAM (**iam.eu-west-101.myhuaweicloud.eu**) 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.eu-west-101.myhuaweicloud.eu/v3/auth/tokens`

 **NOTE**

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

## Request Method

The HTTP protocol defines the following request methods that can be used to send a request to the server:

**Table 3-2** HTTP methods

Method	Description
GET	Requests the server to return specified resources.
PUT	Requests the server to update specified resources.
POST	Requests the server to add resources or perform special operations.
DELETE	Requests the server to delete specified resources, for example, an object.
HEAD	Same as GET except that the server must return only the response header.
PATCH	Requests the server to update partial content of a specified resource. If the resource does not exist, a new resource will be created.

For example, in the case of the API used to **obtain a user token**, the request method is POST. The request is as follows:

POST `https://iam.eu-west-101.myhuaweicloud.eu/v3/auth/tokens`

## Request Header

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

**Table 3-3** lists common request header fields.

**Table 3-3** Common request header fields

Field	Description	Mandatory	Example
Content-Type	Specifies the request body MIME type. This field is mandatory and its default value is <b>application/json</b> . Other values of this field will be provided for specific APIs if any.	Yes	The default value is <b>application/json</b> .
Content-Length	Specifies the length of the request body. The unit is byte.	No	3495
X-Language	Specifies the request language.	No	en_us
X-Project-Id	Specifies a project ID. Obtain the project ID by following the instructions in <a href="#">Project ID and Account ID</a> .	No	e9993fc787d94b6c886cbaa340f9c0f4
X-Auth-Token	Specifies a user token. The user token is a response to the API used to <a href="#">obtain a user token</a> . This API is the only one that does not require authentication. The token is the value of <b>X-Subject-Token</b> in the response header.	This field is mandatory for token authentication.	The following is part of an example token: MIIPAgYJKoZlIhvc-NAQcCo...ggg1BBI INPXsidG9rZ
X-Sdk-Date	Time when the request is sent. The time is in <b>YYYYMMDD'T'HHMMSS'Z</b> format. The value is the current GMT time of the system.	This field is mandatory for AK/SK-based authentication.	20150907T101459Z

Field	Description	Mandatory	Example
Host	Specifies the server domain name and port number of the resources being requested. The value can be obtained from the URL of the service API. The value is in the format of <i>hostname[:port]</i> . If the port number is not specified, the default port is used. The default port number for HTTPS is 443.	This field is mandatory for AK/SK-based authentication.	code.test.com or code.test.com:443
Authorization	Authentication information. The value can be obtained from the request signing result.	This field is mandatory for AK/SK-based authentication.	SDK-HMAC-SHA256 Credential=QRUP2R3QFNAOVAVW MYHZW/ 20160202/ northchina/test/ sdk_request, SignedHeaders=host;x-sdk-date, Signature=9d8b56b055c0e1f7a9498d881a7cb726be91b4f0cde1773b0b1557e987a480ce

Field	Description	Mandatory	Example
workspace	Workspace ID. For details about how to obtain it, see <a href="#">DataArts Studio Instance ID and Workspace ID</a> .	<ul style="list-style-type: none"><li>You do not need to set this field when calling a CDM API because in that case, only the default workspace can be used.</li><li>When a DataArts Factory API is called, data in the default workspace is queried by default. To query data in other workspaces, include this header in the query request.</li><li>This header is mandatory for calling the APIs of other modules. Otherwise, API calls will fail.</li></ul>	d1cd7861478748a6925bc02f47c69279
X-Dlm-Type	DataArts DataService edition, which is Exclusive	This parameter is mandatory for calling DataArts DataService APIs.	<b>EXCLUSIVE:</b> exclusive edition

 **NOTE**

In addition to supporting token-based authentication, APIs also support authentication using access key ID/secret access key (AK/SK). During AK/SK-based authentication, an SDK is used to sign the request, and the **Authorization** (signature authentication) and **X-Sdk-Date** (time when the request is sent) header fields are automatically added to the request.

For more information, see "AK/SK-based Authentication" in [Authentication](#).

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.eu-west-101.myhuaweicloud.eu/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.

The request body varies between APIs. Some APIs do not require the request body, such as the APIs requested using the **GET** and **DELETE** methods.

In the case of the API 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 *username*, *domainname*, *\*\*\*\*\** (login password), and *xxxxxxxxxxxxxxxxxxxx* (project ID) with the actual values. To learn how to obtain a project ID, see **Project ID and Account ID**.

### NOTE

The **scope** parameter specifies where a token takes effect. You can set **scope** to an account or a project under an account. For details, see **Obtaining a User Token**.

```
POST https://iam.eu-west-101.myhuaweicloud.eu/v3/auth/tokens
Content-Type: application/json
```

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
          "password": "*****",
          "domain": {
            "name": "domainname"
          }
        }
      }
    },
    "scope": {
      "project": {
        "id": "xxxxxxxxxxxxxxxxxxxx"
      }
    }
  }
}
```

If all data required for the API request is available, you can send the request to call the API through **curl**, **Postman**, or coding. For the API used to **obtain a user token**, **x-subject-token** in the response header is the desired user token. This token can then be used to authenticate the calling of other APIs.

## 3.2 Authentication

Requests for calling an API can be authenticated using either of the following methods:

- Token-based authentication: Requests are authenticated using a token.

- AK/SK-based authentication: Requests are authenticated by encrypting the request body using an AK/SK pair. AK/SK-based authentication is recommended because it is more secure than token-based authentication.

## 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 temporary permissions in a computer system. During API authentication using a token, the token is added to a request 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**.

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
          "password": "*****",
          "domain": {
            "name": "domainname"
          }
        }
      }
    }
  },
  "scope": {
    "project": {
      "id": "xxxxxxxxxxxxxxxxxxxxxx"
    }
  }
}
```

After a token is obtained, the X-Auth-Token header field must be added to requests to specify the token when calling other APIs, for example, the API used to query a connection list. For example, if the token is **ABCDEFJ....**, **X-Auth-Token: ABCDEFJ....** can be added to a request as follows:

```
GET https://iam.eu-west-101.myhuaweicloud.eu/v1/{project_id}/connections
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-based authentication is recommended.

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

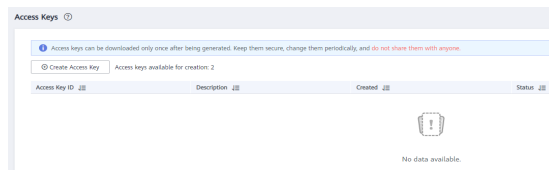
- AK: access key ID, which is a unique identifier used in conjunction with a secret access key to sign requests cryptographically.

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

To obtain an access key, perform the following steps:

1. Log in to the management console, move the cursor to the username in the upper right corner, and select **My Credentials** from the drop-down list.
2. On the **My Credentials** page, choose **Access Keys**, and click **Create Access Key**. See [Figure 3-1](#).

**Figure 3-1** Clicking Create Access Key



3. Click **OK** and save the access key file as prompted. The access key file will be saved to your browser's configured download location. Open the **credentials.csv** file to view **Access Key Id** and **Secret Access Key**.

#### NOTE

- Only two access keys can be added for each user.
- To ensure access key security, the access key is automatically downloaded only when it is generated for the first time and cannot be obtained from the management console later. Keep them properly.

In AK/SK-based 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 signature SDK, see [API Request Signing Guide](#).

#### NOTICE

The signing SDKs are only used for signing requests and different from the SDKs provided by services.

## 3.3 Response

### Status Code

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

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 Codes](#).

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 3-2** shows the response header fields for the API used to **obtain a user token**. The **x-subject-token** header field 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
→ MIiYXQYJKoZIhvcNAQcCoIIYTCCEGoCAQExDTALBglghkgBZQMEAgEwgharBgkqhkiG9w0BBwGgghacBIIWmHsidG9rZW4iOansiZXhwaXJlc19hdCI6IiwMTktMDItMTNUMC
fj3Kjs6YgKnpVNRbW2eZ5eb78SZOkqjACgkqlqO1wi4JIGzrpd18LGXK5bdfq4lqHCYb8P4NaYONYeJcAgz/VeFYtLWT1GSO0zxKZmlQHqJ82HBqHdglZO9fuEbL5dMhdavj+33wEI
xHRCE9I87o+k9-
j+CMZSEB7bUGd5Uj6eRASXl1jipPEGA270g1FruooL6jgglFKNPQuFSOU8+uSsttVwRtnfsC+qTp22Rkd5MCqFGQ8LcuUxC3a+9CMBnOintWW7oeRUUVhVpxk8pxiX1wTEboX-
RzT6MUbpvGw-oPNFYxjECKnoH3HRozv0vN--n5d6Nbxg==

x-xss-protection → 1; mode=block;

```

## (Optional) Response Body

The body of a response is often returned in structured format (such as JSON or XML) 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**. The following describes part of the request body.

```

{
  "token": {
    "expires_at": "2019-02-13T06:52:13.855000Z",
    "methods": [
      "password"
    ],
    "catalog": [
      {
        "endpoints": [
          {
            "region_id": "eu-west-101",
            ...
          }
        ]
      }
    ]
  }
}

```

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 response body, **error\_code** is an error code, and **error\_msg** provides information about the error.

# 4 Application Cases

## 4.1 Application Example

This section describes how to use cURL to call CDM APIs to migrate data from a local MySQL database to DWS in the cloud.

1. **Obtaining a Token**

Call the API to obtain the user token, which will be put into the request header for authentication in a subsequent request.

2. **Creating a CDM Cluster**

- If you have created a CDM cluster, skip this step and directly use the ID of the created cluster.
- If you want to use a new cluster for migration, call the API in **Creating a Cluster** to create a CDM cluster.

3. **Creating Links**

Call the API in **Creating a Link** to create the MySQL and DWS links.

4. **Creating a Migration Job**

Call the API in **Creating a Job in a Specified Cluster** to create a job for migrating data from MySQL to DWS.

5. **Viewing Job Result**

Call the API in **Querying Job Execution History** to execute the job.

### Preparing Data

Before calling an API, prepare the following data.

**Table 4-1** Preparing data

Item	Name	Description	Example
Account information	Project name	Name of the project where CDM resides	Project Name

Item	Name	Description	Example
	Project ID	ID of the project where CDM resides	1551c7f6c808414d8e9f3c514a170f2e
	Account name	Name of an enterprise account to which a user belongs	Account Name
	Username	Username for using a cloud service. The user must have operation permissions on CDM.	Username
	Password	User password	password
VPC information	VPC ID	The VPC where CDM resides must be the same as that of DWS.	6b47302a-bf79-4b20-bf7a-80987408e196
	Subnet ID	The subnet where CDM resides must be the same as that of DWS.	63bdc3cb-a4e7-486f-82ee-d9bf208c8f8c
	Security group ID	The security group where CDM resides must be the same as that of DWS.	005af77a-cce5-45ac-99c7-2ea50ea8addf
Endpoint	IAM endpoint	An endpoint is the <b>request address</b> for calling an API. Endpoints vary depending on services and regions. You can obtain endpoints from <a href="#">Endpoints</a> .	iam_endpoint
	CDM endpoint		cdm_endpoint
MySQL database	IP address	IP address of the local MySQL database, which allows CDM to access the MySQL database using a public IP address	1xx.120.85.24
	Port	MySQL database port	3306
	Database name	Name of the MySQL database from which data is to be exported	DB_name

Item	Name	Description	Example
	Username	Username for accessing the MySQL database. The user must have the read, write, and delete permissions on the MySQL database.	username
	Password	Password for accessing the MySQL database	DB_password
DWS database	IP address	IP address of the DWS database. CDM can access the IP address through the internal network.	10.120.85.24
	Port	DWS database port	3306
	Database name	Name of the DWS database to which data is written	DWS
	Username	Username for accessing the DWS database. The user must have the read, write, and delete permissions on the DWS database.	user_dws
	Password	Password for accessing the DWS database	dws_password

## Obtaining a Token

1. Before calling other APIs, obtain the token and set it as an environment variable.

```
curl -H "Content-Type:application/json" https://{iam_endpoint}/v3/auth/tokens -X POST -d '{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "Username",
          "password": "password",
          "domain": {
            "name": "Account Name"
          }
        }
      }
    }
  }
}
```

```
    }
  },
  "scope": {
    "project": {
      "id": "1551c7f6c808414d8e9f3c514a170f2e"
    }
  }
}
'-v -k
```

The value of **X-Subject-Token** in the response header is the token.

**X-Subject-Token:**MIIDkgYJKoZIhvcNAQcCoIIDgzCCA38CAQExDTALBglghkgBZQMEAgEwgXXXXX...

2. Run the following command to set the token as an environment variable for future use:

```
export X-Auth-Token = MIIDkgYJKoZIhvcNAQcCoIIDgzCCA38CAQExDTALBglghkgBZQMEAgEwgXXXXX...
```

## Creating a CDM Cluster

1. Call the API in [Creating a Cluster](#) to create a cluster. The following values are examples:
  - Cluster name: **cdm-ab82**
  - Cluster flavor: **cdm.medium**
  - The VPC, subnet, and security group are the same as those of DWS, and the EIP is automatically bound.

If status code **200** is returned, the cluster is successfully created.

```
curl -X POST -H 'Content-Type:application/json;charset=utf-8' -H "X-Auth-Token:$Token" -d '{
  "cluster": {
    "name": "cdm-ab82",
    "vpclid": "6b47302a-bf79-4b20-bf7a-80987408e196",
    "instances": [{
      "flavorRef": "fb8fe666-6734-4b11-bc6c-43d11db3c745",
      "nics": [{
        "net-id": "63bdc3cb-a4e7-486f-82ee-d9bf208c8f8c",
        "securityGroupId": "005af77a-cce5-45ac-99c7-2ea50ea8addf"
      }],
      "availability_zone": "Project Name",
      "type": "cdm"
    }],
    "datastore": {
      "version": "1.8.5",
      "type": "cdm"
    },
    "isScheduleBootOff": false,
    "scheduleBootTime": "null",
    "scheduleOffTime": "null",
    "isAutoOff": false,
    "sys_tags": [{
      "key": "_sys_enterprise_project_id",
      "value": "1ce45885-4033-40d2-bdde-d4dbaceb387d"
    }],
    "autoRemind": false,
    "phoneNum": "null",
    "email": "null"
  }
}'
https://{cdm_endpoint}/v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters -v -k
```

2. Call the API in [Querying Cluster Details](#) to query cluster information, obtain the cluster ID, and set the cluster ID to a global variable.

```
curl -X GET -H 'Content-Type:application/json;charset=utf-8' -H "X-Auth-Token:$Token" https://{cdm_endpoint}/v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters -k -v
```

The response is as follows:

```
{
  "clusters": [{
    "version": "x.x.x",
    "updated": "2018-09-05T08:38:25",
    "name": "cdm-ab82",
    "created": "2018-09-05T08:38:25",
    "id": "bae65496-643e-47ca-84af-948672de7eeb",
    "status": "200",
    "isFrozen": "0",
    "statusDetail": "Normal",
    "actionProgress": {},
    "config_status": "In-Sync"
  }]
}
```

If the value of **status** is **200**, the cluster is successfully created. The cluster ID is **bae65496-643e-47ca-84af-948672de7eeb**.

3. Run the following command to set the cluster ID to a global variable for future use:

```
export ID = bae65496-643e-47ca-84af-948672de7eeb
```

## Creating Links

1. Call the API in [Creating a Link](#) to create the MySQL link **mysql\_link**. The following values are examples:

- IP address: **1xx.120.85.24**
- Port number: **3306**
- Database name: **DB\_name**
- Login username: *username*
- Password: **DB\_password**

If status code **200** is returned, the link is successfully created.

```
curl -X POST -H "Content-Type:application/json" -H "X-Auth-Token:$Token" -d '{
  "links": [{
    "enabled": true,
    "update-user": null,
    "name": "mysql_link",
    "link-config-values": {
      "configs": [
        {
          "name": "linkConfig",
          "inputs": [
            {
              "name": "linkConfig.databaseType",
              "value": "MYSQL"
            },
            {
              "name": "linkConfig.host",
              "value": "1xx.120.85.24"
            },
            {
              "name": "linkConfig.port",
              "value": "3306"
            },
            {
              "name": "linkConfig.database",
              "value": "DB_name"
            },
            {
              "name": "linkConfig.username",
              "value": "username"
            }
          ]
        }
      ]
    }
  }]
}
```

```
    {
      "name": "linkConfig.password",
      "value": "DB_password"
    },
    {
      "name": "linkConfig.fetchSize",
      "value": "100000"
    },
    {
      "name": "linkConfig.usingNative",
      "value": "true"
    }
  ]
},
"connector-name": "generic-jdbc-connector",
"creation-date": 1536654788622,
"update-date": 1536654788622,
"creation-user": null
}]
}'
https://{cdm_endpoint}/v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/
bae65496-643e-47ca-84af-948672de7eeb/cdm/link -k -v
```

2. Call the API in [Creating a Link](#) to create the DWS link **dws\_link**. The following values are examples:

- IP address of the database: **10.120.85.24**
- Port number: **3306**
- Database name: **DWS**
- Login username: **user\_dws**
- Password: **dws\_password**

```
curl -X POST -H "Content-Type:application/json" -H "X-Auth-Token:$Token" -d '{
  "links": [{
    "enabled": true,
    "update-user": null,
    "name": "dws_link",
    "link-config-values": {
      "configs": [
        {
          "name": "linkConfig",
          "inputs": [
            {
              "name": "linkConfig.databaseType",
              "value": "DWS"
            },
            {
              "name": "linkConfig.host",
              "value": "10.120.85.24"
            },
            {
              "name": "linkConfig.port",
              "value": "3306"
            },
            {
              "name": "linkConfig.database",
              "value": "DWS"
            },
            {
              "name": "linkConfig.username",
              "value": "user_dws"
            },
            {
              "name": "linkConfig.password",
              "value": "dws_password"
            }
          ]
        }
      ]
    }
  ]
}
```

```
        {
          "name": "linkConfig.fetchSize",
          "value": "100000"
        },
        {
          "name": "linkConfig.usingNative",
          "value": "true"
        }
      ]
    }
  ],
  "connector-name": "generic-jdbc-connector",
  "creation-date": 1536654788622,
  "update-date": 1536654788622,
  "creation-user": null
}]
}
```

[https://{cdm\\_endpoint}/v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/bae65496-643e-47ca-84af-948672de7eeb/cdm/link](https://{cdm_endpoint}/v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/bae65496-643e-47ca-84af-948672de7eeb/cdm/link) -k -v

## Creating a Migration Job

1. After the links are created, call the API in [Creating a Job in a Specified Cluster](#) to create a migration job. The following is a sample job:
  - The job name is **mysql2dws**.
  - The name of the MySQL database from which data is exported is **default**, and the name of the exported table is **mysql\_tbl**. The job is split into multiple tasks by **id** and the tasks are executed concurrently.
  - The name of the database on DWS to which the data is imported is **public**, and the table name is **cdm\_all\_type**. Do not clear the data in the table before import.
  - If no table in the local MySQL database exists in the database on DWS, CDM automatically creates the table on DWS.
  - The field list loaded to DWS is **id&gid&name**.
  - When the job extracts data, three extractors are concurrently executed.

If status code **200** is returned, the job is successfully created.

```
curl -X POST -H "Content-Type:application/json" -H "X-Cluster-ID:$ID" -H "X-Auth-Token:$Token" -d '{
  "jobs": [{
    "job_type": "NORMAL_JOB",
    "name": "mysql2dws",
    "from-link-name": "mysql_link",
    "from-connector-name": "generic-jdbc-connector",
    "to-link-name": "dws_link",
    "to-connector-name": "generic-jdbc-connector",
    "from-config-values": {
      "configs": [{
        "name": "fromJobConfig",
        "inputs": [{
          "name": "fromJobConfig.schemaName",
          "value": "default"
        }],
        "name": "fromJobConfig.tableName",
        "value": "mysql_tbl"
      },
      {
        "name": "fromJobConfig.partitionColumn",
        "value": "id"
      }
    ]
  }
}]
}
```



```
},
"to-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "toJobConfig.schemaName",
          "value": "public"
        },
        {
          "name": "toJobConfig.tablePreparation",
          "value": "CREATE_WHEN_NOT_EXIST"
        },
        {
          "name": "toJobConfig.tableName",
          "value": "cdm_all_type"
        },
        {
          "name": "toJobConfig.columnList",
          "value": "id&gid&name"
        },
        {
          "name": "toJobConfig.shouldClearTable",
          "value": "false"
        }
      ]
    },
    {
      "name": "toJobConfig"
    }
  ]
},
"driver-config-values": {
  "configs": [
    {
      "name": "throttlingConfig",
      "inputs": [
        {
          "name": "throttlingConfig.numExtractors",
          "value": "3"
        }
      ]
    }
  ]
}
}
} https://{cdm_endpoint}/v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/
bae65496-643e-47ca-84af-948672de7eeb/cdm/job -k -v
```

2. Call the API in [Starting a Job](#) to execute the job.

```
curl -X GET -H 'Content-Type:application/json;charset=utf-8' -H "X-Cluster-ID:$ID" -H "X-Auth-Token:
$Token" https://{cdm_endpoint}/v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/
bae65496-643e-47ca-84af-948672de7eeb/cdm/job/mysql2dws/start -k -v
```

The response is as follows:

```
{
  "submissions": [
    {
      "progress": 1,
      "job-name": "mysql2dws",
      "status": "BOOTING",
      "creation-date": 1536654788622,
      "creation-user": "cdm"
    }
  ]
}
```

## Viewing Job Result

1. Call the API in [Querying Job Status](#) to query the job status.  

```
curl -X GET -H 'Content-Type:application/json;charset=utf-8' -H "X-Cluster-ID:$ID" -H "X-Auth-Token:
$Token" https://{cdm_endpoint}/v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/
6ec9a0a4-76be-4262-8697-e7af1fac7920/cdm/job/mysql2dws/status -k -v
```
2. View the job execution result. The response to successful job execution is as follows:

```
{
  "submissions": [{
    "progress": 0,
    "job-name": "mysql2dws",
    "status": "SUCCEEDED",
    "creation-date": 1536654788622,
    "creation-user": "cdm",
    "isStoppingIncrement": "",
    "last-update-date": 1536654888622,
    "is-execute-auto": false,
    "last-udpate-user": "cdm",
    "isDeleteJob": false,
    "isIncrementing": false,
    "external-id": "job_local1127970451_0009",
    "counters": {
      "org.apache.sqoop.submission.counter.SqoopCounters": {
        "BYTES_WRITTEN": -1,
        "TOTAL_FILES": -1,
        "BYTES_READ": -1,
        "FILES_WRITTEN": -1,
        "TOTAL_SIZE": -1,
        "FILES_READ": -1,
        "ROWS_WRITTEN": 80,
        "ROWS_READ": 80
      }
    }
  ]
}
```

#### NOTE

- **BYTES\_WRITTEN**: number of written bytes
- **BYTES\_READ**: number of read bytes
- **TOTAL\_FILES**: total number of files
- **FILES\_WRITTEN**: number of written files
- **FILES\_READ**: number of read files
- **ROWS\_WRITTEN**: number of rows that are successfully written
- **ROWS\_READ**: number of rows that are successfully read

## 4.2 Example of Using Data Development APIs

### Scenarios

DataArts Studio helps enterprises quickly build an end-to-end intelligent data system that covers the entire process from data ingestion to data analytics. The system can eliminate data silos, unify data standards, accelerate data monetization, and promote digital transformation.

The following describes how to create a script by calling the [Creating a Script](#) API. For details, see [Calling APIs](#).

### Prerequisites

You have planned the region where Data Development is located and determined the endpoint for calling an API based on the region.

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions. You can obtain endpoints from [Endpoints](#).

## Creating a Shell Script

The following is an example of creating a shell script:

```
{
"name":"echoTimeShell",
"type":"Shell",
"content":"echo a",
"connectionName":"con"
}
```

- **name** indicates a custom script name, for example, **echoTimeShell**.
- **type** indicates the type of the script.
- **content** indicates the script content.
- **connectionName** indicates the name of the data connection associated with the script.

## Creating a DLI SQL Script

You can also create a DLI SQL script. The following is an example:

```
{
"name":"dliSql1",
"type":"DLISQL",
"content":"show tables",
"connectionName":"dliCon1",
"database":"testDatabase1",
"queueName":"queue1"
}
```

- **name** indicates a custom script name, for example, **dliSql1**.
- **type** indicates the type of the script.
- **content** indicates the script content.
- **connectionName** indicates the name of the data connection associated with the script.
- **database** indicates the name of the associated database when the script is executed.
- **queueName** indicates the name of the queue running on DLI when the SQL statement is executed.

# 5 DataArts Migration APIs

## 5.1 Cluster Management

### 5.1.1 Querying Cluster Details

#### Function

This API is used to query cluster details.

#### URI

GET /v1.1/{project\_id}/clusters/{cluster\_id}

**Table 5-1** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID

#### Request Parameters

**Table 5-2** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

## Response Parameters

Status code: 200

**Table 5-3** Response body parameters

Parameter	Type	Description
publicEndpoint	String	EIP bound to the cluster
instances	Array of <a href="#">ClusterDetail Instance</a> objects	Cluster node information. For details, see the descriptions of <b>instances</b> parameters.
security_group_id	String	Security group ID
subnet_id	String	Subnet ID
vpc_id	String	VPC ID
customerConfig	<a href="#">CustomerConfig</a> object	User configuration
datastore	<a href="#">Datastore</a> object	CDM information
isAutoOff	Boolean	Auto shutdown
publicEndpointDomainName	String	Domain name for the EIP bound to the cluster
bakExpectedStartTime	String	Start time
bakKeepDay	Integer	Retention duration
maintainWindow	<a href="#">maintainWindow</a> object	Maintenance window
recentEvent	Integer	Number of events
flavorName	String	Flavor name
azName	String	AZ name
endpointDomainName	String	Peer domain name
publicEndpointStatus	<a href="#">publicEndpointStatus</a> object	EIP status

Parameter	Type	Description
isScheduleBoo tOff	Boolean	Whether to enable scheduled startup/ shutdown. The scheduled startup/shutdown and auto shutdown functions cannot be enabled at the same time.
namespace	String	Namespace
eipId	String	EIP ID
failedReasons	<b>FailedReason s</b> object	Failure cause. If this parameter is left empty, the cluster is in normal state.
dbuser	String	Database user
links	Array of <b>ClusterLinks</b> objects	Cluster link information
clusterMode	String	Cluster mode: sharding
task	<b>ClusterTask</b> object	Task information
created	String	Cluster creation time in ISO 8601 format: YYYY-MM-DDThh:mm:ssZ
statusDetail	String	Cluster status: normal
config_status	String	Cluster configuration status <ul style="list-style-type: none"> <li>• <b>In-Sync</b>: The configuration has been synchronized.</li> <li>• <b>Applying</b>: The configuration is in progress.</li> <li>• <b>Sync-Failure</b>: The configuration fails.</li> </ul>
actionProgres s	<b>ActionProgre ss</b> object	Cluster operation progress, which consists of a key and a value. The key indicates an ongoing task, and the value indicates the progress of the ongoing task. An example is "action_progress":{"SNAPSHOTTING":"16%"}.
name	String	Cluster name
id	String	Cluster ID
isFrozen	String	Whether the cluster is frozen. The value can be <b>0</b> (not frozen) or <b>1</b> (frozen).
actions	Array of strings	Cluster configuration status. Options: - <b>In- Sync</b> : The cluster configuration has been synchronized. - <b>Applying</b> : The cluster is being configured. - <b>Sync-Failure</b> : The cluster configuration failed.

Parameter	Type	Description
updated	String	Cluster update time in ISO 8601 format: YYYY-MM-DDThh:mm:ssZ
status	String	Cluster status <ul style="list-style-type: none"><li>● <b>100</b>: creating</li><li>● <b>200</b>: normal</li><li>● <b>300</b>: failed</li><li>● <b>303</b>: failed to be created</li><li>● <b>800</b>: frozen</li><li>● <b>900</b>: stopped</li><li>● <b>910</b>: stopping</li><li>● <b>920</b>: starting</li></ul>

**Table 5-4** ClusterDetailInstance

Parameter	Type	Description
flavor	<b>flavor</b> object	VM flavor of a node. For details, see the descriptions of <b>flavor</b> parameters.
volume	<b>volume</b> object	Disk information of a node. For details, see the descriptions of <b>volume</b> parameters.
status	String	Node status <ul style="list-style-type: none"><li>● <b>100</b>: creating</li><li>● <b>200</b>: normal</li><li>● <b>300</b>: failed</li><li>● <b>303</b>: failed to be created</li><li>● <b>400</b>: deleted</li><li>● <b>800</b>: frozen</li></ul>
actions	Array of strings	Node operation status <ul style="list-style-type: none"><li>● <b>REBOOTING</b>: restarting</li><li>● <b>RESTORING</b>: restoring</li><li>● <b>REBOOT_FAILURE</b>: failed to restart</li></ul>
type	String	Node type. Currently, only <b>cdm</b> is available.
id	String	Node VM ID
name	String	Name of the VM on the node
isFrozen	String	Whether the node is frozen. The value can be <b>0</b> (not frozen) or <b>1</b> (frozen).
components	String	Component

Parameter	Type	Description
config_status	String	Node configuration status. The value is null when the cluster list is queried. <ul style="list-style-type: none"><li>• <b>In-Sync</b>: The configuration has been synchronized.</li><li>• <b>Applying</b>: The configuration is in progress.</li><li>• <b>Sync-Failure</b>: The configuration fails.</li></ul>
role	String	Instance role
group	String	Group
links	Array of <b>ClusterLinks</b> objects	Link information
paramsGroupID	String	Group ID
publicip	String	Public IP address
managelp	String	Management IP address
trafficip	String	Traffic IP address
shard_id	String	Slice ID
manage_fix_ip	String	Management fix IP address
private_ip	String	Private IP address
internal_ip	String	Internal IP address
resource	Array of <b>Resource</b> objects	Resource information (null is returned for querying the cluster list)

**Table 5-5** flavor

Parameter	Type	Description
id	String	VM flavor ID
links	Array of <b>ClusterLinks</b> objects	Link information



**Table 5-6** volume

Parameter	Type	Description
type	String	Type of disks on the node. Only local disks are supported.
size	Long	Size of the disk on the node (GB)

**Table 5-7** Resource

Parameter	Type	Description
resource_id	String	Resource ID
resource_type	String	Resource type: server

**Table 5-8** CustomerConfig

Parameter	Type	Description
failureRemind	String	Failure notification
clusterName	String	Cluster type
serviceProvider	String	Service provisioning
localDisk	String	Whether the disk is a local disk
ssl	String	Whether to enable SSL
createFrom	String	Source
resourceId	String	Resource ID
flavorType	String	Flavor type
workspaceId	String	Workspace ID
trial	String	Trial

**Table 5-9** Datastore

Parameter	Type	Description
type	String	Type. Generally, the value is <b>cdm</b> .
version	String	Cluster version

**Table 5-10** maintainWindow

Parameter	Type	Description
day	String	Day of a week
startTime	String	Start time
endTime	String	End time

**Table 5-11** publicEndpointStatus

Parameter	Type	Description
status	String	Status
errorMessage	String	Error message

**Table 5-12** FailedReasons

Parameter	Type	Description
CREATE_FAILED	<a href="#">CREATE_FAILED</a> object	Cause of the cluster creation failure

**Table 5-13** CREATE\_FAILED

Parameter	Type	Description
errorCode	String	Error code
errorMsg	String	Failure cause

**Table 5-14** ClusterLinks

Parameter	Type	Description
rel	String	Relationship
href	String	Link address

**Table 5-15** ClusterTask

Parameter	Type	Description
description	String	Task description

Parameter	Type	Description
id	String	Task ID
name	String	Task name

**Table 5-16** ActionProgress

Parameter	Type	Description
CREATING	String	Cluster creation progress, for example, <b>29%</b>
GROWING	String	Cluster expansion progress, for example, <b>29%</b>
RESTORING	String	Cluster restoration progress, for example, <b>29%</b>
SNAPSHOTTING	String	Cluster snapshotting progress, for example, <b>29%</b>
REPAIRING	String	Cluster repairing progress, for example, <b>29%</b>

## Example Requests

```
GET /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/bae65496-643e-47ca-84af-948672de7eeb
```

## Example Responses

**Status code: 200**

ok

```
{
  "publicEndpoint": "49.xx.xx.10",
  "instances": [ {
    "flavor": {
      "id": "fb8fe666-6734-4b11-bc6c-43d11db3c745"
    },
    "volume": {
      "size": "100",
      "type": "LOCAL_DISK"
    },
    "name": "cdm-c018",
    "id": "635dce67-3df8-4756-b4c7-90e45e687367",
    "isFrozen": "0",
    "type": "cdm",
    "actions": "REBOOTING",
    "config_status": "In-Sync",
    "status": "200"
  } ],
  "created": "2018-09-05T08:38:25",
  "statusDetail": "Normal",
  "actionProgress": { },
  "name": "cdm-c018",
  "id": "bae65496-643e-47ca-84af-948672de7eeb",
  "isFrozen": "0",
  "actions": "REBOOTING",
  "updated": "2018-09-05T08:38:25",
  "status": "200"
}
```

## Status Codes

Status Code	Description
200	ok
400	Request error.
401	Authentication failed.
403	You do not have required permissions to perform this operation.
404	The requested resource was not found.
500	An internal service error occurred. For details, see error codes.
503	Service unavailable.

## Error Codes

See [Error Codes](#).

### 5.1.2 Deleting a Cluster

#### Function

This API is used to delete a cluster.

#### URI

DELETE /v1.1/{project\_id}/clusters/{cluster\_id}

**Table 5-17** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID

#### Request Parameters

**Table 5-18** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

**Table 5-19** Request body parameters

Parameter	Mandatory	Type	Description
keep_last_manual_backup	Yes	Integer	Number of backup log files. Retain the default value <b>0</b> . Default: <b>0</b>

## Response Parameters

**Status code: 202**

**Table 5-20** Response body parameters

Parameter	Type	Description
jobId	String	Job ID

## Example Requests

```
DELETE /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/6ec9a0a4-76be-4262-8697-e7af1fac7920
{
  "keep_last_manual_backup": 0
}
```

## Example Responses

**Status code: 202**

Accepted

```
{
  "jobId": "ff8080815e55125a015e552eddba001a"
}
```

## Status Codes

Status Code	Description
202	Accepted
400	Request error.
401	Authentication failed.
403	You do not have required permissions to perform this operation.
404	The requested resource was not found.

Status Code	Description
500	An internal service error occurred. For details, see error codes.
503	Service unavailable.

## Error Codes

See [Error Codes](#).

## 5.1.3 Restarting a Cluster

### Function

This API is used to restart a cluster.

### URI

POST /v1.1/{project\_id}/clusters/{cluster\_id}/action

**Table 5-21** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID

### Request Parameters

**Table 5-22** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

**Table 5-23** Request body parameters

Parameter	Mandatory	Type	Description
restart	Yes	<b>restart</b> object	Cluster restart. For details about how to define the cluster to restart, see the descriptions of <b>restart</b> parameters.

**Table 5-24** restart

Parameter	Mandatory	Type	Description
restartDelayTime	No	Integer	Restart delay, in seconds
restartMode	No	String	Restart mode <ul style="list-style-type: none"> <li>● <b>IMMEDIATELY</b>: immediate restart</li> <li>● <b>FORCELY</b>: forcible restart</li> <li>● <b>SOFTLY</b>: common restart</li> </ul> The default value is <b>IMMEDIATELY</b> . Forcibly restarting the service process will interrupt the service process and restart the VMs in the cluster.
restartLevel	No	String	Restart level <ul style="list-style-type: none"> <li>● <b>SERVICE</b>: service restart</li> <li>● <b>VM</b>: VM restart</li> </ul> The default value is <b>SERVICE</b> .
type	No	String	Type of the cluster to be restarted. The value can be set to <b>cdm</b> only.
instance	No	String	Reserved field. When <b>restartLevel</b> is set to <b>SERVICE</b> , this parameter is mandatory and an empty string should be entered.
group	No	String	Reserved field. When <b>restartLevel</b> is set to <b>SERVICE</b> , this parameter is mandatory and an empty string should be entered.

## Response Parameters

**Status code: 200**

**Table 5-25** Response body parameters

Parameter	Type	Description
jobId	String	Job ID

## Example Requests

Restarting a Cluster

```
POST /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/bae65496-643e-47ca-84af-948672de7eeb/action
{
  "restart": {
    "instance": "",
    "type": "cdm",
    "group": ""
  }
}
```

## Example Responses

**Status code: 200**

ok

```
{
  "jobId": "ff8080815e59d92d015e5b27ccb0004d"
}
```

## Status Codes

Status Code	Description
200	ok
400	Request error.
401	Authentication failed.
403	You do not have required permissions to perform this operation.
404	The requested resource was not found.
500	An internal service error occurred. For details, see error codes.
503	Service unavailable.

## Error Codes

See [Error Codes](#).



## 5.1.4 Starting a Cluster

### Function

This API is used to start a cluster.

### URI

POST /v1.1/{project\_id}/clusters/{cluster\_id}/action

**Table 5-26** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID

### Request Parameters

**Table 5-27** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

**Table 5-28** Request body parameters

Parameter	Mandatory	Type	Description
start	Yes	Object	Starting a cluster. This parameter is an empty object.

### Response Parameters

**Status code: 200**

**Table 5-29** Response body parameters

Parameter	Type	Description
jobId	Array of strings	Job ID

## Example Requests

Starting a Cluster

```
POST /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/bae65496-643e-47ca-84af-948672de7eeb/action
{
  "start" : { }
}
```

## Example Responses

**Status code: 200**

ok

```
{
  "jobId" : [ "ff8080815e59d92d015e5b27ccb0004d" ]
}
```

## Status Codes

Status Code	Description
200	ok
400	Request error.
401	Authentication failed.
403	You do not have required permissions to perform this operation.
404	The requested resource was not found.
500	An internal service error occurred. For details, see error codes.
503	Service unavailable.

## Error Codes

See [Error Codes](#).

### 5.1.5 Stopping a Cluster

#### Function

This API is used to stop a cluster.

#### URI

```
POST /v1.1/{project_id}/clusters/{cluster_id}/action
```

**Table 5-30** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID

## Request Parameters

**Table 5-31** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

**Table 5-32** Request body parameters

Parameter	Mandatory	Type	Description
stop	Yes	<b>stop</b> object	Startup of a cluster. This parameter is an empty object.

**Table 5-33** stop

Parameter	Mandatory	Type	Description
stopMode	No	String	Stop mode <ul style="list-style-type: none"><li>● <b>IMMEDIATELY</b>: immediate stop</li><li>● <b>GRACEFULLY</b>: graceful stop</li></ul> Enumeration values: <ul style="list-style-type: none"><li>● <b>IMMEDIATELY</b></li><li>● <b>GRACEFULLY</b></li></ul>

Parameter	Mandatory	Type	Description
delayTime	No	Integer	Stop delay, in seconds. This parameter is valid only when <b>stopMode</b> is set to <b>GRACEFULLY</b> . If the value of this parameter is set to <b>-1</b> , the system waits for all jobs to complete and stops accepting new jobs. If the value of this parameter is greater than <b>0</b> , the system stops the cluster after the specified time and stops accepting new jobs.

## Response Parameters

Status code: 200

Table 5-34 Response body parameters

Parameter	Type	Description
jobId	Array of strings	Job ID

## Example Requests

Stopping a Cluster

```
POST /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/bae65496-643e-47ca-84af-948672de7eeb/action
{
  "stop": {
    "stopMode": "GRACEFULLY",
    "delayTime": -1
  }
}
```

## Example Responses

Status code: 200

ok

```
{
  "jobId": [ "ff8080815e59d92d015e5b27ccb0004d" ]
}
```

## Status Codes

Status Code	Description
200	ok
400	Request error.
401	Authentication failed.
403	You do not have required permissions to perform this operation.
404	The requested resource was not found.
500	An internal service error occurred. For details, see error codes.
503	Service unavailable.

## Error Codes

See [Error Codes](#).

## 5.1.6 Creating a Cluster

### Function

This API is used to create a cluster.

### URI

POST /v1.1/{project\_id}/clusters

**Table 5-35** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 5-36** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).
X-Language	Yes	String	Request language

**Table 5-37** Request body parameters

Parameter	Mandatory	Type	Description
cluster	Yes	<b>cluster</b> object	Cluster object. For details, see the descriptions of <b>cluster</b> parameters.
auto_remind	No	Boolean	Whether to enable message notification. If you enable this function, you can configure a maximum of five mobile numbers or email addresses. You will be notified of table/file migration job failures and EIP exceptions by SMS message or email.
phone_num	No	String	Mobile number for receiving notifications
email	No	String	Email address for receiving notifications

**Table 5-38** cluster

Parameter	Mandatory	Type	Description
scheduleBoot Time	No	String	Time for scheduled startup of a CDM cluster. The CDM cluster starts at this time every day.
isScheduleBoo tOff	No	Boolean	Whether to enable scheduled startup/shutdown. The scheduled startup/shutdown and auto shutdown functions cannot be enabled at the same time.
instances	No	Array of <b>instance</b> objects	Node list. For details, see the descriptions of <b>instances</b> parameters.
datastore	No	<b>Datastore</b> object	Cluster information. For details, see the descriptions of <b>datastore</b> parameters.
extended_pro perties	No	<b>ExtendedPro perties</b> object	Extended attribute. For details, see parameters in the extended_properties field.

Parameter	Mandatory	Type	Description
scheduleOffTime	No	String	Time for scheduled shutdown of a CDM cluster. The CDM cluster shuts down directly at this time every day without waiting for unfinished jobs to complete.
vpId	No	String	VPC ID, which is used for configuring a network for the cluster.
name	No	String	Cluster name
sys_tags	No	Array of <a href="#">sys_tags</a> objects	Enterprise project information. For details, see the descriptions of <b>sys_tags</b> parameters.
isAutoOff	No	Boolean	Whether to enable auto shutdown. The auto shutdown and scheduled startup/shutdown functions cannot be enabled at the same time. When auto shutdown is enabled, if no job is running in the cluster and no scheduled job is available, a cluster will be automatically shut down 15 minutes after it starts running, which reduces costs for you.

**Table 5-39** instance

Parameter	Mandatory	Type	Description
availability_zone	Yes	String	AZ where a cluster is located
nics	Yes	Array of <a href="#">nics</a> objects	NIC list. A maximum of two NICs are supported. For details, see the descriptions of <b>nics</b> parameters.

Parameter	Mandatory	Type	Description
flavorRef	Yes	String	Instance flavor <ul style="list-style-type: none"> <li>• <b>a79fd5ae-1833-448a-88e8-3ea2b913e1f6</b>: cdm.small with 2 vCPUs and 4 GB memory applicable to Proof of Concept (PoC) verification and development and tests</li> <li>• <b>fb8fe666-6734-4b11-bc6c-43d11db3c745</b>: cdm.medium with 4 vCPUs and 8 GB memory applicable to the migration of a single database table with fewer than 10 million pieces of data</li> <li>• <b>5ddb1071-c5d7-40e0-a874-8a032e81a697</b>: cdm.large with 8 vCPUs and 16 GB memory applicable to the migration of a single database table with 10 million or more pieces of data</li> <li>• <b>6ddb1072-c5d7-40e0-a874-8a032e81a698</b>: cdm.xlarge with 16 vCPUs and 32 GB memory applicable to the migration of terabytes of data requiring 10GE bandwidth</li> </ul>
type	Yes	String	Node type. Currently, only <b>cdm</b> is available.

**Table 5-40** nics

Parameter	Mandatory	Type	Description
securityGroup Id	Yes	String	Security group ID
net-id	Yes	String	Subnet ID



**Table 5-41** Datastore

Parameter	Mandatory	Type	Description
type	No	String	Type. Generally, the value is <b>cdm</b> .
version	No	String	Cluster version

**Table 5-42** ExtendedProperties

Parameter	Mandatory	Type	Description
workSpaceId	No	String	Workspace ID
resourceId	No	String	Resource ID
trial	No	String	Whether the cluster is a trial cluster

**Table 5-43** sys\_tags

Parameter	Mandatory	Type	Description
value	Yes	String	Enterprise project ID
key	Yes	String	The value is fixed at <b>_sys_enterprise_project_id</b> .

## Response Parameters

Status code: 202

**Table 5-44** Response body parameters

Parameter	Type	Description
name	String	Cluster name
id	String	Cluster ID
task	<b>Task</b> object	Task information
datastore	<b>Datastore</b> object	Cluster information
instances	Array of <b>ClusterInstance</b> objects	Cluster node information

**Table 5-45** Task

Parameter	Type	Description
id	String	Task ID
name	String	Task name

**Table 5-46** Datastore

Parameter	Type	Description
type	String	Type. Generally, the value is <b>cdm</b> .
version	String	Cluster version

**Table 5-47** ClusterInstance

Parameter	Type	Description
id	String	Node VM ID
name	String	Name of the VM on the node
type	String	Node type. Currently, only <b>cdm</b> is available.
shard_id	String	Shard ID

## Example Requests

```
POST /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters
{
  "cluster": {
    "scheduleBootTime": "",
    "isScheduleBootOff": false,
    "instances": [ {
      "availability_zone": "cn-north-1b",
      "nics": [ {
        "securityGroupId": "c37852d2-2d12-41cb-af47-65c80e995c80",
        "net-id": "2d120298-6130-44d4-a438-454912fff901"
      } ],
      "flavorRef": "5ddb1071-c5d7-40e0-a874-8a032e81a697",
      "type": "cdm"
    } ],
    "datastore": {
      "type": "cdm",
      "version": "1.8.10"
    },
    "scheduleOffTime": "",
    "vpclId": "67c06084-2212-4242-bcd4-d2144c2385a9",
    "name": "cdm-ab82",
    "sys_tags": [ {
      "value": "1ce45885-4033-40d2-bdde-d4dbaceb387d",
      "key": "_sys_enterprise_project_id"
    } ],
    "isAutoOff": false
  }
}
```

```
},  
"auto_remind" : false,  
"phone_num" : "",  
"email" : ""  
}
```

## Example Responses

**Status code: 202**

Accepted

```
{  
  "id" : "befc862c-9286-46a0-a1d6-300d98b63aad",  
  "name" : "cdm-4ef213",  
  "task" : {  
    "id" : "2c9080047f1b1185017f1ef6ad0500ac",  
    "name" : "rdsCreateBackupJob"  
  },  
  "datastore" : {  
    "type" : "cdm",  
    "version" : "2.9.1.100"  
  },  
  "instances" : [ {  
    "id" : "b2672e7d-2faf-423f-96bb-0664cd743cfd",  
    "name" : "cdm-4ef213-cdm-dn-1-1",  
    "type" : "cdm",  
    "shard_id" : "dn-1"  
  } ]  
}
```

## Status Codes

Status Code	Description
202	Accepted
400	Request error.
401	Authentication failed.
403	You do not have required permissions to perform this operation.
404	The requested resource was not found.
500	Internal service error.
503	Service unavailable.

## Error Codes

See [Error Codes](#).

## 5.1.7 Querying the Cluster List

### Function

This API is used to query the cluster list.

## URI

GET /v1.1/{project\_id}/clusters

**Table 5-48** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 5-49** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

## Response Parameters

Status code: 200

**Table 5-50** Response body parameters

Parameter	Type	Description
clusters	Array of <a href="#">clusters</a> objects	Cluster list. For details, see the descriptions of <b>clusters</b> parameters.

**Table 5-51** clusters

Parameter	Type	Description
customerConfig	<a href="#">CustomerConfig</a> object	User configuration
datastore	<a href="#">Datastore</a> object	CDM information
instances	Array of <a href="#">ClusterDetail Instance</a> objects	Cluster node information. For details, see the descriptions of <b>instances</b> parameters.

Parameter	Type	Description
azName	String	AZ name
dbuser	String	Database user
flavorName	String	Flavor name
recentEvent	Integer	Number of events
isAutoOff	Boolean	Auto shutdown
isScheduleBootOff	Boolean	Whether to enable scheduled startup/shutdown. The scheduled startup/shutdown and auto shutdown functions cannot be enabled at the same time.
clusterMode	String	Cluster mode: sharding
namespace	String	Namespace
task	<a href="#">ClusterTask</a> object	Task information
publicEndpoint	String	EIP bound to the cluster
actionProgress	<a href="#">ActionProgress</a> object	Cluster operation progress, which consists of a key and a value. The key indicates an ongoing task, and the value indicates the progress of the ongoing task. An example is "action_progress":{"SNAPSHOTTING":"16%"}.
created	String	Cluster creation time in ISO 8601 format: YYYY-MM-DDThh:mm:ssZ
bakExpectedStartTime	String	Start time
bakKeepDay	Integer	Retention duration
name	String	Cluster name
statusDetail	String	Cluster status: normal
id	String	Cluster ID
isFrozen	String	Whether the cluster is frozen. The value can be <b>0</b> (not frozen) or <b>1</b> (frozen).
updated	String	Cluster update time in ISO 8601 format: YYYY-MM-DDThh:mm:ssZ

Parameter	Type	Description
status	String	Cluster status <ul style="list-style-type: none"> <li>● <b>100</b>: creating</li> <li>● <b>200</b>: normal</li> <li>● <b>300</b>: failed</li> <li>● <b>303</b>: failed to be created</li> <li>● <b>500</b>: restarting</li> <li>● <b>800</b>: frozen</li> <li>● <b>900</b>: stopped</li> <li>● <b>910</b>: stopping</li> <li>● <b>920</b>: starting</li> </ul>
failedReasons	<b>FailedReasons</b> object	Failure cause. If this parameter is left empty, the cluster is in normal state.

**Table 5-52** CustomerConfig

Parameter	Type	Description
failureRemind	String	Failure notification
clusterName	String	Cluster type
serviceProvider	String	Service provisioning
localDisk	String	Whether the disk is a local disk
ssl	String	Whether to enable SSL
createFrom	String	Source
resourceId	String	Resource ID
flavorType	String	Flavor type
workspaceId	String	Workspace ID
trial	String	Trial

**Table 5-53** Datastore

Parameter	Type	Description
type	String	Type. Generally, the value is <b>cdm</b> .
version	String	Cluster version

**Table 5-54** ClusterDetailInstance

Parameter	Type	Description
flavor	<b>flavor</b> object	VM flavor of a node. For details, see the descriptions of <b>flavor</b> parameters.
volume	<b>volume</b> object	Disk information of a node. For details, see the descriptions of <b>volume</b> parameters.
status	String	Node status <ul style="list-style-type: none"><li>● <b>100</b>: creating</li><li>● <b>200</b>: normal</li><li>● <b>300</b>: failed</li><li>● <b>303</b>: failed to be created</li><li>● <b>400</b>: deleted</li><li>● <b>800</b>: frozen</li></ul>
actions	Array of strings	Node operation status <ul style="list-style-type: none"><li>● <b>REBOOTING</b>: restarting</li><li>● <b>RESTORING</b>: restoring</li><li>● <b>REBOOT_FAILURE</b>: failed to restart</li></ul>
type	String	Node type. Currently, only <b>cdm</b> is available.
id	String	Node VM ID
name	String	Name of the VM on the node
isFrozen	String	Whether the node is frozen. The value can be <b>0</b> (not frozen) or <b>1</b> (frozen).
components	String	Component
config_status	String	Node configuration status. The value is null when the cluster list is queried. <ul style="list-style-type: none"><li>● <b>In-Sync</b>: The configuration has been synchronized.</li><li>● <b>Applying</b>: The configuration is in progress.</li><li>● <b>Sync-Failure</b>: The configuration fails.</li></ul>
role	String	Instance role
group	String	Group
links	Array of <b>ClusterLinks</b> objects	Link information
paramsGroupID	String	Group ID
publicIp	String	Public IP address

Parameter	Type	Description
managelp	String	Management IP address
trafficlp	String	Traffic IP address
shard_id	String	Slice ID
manage_fix_ip	String	Management fix IP address
private_ip	String	Private IP address
internal_ip	String	Internal IP address
resource	Array of <b>Resource</b> objects	Resource information (null is returned for querying the cluster list)

**Table 5-55** flavor

Parameter	Type	Description
id	String	VM flavor ID
links	Array of <b>ClusterLinks</b> objects	Link information

**Table 5-56** volume

Parameter	Type	Description
type	String	Type of disks on the node. Only local disks are supported.
size	Long	Size of the disk on the node (GB)

**Table 5-57** ClusterLinks

Parameter	Type	Description
rel	String	Relationship
href	String	Link address



**Table 5-58** Resource

Parameter	Type	Description
resource_id	String	Resource ID
resource_type	String	Resource type: server

**Table 5-59** ClusterTask

Parameter	Type	Description
description	String	Task description
id	String	Task ID
name	String	Task name

**Table 5-60** ActionProgress

Parameter	Type	Description
CREATING	String	Cluster creation progress, for example, <b>29%</b>
GROWING	String	Cluster expansion progress, for example, <b>29%</b>
RESTORING	String	Cluster restoration progress, for example, <b>29%</b>
SNAPSHOTTING	String	Cluster snapshotting progress, for example, <b>29%</b>
REPAIRING	String	Cluster repairing progress, for example, <b>29%</b>

**Table 5-61** FailedReasons

Parameter	Type	Description
CREATE_FAILED	<a href="#">CREATE_FAILED</a> object	Cause of the cluster creation failure

**Table 5-62** CREATE\_FAILED

Parameter	Type	Description
errorCode	String	Error code
errorMsg	String	Failure cause

## Example Requests

```
GET /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters
```

## Example Responses

**Status code: 200**

ok

```
{
  "clusters": [ {
    "publicEndpoint": "49.xx.xx.10",
    "actionProgress": { },
    "created": "2018-09-05T08:38:25",
    "name": "cdm-c018",
    "statusDetail": "Normal",
    "id": "bae65496-643e-47ca-84af-948672de7eeb",
    "isFrozen": "0",
    "updated": "2018-09-05T08:38:25",
    "status": "200"
  } ]
}
```

## Status Codes

Status Code	Description
200	ok
400	Request error.
401	Authentication failed.
403	You do not have required permissions to perform this operation.
404	The requested resource was not found.
500	An internal service error occurred. For details, see error codes.
503	Service unavailable.

## Error Codes

See [Error Codes](#).

## 5.2 Job Management

### 5.2.1 Querying a Job

#### Function

This API is used to query jobs.

## URI

GET /v1.1/{project\_id}/clusters/{cluster\_id}/cdm/job/{job\_name}

**Table 5-63** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID
job_name	Yes	String	Job name. When this parameter is set to <b>all</b> , all jobs are to be queried.

**Table 5-64** Query Parameters

Parameter	Mandatory	Type	Description
filter	No	String	When <b>job_name</b> is <b>all</b> , this parameter is used for fuzzy job filtering.
page_no	No	Integer	Page number Minimum: <b>1</b>
page_size	No	Integer	Number of jobs on each page. The value ranges from 10 to 100. Minimum: <b>10</b> Maximum: <b>100</b>
jobType	No	String	Type of the jobs to be queried <ul style="list-style-type: none"> <li>• <b>jobType=NORMAL_JOB</b>: table/file migration job</li> <li>• <b>jobType=BATCH_JOB</b>: entire DB migration job</li> <li>• <b>jobType=SCENARIO_JOB</b>: scenario migration job If this parameter is not specified, only table/file migration jobs are queried by default.</li> </ul> Enumeration values: <ul style="list-style-type: none"> <li>• <b>NORMAL_JOB</b></li> <li>• <b>BATCH_JOB</b></li> <li>• <b>SCENARIO_JOB</b></li> </ul>

## Request Parameters

**Table 5-65** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

## Response Parameters

Status code: 200

**Table 5-66** Response body parameters

Parameter	Type	Description
total	Integer	Number of jobs
jobs	Array of <b>Job</b> objects	Job list. For details, see the descriptions of <b>jobs</b> parameters.
page_no	Integer	Page number. Jobs on the specified page will be returned.
page_size	Integer	Number of jobs on each page.

**Table 5-67** Job

Parameter	Type	Description
job_type	String	Job type <ul style="list-style-type: none"> <li>• <b>NORMAL_JOB</b>: table/file migration</li> <li>• <b>BATCH_JOB</b>: entire DB migration</li> <li>• <b>SCENARIO_JOB</b>: scenario migration</li> </ul> Enumeration values: <ul style="list-style-type: none"> <li>• <b>NORMAL_JOB</b></li> <li>• <b>BATCH_JOB</b></li> <li>• <b>SCENARIO_JOB</b></li> </ul>
from-connector-name	String	Source link type
to-config-values	<b>ConfigValues</b> object	Destination link parameter configuration

Parameter	Type	Description
to-link-name	String	Destination link name
driver-config-values	<a href="#">ConfigValues</a> object	Job parameter configuration
from-config-values	<a href="#">ConfigValues</a> object	Source link parameter configuration
to-connector-name	String	Destination link type
name	String	Job name, which contains 1 to 240 characters Minimum: <b>1</b> Maximum: <b>240</b>
from-link-name	String	Source link name
creation-user	String	User who created the job
creation-date	Long	Time when the job was created, accurate to millisecond
update-date	Long	Time when the job was last updated, accurate to millisecond
is_incre_job	Boolean	Incremental or not
flag	Integer	Flag
files_read	Integer	Number of read files
update-user	String	User who last updated the job
external_id	String	External ID
type	String	Task type
execute_start_date	Long	Execution start date
delete_rows	Integer	Number of deleted rows
enabled	Boolean	Whether to activate the link
bytes_written	Long	Number of written bytes
id	Integer	Job ID
is_use_sql	Boolean	Whether to use SQL statements
update_rows	Integer	Number of updated rows
group_name	String	Group name
bytes_read	Long	Number of read bytes

Parameter	Type	Description
execute_update_date	Long	Execution update date
write_rows	Integer	Number of written rows
rows_written	Integer	Number of written rows
rows_read	Long	Number of rows that are read
files_written	Integer	Number of written files
is_incrementing	Boolean	Incremental or not
execute_create_date	Long	Execution creation date
status	String	Job execution status <ul style="list-style-type: none"> <li>● <b>BOOTING</b>: The job is starting.</li> <li>● <b>RUNNING</b>: The job is running.</li> <li>● <b>SUCCEEDED</b>: The job was successfully executed.</li> <li>● <b>FAILED</b>: The job execution failed.</li> <li>● <b>NEW</b>: The job was not executed.</li> </ul>

**Table 5-68** ConfigValues

Parameter	Type	Description
configs	Array of <b>configs</b> objects	The data structures of source link parameters, destination link parameters, and job parameters are the same. However, the <b>inputs</b> parameter varies. For details, see the descriptions of <b>configs</b> parameters.
extended-configs	<b>extended-configs</b> object	Extended configuration. For details, see the descriptions of <b>extended-configs</b> parameters.

**Table 5-69** extended-configs

Parameter	Type	Description
name	String	Name
value	String	Value

**Table 5-70** extended-configs

Parameter	Type	Description
name	String	Name
value	String	Value

**Table 5-71** configs

Parameter	Type	Description
inputs	Array of <a href="#">Input</a> objects	Input parameter list. Each element in the list is in <b>name,value</b> format. For details, see the descriptions of <b>inputs</b> parameters. In the <b>from-config-values</b> data structure, the value of this parameter varies with the source link type. For details, see section "Source Job Parameters" in the <b>Cloud Data Migration User Guide</b> . In the <b>to-config-values</b> data structure, the value of this parameter varies with the destination link type. For details, see section "Destination Job Parameters" in the <b>Cloud Data Migration User Guide</b> . For details about the <b>inputs</b> parameter in the <b>driver-config-values</b> data structure, see the job parameter descriptions.
name	String	Configuration name. The value is <b>fromJobConfig</b> for a source job, <b>toJobConfig</b> for a destination job, and <b>linkConfig</b> for a link.
id	Integer	Configuration ID
type	String	Configuration type

**Table 5-72** Input

Parameter	Type	Description
name	String	Parameter name
value	String	Parameter value
type	String	Value type

**Table 5-73** extended-configs

Parameter	Type	Description
name	String	Name

Parameter	Type	Description
value	String	Value

## Example Requests

```
GET /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/6ec9a0a4-76be-4262-8697-e7af1fac7920/cdm/job/all?jobType=NORMAL_JOB
```

## Example Responses

**Status code: 200**

ok

```
{
  "total": 1,
  "jobs": [ {
    "job_type": "NORMAL_JOB",
    "from-connector-name": "elasticsearch-connector",
    "to-config-values": {
      "configs": [ {
        "inputs": [ {
          "name": "toJobConfig.streamName",
          "value": "dis-lkGm"
        }, {
          "name": "toJobConfig.separator",
          "value": "|"
        }, {
          "name": "toJobConfig.columnList",
          "value": "1&2&3"
        }
      ],
      "name": "toJobConfig"
    }
  ]
},
  "to-link-name": "dis",
  "driver-config-values": {
    "configs": [ {
      "inputs": [ {
        "name": "throttlingConfig.numExtractors",
        "value": "1"
      }, {
        "name": "throttlingConfig.submitToCluster",
        "value": "false"
      }, {
        "name": "throttlingConfig.numLoaders",
        "value": "1"
      }, {
        "name": "throttlingConfig.recordDirtyData",
        "value": "false"
      }
    ],
    "name": "throttlingConfig"
  }, {
    "inputs": { },
    "name": "jarConfig"
  }, {
    "inputs": [ {
      "name": "schedulerConfig.isSchedulerJob",
      "value": "false"
    }, {
      "name": "schedulerConfig.disposableType",
      "value": "NONE"
    }
  ],
  "name": "schedulerConfig"
}, {
```



```
"inputs" : { },
"name" : "transformConfig"
}, {
  "inputs" : [ {
    "name" : "retryJobConfig.retryJobType",
    "value" : "NONE"
  } ],
  "name" : "retryJobConfig"
} ]
},
"from-config-values" : {
  "configs" : [ {
    "inputs" : [ {
      "name" : "fromJobConfig.index",
      "value" : "52est"
    } ],
    "name" : "fromJobConfig.type",
    "value" : "est_array"
  }, {
    "name" : "fromJobConfig.columnList",
    "value" : "array_f1_int:long&array_f2_text:string&array_f3_object:nested"
  }, {
    "name" : "fromJobConfig.splitNestedField",
    "value" : "false"
  } ],
  "name" : "fromJobConfig"
} ]
},
"to-connector-name" : "dis-connector",
"name" : "es_css",
"from-link-name" : "css"
} ],
"page_no" : 1,
"page_size" : 10
}
```

## Status Codes

Status Code	Description
200	ok

## Error Codes

See [Error Codes](#).

### 5.2.2 Deleting a Job

#### Function

This API is used to delete a job.

#### URI

DELETE /v1.1/{project\_id}/clusters/{cluster\_id}/cdm/job/{job\_name}

**Table 5-74** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID
job_name	Yes	String	Job name

## Request Parameters

**Table 5-75** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

## Response Parameters

**Status code: 500**

**Table 5-76** Response body parameters

Parameter	Type	Description
errCode	String	Error code
externalMessage	String	Error message

## Example Requests

```
DELETE /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/6ec9a0a4-76be-4262-8697-  
e7af1fac7920/cdm/job/jdbc2hive
```

## Example Responses

**Status code: 500**

An internal service error occurred. For details, see error codes.

```
{  
  "errCode" : "Cdm.0100",  
  "externalMessage" : "Job[jdbc2hive] doesn't exist."  
}
```

## Status Codes

Status Code	Description
200	OK
400	Request error.
401	Authentication failed.
403	You do not have required permissions to perform this operation.
404	The requested resource was not found.
500	An internal service error occurred. For details, see error codes.

## Error Codes

See [Error Codes](#).

## 5.2.3 Modifying a Job

### Function

This API is used to modify a job.

### URI

PUT /v1.1/{project\_id}/clusters/{cluster\_id}/cdm/job/{job\_name}

**Table 5-77** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID
job_name	Yes	String	Job name

## Request Parameters

**Table 5-78** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

**Table 5-79** Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of <b>Job</b> objects	Job list. For details, see the descriptions of <b>jobs</b> parameters.

**Table 5-80** Job

Parameter	Mandatory	Type	Description
job_type	No	String	Job type <ul style="list-style-type: none"> <li>● <b>NORMAL_JOB</b>: table/file migration</li> <li>● <b>BATCH_JOB</b>: entire DB migration</li> <li>● <b>SCENARIO_JOB</b>: scenario migration</li> </ul> Enumeration values: <ul style="list-style-type: none"> <li>● <b>NORMAL_JOB</b></li> <li>● <b>BATCH_JOB</b></li> <li>● <b>SCENARIO_JOB</b></li> </ul>
from-connector-name	Yes	String	Source link type
to-config-values	Yes	<b>ConfigValues</b> object	Destination link parameter configuration
to-link-name	Yes	String	Destination link name
driver-config-values	Yes	<b>ConfigValues</b> object	Job parameter configuration
from-config-values	Yes	<b>ConfigValues</b> object	Source link parameter configuration
to-connector-name	No	String	Destination link type
name	No	String	Job name, which contains 1 to 240 characters Minimum: <b>1</b> Maximum: <b>240</b>
from-link-name	No	String	Source link name

Parameter	Mandatory	Type	Description
creation-user	No	String	User who created the job
creation-date	No	Long	Time when the job was created, accurate to millisecond
update-date	No	Long	Time when the job was last updated, accurate to millisecond
is_incre_job	No	Boolean	Incremental or not
flag	No	Integer	Flag
files_read	No	Integer	Number of read files
update-user	No	String	User who last updated the job
external_id	No	String	External ID
type	No	String	Task type
execute_start_date	No	Long	Execution start date
delete_rows	No	Integer	Number of deleted rows
enabled	No	Boolean	Whether to activate the link
bytes_written	No	Long	Number of written bytes
id	No	Integer	Job ID
is_use_sql	No	Boolean	Whether to use SQL statements
update_rows	No	Integer	Number of updated rows
group_name	No	String	Group name
bytes_read	No	Long	Number of read bytes
execute_update_date	No	Long	Execution update date
write_rows	No	Integer	Number of written rows
rows_written	No	Integer	Number of written rows
rows_read	No	Long	Number of rows that are read
files_written	No	Integer	Number of written files
is_incrementing	No	Boolean	Incremental or not
execute_create_date	No	Long	Execution creation date

Parameter	Mandatory	Type	Description
status	No	String	Job execution status <ul style="list-style-type: none"> <li>• <b>BOOTING</b>: The job is starting.</li> <li>• <b>RUNNING</b>: The job is running.</li> <li>• <b>SUCCEEDED</b>: The job was successfully executed.</li> <li>• <b>FAILED</b>: The job execution failed.</li> <li>• <b>NEW</b>: The job was not executed.</li> </ul>

**Table 5-81** ConfigValues

Parameter	Mandatory	Type	Description
configs	Yes	Array of <b>configs</b> objects	The data structures of source link parameters, destination link parameters, and job parameters are the same. However, the <b>inputs</b> parameter varies. For details, see the descriptions of <b>configs</b> parameters.
extended-configs	No	<b>extended-configs</b> object	Extended configuration. For details, see the descriptions of <b>extended-configs</b> parameters.

**Table 5-82** extended-configs

Parameter	Mandatory	Type	Description
name	No	String	Name
value	No	String	Value

**Table 5-83** extended-configs

Parameter	Mandatory	Type	Description
name	No	String	Name
value	No	String	Value

**Table 5-84** configs

Parameter	Mandatory	Type	Description
inputs	Yes	Array of <b>Input</b> objects	Input parameter list. Each element in the list is in <b>name,value</b> format. For details, see the descriptions of <b>inputs</b> parameters. In the <b>from-config-values</b> data structure, the value of this parameter varies with the source link type. For details, see section "Source Job Parameters" in the <b>Cloud Data Migration User Guide</b> . In the <b>to-cofig-values</b> data structure, the value of this parameter varies with the destination link type. For details, see section "Destination Job Parameters" in the <b>Cloud Data Migration User Guide</b> . For details about the <b>inputs</b> parameter in the <b>driver-config-values</b> data structure, see the job parameter descriptions.
name	Yes	String	Configuration name. The value is <b>fromJobConfig</b> for a source job, <b>toJobConfig</b> for a destination job, and <b>linkConfig</b> for a link.
id	No	Integer	Configuration ID
type	No	String	Configuration type

**Table 5-85** Input

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name
value	Yes	String	Parameter value
type	No	String	Value type

**Table 5-86** extended-configs

Parameter	Mandatory	Type	Description
name	No	String	Name
value	No	String	Value

## Response Parameters

**Status code: 200**

**Table 5-87** Response body parameters

Parameter	Type	Description
validation-result	Array of <b>JobValidationResult</b> objects	Validation result. - If a job fails to be modified, the failure cause is returned. - If a job is successfully modified, an empty list is returned.

**Table 5-88** JobValidationResult

Parameter	Type	Description
message	String	Error message
status	String	ERROR,WARNING Enumeration values: <ul style="list-style-type: none"> <li>• <b>ERROR</b></li> <li>• <b>WARNING</b></li> </ul>

**Status code: 400**

**Table 5-89** Response body parameters

Parameter	Type	Description
code	String	Return code
errCode	String	Error code
message	String	Error message
externalMessage	String	Additional information



## Example Requests

```
PUT /v1.1/1551c7f6c808414d8e9f3c514a170f2e/cluster/6ec9a0a4-76be-4262-8697-e7af1fac7920/cdm/job/
es_css

{
  "jobs" : [ {
    "job_type" : "NORMAL_JOB",
    "from-connector-name" : "elasticsearch-connector",
    "to-config-values" : {
      "configs" : [ {
        "inputs" : [ {
          "name" : "toJobConfig.streamName",
          "value" : "dis-lkGm"
        } , {
          "name" : "toJobConfig.separator",
          "value" : "|"
        } , {
          "name" : "toJobConfig.columnList",
          "value" : "1&2&3"
        }
      ] ,
      "name" : "toJobConfig"
    }
  ]
} ,
"to-link-name" : "dis",
"driver-config-values" : {
  "configs" : [ {
    "inputs" : [ {
      "name" : "throttlingConfig.numExtractors",
      "value" : "1"
    } , {
      "name" : "throttlingConfig.submitToCluster",
      "value" : "false"
    } , {
      "name" : "throttlingConfig.numLoaders",
      "value" : "1"
    } , {
      "name" : "throttlingConfig.recordDirtyData",
      "value" : "false"
    }
  ] ,
  "name" : "throttlingConfig"
} , {
  "inputs" : { } ,
  "name" : "jarConfig"
} , {
  "inputs" : [ {
    "name" : "schedulerConfig.isSchedulerJob",
    "value" : "false"
  } , {
    "name" : "schedulerConfig.disposableType",
    "value" : "NONE"
  }
  ] ,
  "name" : "schedulerConfig"
} , {
  "inputs" : { } ,
  "name" : "transformConfig"
} , {
  "inputs" : [ {
    "name" : "retryJobConfig.retryJobType",
    "value" : "NONE"
  }
  ] ,
  "name" : "retryJobConfig"
}
]
} ,
"from-config-values" : {
  "configs" : [ {
    "inputs" : [ {
      "name" : "fromJobConfig.index",
      "value" : "52est"
    }
  ] ,
  "name" : "fromJobConfig"
}
]
}
```

```

    "name" : "fromJobConfig.type",
    "value" : "est_array"
  }, {
    "name" : "fromJobConfig.columnList",
    "value" : "array_f1_int:long&array_f2_text:string&array_f3_object:nested"
  }, {
    "name" : "fromJobConfig.splitNestedField",
    "value" : "false"
  } ],
  "name" : "fromJobConfig"
}]
},
"to-connector-name" : "dis-connector",
"name" : "es_css",
"from-link-name" : "css"
}]
}

```

## Example Responses

### Status code: 200

ok

```

{
  "validation-result" : [ {}, {}, {} ]
}

```

### Status code: 400

Error code

```

{
  "code" : "Cdm.0095",
  "errCode" : "Cdm.00095",
  "message" : "A job with the name obs-obs does not exist.",
  "externalMessage" : "A job with the name obs-obs does not exist."
}

```

## Status Codes

Status Code	Description
200	ok
400	Error code

## Error Codes

See [Error Codes](#).

## 5.2.4 Creating and Executing a Job in a Random Cluster

### Function

This API is used to create and execute a job in a random cluster.

## URI

POST /v1.1/{project\_id}/clusters/job

**Table 5-90** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 5-91** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).
X-Language	Yes	String	Request language

**Table 5-92** Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of <b>Job</b> objects	Job list. For details, see the descriptions of <b>jobs</b> parameters.
clusters	Yes	Array of strings	IDs of CDM clusters. The system selects a random cluster in running state from the specified clusters and creates and executes a migration job in the cluster.

**Table 5-93** Job

Parameter	Mandatory	Type	Description
job_type	No	String	Job type <ul style="list-style-type: none"> <li>● <b>NORMAL_JOB</b>: table/file migration</li> <li>● <b>BATCH_JOB</b>: entire DB migration</li> <li>● <b>SCENARIO_JOB</b>: scenario migration</li> </ul> Enumeration values: <ul style="list-style-type: none"> <li>● <b>NORMAL_JOB</b></li> <li>● <b>BATCH_JOB</b></li> <li>● <b>SCENARIO_JOB</b></li> </ul>
from-connector-name	Yes	String	Source link type
to-config-values	Yes	<b>ConfigValues</b> object	Destination link parameter configuration
to-link-name	Yes	String	Destination link name
driver-config-values	Yes	<b>ConfigValues</b> object	Job parameter configuration
from-config-values	Yes	<b>ConfigValues</b> object	Source link parameter configuration
to-connector-name	No	String	Destination link type
name	No	String	Job name, which contains 1 to 240 characters Minimum: <b>1</b> Maximum: <b>240</b>
from-link-name	No	String	Source link name
creation-user	No	String	User who created the job
creation-date	No	Long	Time when the job was created, accurate to millisecond
update-date	No	Long	Time when the job was last updated, accurate to millisecond
is_incre_job	No	Boolean	Incremental or not

Parameter	Mandatory	Type	Description
flag	No	Integer	Flag
files_read	No	Integer	Number of read files
update-user	No	String	User who last updated the job
external_id	No	String	External ID
type	No	String	Task type
execute_start_date	No	Long	Execution start date
delete_rows	No	Integer	Number of deleted rows
enabled	No	Boolean	Whether to activate the link
bytes_written	No	Long	Number of written bytes
id	No	Integer	Job ID
is_use_sql	No	Boolean	Whether to use SQL statements
update_rows	No	Integer	Number of updated rows
group_name	No	String	Group name
bytes_read	No	Long	Number of read bytes
execute_update_date	No	Long	Execution update date
write_rows	No	Integer	Number of written rows
rows_written	No	Integer	Number of written rows
rows_read	No	Long	Number of rows that are read
files_written	No	Integer	Number of written files
is_incrementing	No	Boolean	Incremental or not
execute_create_date	No	Long	Execution creation date

Parameter	Mandatory	Type	Description
status	No	String	Job execution status <ul style="list-style-type: none"> <li>• <b>BOOTING</b>: The job is starting.</li> <li>• <b>RUNNING</b>: The job is running.</li> <li>• <b>SUCCEEDED</b>: The job was successfully executed.</li> <li>• <b>FAILED</b>: The job execution failed.</li> <li>• <b>NEW</b>: The job was not executed.</li> </ul>

**Table 5-94** ConfigValues

Parameter	Mandatory	Type	Description
configs	Yes	Array of <b>configs</b> objects	The data structures of source link parameters, destination link parameters, and job parameters are the same. However, the <b>inputs</b> parameter varies. For details, see the descriptions of <b>configs</b> parameters.
extended-configs	No	<b>extended-configs</b> object	Extended configuration. For details, see the descriptions of <b>extended-configs</b> parameters.

**Table 5-95** extended-configs

Parameter	Mandatory	Type	Description
name	No	String	Name
value	No	String	Value

**Table 5-96** extended-configs

Parameter	Mandatory	Type	Description
name	No	String	Name
value	No	String	Value

**Table 5-97** configs

Parameter	Mandatory	Type	Description
inputs	Yes	Array of <b>Input</b> objects	Input parameter list. Each element in the list is in <b>name,value</b> format. For details, see the descriptions of <b>inputs</b> parameters. In the <b>from-config-values</b> data structure, the value of this parameter varies with the source link type. For details, see section "Source Job Parameters" in the <b>Cloud Data Migration User Guide</b> . In the <b>to-cofig-values</b> data structure, the value of this parameter varies with the destination link type. For details, see section "Destination Job Parameters" in the <b>Cloud Data Migration User Guide</b> . For details about the <b>inputs</b> parameter in the <b>driver-config-values</b> data structure, see the job parameter descriptions.
name	Yes	String	Configuration name. The value is <b>fromJobConfig</b> for a source job, <b>toJobConfig</b> for a destination job, and <b>linkConfig</b> for a link.
id	No	Integer	Configuration ID
type	No	String	Configuration type

**Table 5-98** Input

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name
value	Yes	String	Parameter value
type	No	String	Value type

**Table 5-99** extended-configs

Parameter	Mandatory	Type	Description
name	No	String	Name
value	No	String	Value

## Response Parameters

Status code: 200

**Table 5-100** Response body parameters

Parameter	Type	Description
submissions	Array of <a href="#">StartJobSubmission</a> objects	Job running information. For details, see the descriptions of <b>submission</b> parameters.

**Table 5-101** StartJobSubmission

Parameter	Type	Description
isIncrementing	Boolean	Whether the job migrates incremental data
delete_rows	Integer	Number of deleted rows
update_rows	Integer	Number of updated rows
write_rows	Integer	Number of written rows
submission-id	Integer	ID of the submitted job
job-name	String	Job name
creation-user	String	User who created the job
creation-date	Long	Job creation time, accurate to millisecond
execute-date	Long	Job execution time
progress	Float	Job progress. If a job fails, the value is <b>-1</b> . Otherwise, the value ranges from 0 to 100.



Parameter	Type	Description
status	String	Job status <ul style="list-style-type: none"> <li>● <b>BOOTING</b>: The job is starting.</li> <li>● <b>FAILURE_ON_SUBMIT</b>: The job failed to be submitted.</li> <li>● <b>RUNNING</b>: The job is running.</li> <li>● <b>SUCCEEDED</b>: The job was successfully executed.</li> <li>● <b>FAILED</b>: The job execution failed.</li> <li>● <b>UNKNOWN</b>: The job status is unknown.</li> <li>● <b>NEVER_EXECUTED</b>: The job was not executed.</li> </ul>
isStopingIncrement	String	Whether to stop incremental data migration
is-execute-auto	Boolean	Whether to execute the job as scheduled
last-update-date	Long	Time when the job was last updated
last-udpate-user	String	User who last updated the job status
isDeleteJob	Boolean	Whether to delete the job after it is executed

## Example Requests

POST /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/job

```
{
  "jobs" : [ {
    "job_type" : "NORMAL_JOB",
    "from-connector-name" : "elasticsearch-connector",
    "to-config-values" : {
      "configs" : [ {
        "inputs" : [ {
          "name" : "toJobConfig.streamName",
          "value" : "dis-lkGm"
        }, {
          "name" : "toJobConfig.separator",
          "value" : "|"
        }, {
          "name" : "toJobConfig.columnList",
          "value" : "1&2&3"
        }
      ],
      "name" : "toJobConfig"
    }
  }, {
    "to-link-name" : "dis",
    "driver-config-values" : {
      "configs" : [ {
        "inputs" : [ {
          "name" : "throttlingConfig.numExtractors",
          "value" : "1"
        }
      ], {

```

```
    "name" : "throttlingConfig.submitToCluster",
    "value" : "false"
  }, {
    "name" : "throttlingConfig.numLoaders",
    "value" : "1"
  }, {
    "name" : "throttlingConfig.recordDirtyData",
    "value" : "false"
  } ],
  "name" : "throttlingConfig"
}, {
  "inputs" : { },
  "name" : "jarConfig"
}, {
  "inputs" : [ {
    "name" : "schedulerConfig.isSchedulerJob",
    "value" : "false"
  } ],
  "name" : "schedulerConfig.disposableType",
  "value" : "NONE"
}, {
  "name" : "schedulerConfig"
}, {
  "inputs" : { },
  "name" : "transformConfig"
}, {
  "inputs" : [ {
    "name" : "retryJobConfig.retryJobType",
    "value" : "NONE"
  } ],
  "name" : "retryJobConfig"
} ]
},
"from-config-values" : {
  "configs" : [ {
    "inputs" : [ {
      "name" : "fromJobConfig.index",
      "value" : "52est"
    } ],
    "name" : "fromJobConfig.type",
    "value" : "est_array"
  }, {
    "name" : "fromJobConfig.columnList",
    "value" : "array_f1_int:long&array_f2_text:string&array_f3_object:nested"
  }, {
    "name" : "fromJobConfig.splitNestedField",
    "value" : "false"
  } ],
  "name" : "fromJobConfig"
} ]
},
"to-connector-name" : "dis-connector",
"name" : "es_css",
"from-link-name" : "css"
} ],
"clusters" : [ "b0791496-e111-4e75-b7ca-9277aeab9297", "c2db1191-eb6c-464a-a0d3-b434e6c6df26",
"c2db1191-eb6c-464a-a0d3-b434e6c6df26" ]
}
```

## Example Responses

**Status code: 200**

ok

```
{
  "submissions" : [ {
    "isIncrementing" : false,
    "job-name" : "obs2obs-03",
```

```
"submisson-id" : 13,  
"isStopingIncrement" : "",  
"last-update-date" : 1635909057030,  
"is-execute-auto" : false,  
"delete_rows" : 0,  
"write_rows" : 0,  
"last-update-user" : "mwx5316849",  
"isDeleteJob" : false,  
"creation-user" : "mwx5316849",  
"progress" : 0,  
"creation-date" : 1635909057030,  
"update_rows" : 0,  
"status" : "PENDING"  
}]  
}
```

## Status Codes

Status Code	Description
200	ok

## Error Codes

See [Error Codes](#).

## 5.2.5 Stopping a Job

### Function

This API is used to stop a job.

### URI

PUT /v1.1/{project\_id}/clusters/{cluster\_id}/cdm/job/{job\_name}/stop

**Table 5-102** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID
job_name	Yes	String	Job name

## Request Parameters

**Table 5-103** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

## Response Parameters

Status code: 200

**Table 5-104** Response body parameters

Parameter	Type	Description
validation-result	Array of <b>JobValidationResult</b> objects	Validation result. If the job fails to be stopped, the failure cause is returned. For details, see the <b>validation-result</b> parameter. If the job is stopped, an empty list is returned.

**Table 5-105** JobValidationResult

Parameter	Type	Description
message	String	Error message
status	String	ERROR,WARNING Enumeration values: <ul style="list-style-type: none"> <li>• <b>ERROR</b></li> <li>• <b>WARNING</b></li> </ul>

## Example Requests

```
PUT /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/6ec9a0a4-76be-4262-8697-e7af1fac7920/cdm/job/jdbc2hive/stop
```

## Example Responses

Status code: 200

ok

```
{ }
```

## Status Codes

Status Code	Description
200	ok

## Error Codes

See [Error Codes](#).

## 5.2.6 Creating a Job in a Specified Cluster

### Function

This API is used to create a job in a specified cluster.

### URI

POST /v1.1/{project\_id}/clusters/{cluster\_id}/cdm/job

**Table 5-106** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID

### Request Parameters

**Table 5-107** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

**Table 5-108** Request body parameters

Parameter	Mandatory	Type	Description
jobs	Yes	Array of <b>Job</b> objects	Job list. For details, see the descriptions of <b>jobs</b> parameters.

**Table 5-109** Job

Parameter	Mandatory	Type	Description
job_type	No	String	Job type <ul style="list-style-type: none"> <li>● <b>NORMAL_JOB</b>: table/file migration</li> <li>● <b>BATCH_JOB</b>: entire DB migration</li> <li>● <b>SCENARIO_JOB</b>: scenario migration</li> </ul> Enumeration values: <ul style="list-style-type: none"> <li>● <b>NORMAL_JOB</b></li> <li>● <b>BATCH_JOB</b></li> <li>● <b>SCENARIO_JOB</b></li> </ul>
from-connector-name	Yes	String	Source link type
to-config-values	Yes	<b>ConfigValues</b> object	Destination link parameter configuration
to-link-name	Yes	String	Destination link name
driver-config-values	Yes	<b>ConfigValues</b> object	Job parameter configuration
from-config-values	Yes	<b>ConfigValues</b> object	Source link parameter configuration
to-connector-name	No	String	Destination link type
name	No	String	Job name, which contains 1 to 240 characters Minimum: <b>1</b> Maximum: <b>240</b>
from-link-name	No	String	Source link name
creation-user	No	String	User who created the job
creation-date	No	Long	Time when the job was created, accurate to millisecond
update-date	No	Long	Time when the job was last updated, accurate to millisecond
is_incre_job	No	Boolean	Incremental or not

Parameter	Mandatory	Type	Description
flag	No	Integer	Flag
files_read	No	Integer	Number of read files
update-user	No	String	User who last updated the job
external_id	No	String	External ID
type	No	String	Task type
execute_start_date	No	Long	Execution start date
delete_rows	No	Integer	Number of deleted rows
enabled	No	Boolean	Whether to activate the link
bytes_written	No	Long	Number of written bytes
id	No	Integer	Job ID
is_use_sql	No	Boolean	Whether to use SQL statements
update_rows	No	Integer	Number of updated rows
group_name	No	String	Group name
bytes_read	No	Long	Number of read bytes
execute_update_date	No	Long	Execution update date
write_rows	No	Integer	Number of written rows
rows_written	No	Integer	Number of written rows
rows_read	No	Long	Number of rows that are read
files_written	No	Integer	Number of written files
is_incrementing	No	Boolean	Incremental or not
execute_create_date	No	Long	Execution creation date

Parameter	Mandatory	Type	Description
status	No	String	Job execution status <ul style="list-style-type: none"> <li>• <b>BOOTING</b>: The job is starting.</li> <li>• <b>RUNNING</b>: The job is running.</li> <li>• <b>SUCCEEDED</b>: The job was successfully executed.</li> <li>• <b>FAILED</b>: The job execution failed.</li> <li>• <b>NEW</b>: The job was not executed.</li> </ul>

**Table 5-110** ConfigValues

Parameter	Mandatory	Type	Description
configs	Yes	Array of <b>configs</b> objects	The data structures of source link parameters, destination link parameters, and job parameters are the same. However, the <b>inputs</b> parameter varies. For details, see the descriptions of <b>configs</b> parameters.
extended-configs	No	<b>extended-configs</b> object	Extended configuration. For details, see the descriptions of <b>extended-configs</b> parameters.

**Table 5-111** extended-configs

Parameter	Mandatory	Type	Description
name	No	String	Name
value	No	String	Value

**Table 5-112** extended-configs

Parameter	Mandatory	Type	Description
name	No	String	Name
value	No	String	Value



**Table 5-113** configs

Parameter	Mandatory	Type	Description
inputs	Yes	Array of <b>Input</b> objects	Input parameter list. Each element in the list is in <b>name,value</b> format. For details, see the descriptions of <b>inputs</b> parameters. In the <b>from-config-values</b> data structure, the value of this parameter varies with the source link type. For details, see section "Source Job Parameters" in the <b>Cloud Data Migration User Guide</b> . In the <b>to-cofig-values</b> data structure, the value of this parameter varies with the destination link type. For details, see section "Destination Job Parameters" in the <b>Cloud Data Migration User Guide</b> . For details about the <b>inputs</b> parameter in the <b>driver-config-values</b> data structure, see the job parameter descriptions.
name	Yes	String	Configuration name. The value is <b>fromJobConfig</b> for a source job, <b>toJobConfig</b> for a destination job, and <b>linkConfig</b> for a link.
id	No	Integer	Configuration ID
type	No	String	Configuration type

**Table 5-114** Input

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name
value	Yes	String	Parameter value
type	No	String	Value type

**Table 5-115** extended-configs

Parameter	Mandatory	Type	Description
name	No	String	Name
value	No	String	Value

## Response Parameters

**Status code: 200**

**Table 5-116** Response body parameters

Parameter	Type	Description
name	String	Job name
validation-result	Array of <b>JobValidationResult</b> objects	Check result <ul style="list-style-type: none"> <li>• If the modification fails, the failure cause is returned.</li> <li>• If the modification is successful, an empty list is returned.</li> </ul>

**Table 5-117** JobValidationResult

Parameter	Type	Description
message	String	Error message
status	String	ERROR,WARNING Enumeration values: <ul style="list-style-type: none"> <li>• <b>ERROR</b></li> <li>• <b>WARNING</b></li> </ul>

**Status code: 400**

**Table 5-118** Response body parameters

Parameter	Type	Description
code	String	Return code
errCode	String	Error code
message	String	Error message

Parameter	Type	Description
externalMessage	String	Additional information

## Example Requests

POST /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/6ec9a0a4-76be-4262-8697-e7af1fac7920/cdm/job

```
{
  "jobs" : [ {
    "job_type" : "NORMAL_JOB",
    "from-connector-name" : "elasticsearch-connector",
    "to-config-values" : {
      "configs" : [ {
        "inputs" : [ {
          "name" : "toJobConfig.streamName",
          "value" : "dis-lkGm"
        }, {
          "name" : "toJobConfig.separator",
          "value" : "|"
        }, {
          "name" : "toJobConfig.columnList",
          "value" : "1&2&3"
        }
      ],
      "name" : "toJobConfig"
    }
  }, {
    "to-link-name" : "dis",
    "driver-config-values" : {
      "configs" : [ {
        "inputs" : [ {
          "name" : "throttlingConfig.numExtractors",
          "value" : "1"
        }, {
          "name" : "throttlingConfig.submitToCluster",
          "value" : "false"
        }, {
          "name" : "throttlingConfig.numLoaders",
          "value" : "1"
        }, {
          "name" : "throttlingConfig.recordDirtyData",
          "value" : "false"
        }
      ],
      "name" : "throttlingConfig"
    }, {
      "inputs" : { },
      "name" : "jarConfig"
    }, {
      "inputs" : [ {
        "name" : "schedulerConfig.isSchedulerJob",
        "value" : "false"
      }, {
        "name" : "schedulerConfig.disposableType",
        "value" : "NONE"
      }
    ],
    "name" : "schedulerConfig"
  }, {
    "inputs" : { },
    "name" : "transformConfig"
  }, {
    "inputs" : [ {
      "name" : "retryJobConfig.retryJobType",
      "value" : "NONE"
    }
  ],
  "name" : "retryJobConfig"
}
```

```

    }]
  },
  "from-config-values" : {
    "configs" : [ {
      "inputs" : [ {
        "name" : "fromJobConfig.index",
        "value" : "52est"
      }, {
        "name" : "fromJobConfig.type",
        "value" : "est_array"
      }, {
        "name" : "fromJobConfig.columnList",
        "value" : "array_f1_int:long&array_f2_text:string&array_f3_object:nested"
      }, {
        "name" : "fromJobConfig.splitNestedField",
        "value" : "false"
      }
    ],
    "name" : "fromJobConfig"
  }
  ],
  "to-connector-name" : "dis-connector",
  "name" : "es_css",
  "from-link-name" : "css"
}
}

```

## Example Responses

### Status code: 200

ok

```

{
  "name" : "mysql2hive"
}

```

### Status code: 400

Request error

```

{
  "code" : "Cdm.0104",
  "errCode" : "Cdm.0104",
  "message" : "Job name already exist or created by other.",
  "ternalMessage" : "Job name already exist or created by other."
}

```

## Status Codes

Status Code	Description
200	ok
400	Request error

## Error Codes

See [Error Codes](#).

## 5.2.7 Starting a Job

### Function

This API is used to start a job.

### URI

PUT /v1.1/{project\_id}/clusters/{cluster\_id}/cdm/job/{job\_name}/start

**Table 5-119** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID
job_name	Yes	String	Job name

### Request Parameters

**Table 5-120** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

### Response Parameters

**Status code: 200**

**Table 5-121** Response body parameters

Parameter	Type	Description
submissions	Array of <a href="#">StartJobSubmission</a> objects	Job running information. For details, see the descriptions of <b>submission</b> parameters.

**Table 5-122** StartJobSubmission

Parameter	Type	Description
isIncrementing	Boolean	Whether the job migrates incremental data
delete_rows	Integer	Number of deleted rows
update_rows	Integer	Number of updated rows
write_rows	Integer	Number of written rows
submission-id	Integer	ID of the submitted job
job-name	String	Job name
creation-user	String	User who created the job
creation-date	Long	Job creation time, accurate to millisecond
execute-date	Long	Job execution time
progress	Float	Job progress. If a job fails, the value is <b>-1</b> . Otherwise, the value ranges from 0 to 100.
status	String	Job status <ul style="list-style-type: none"><li>● <b>BOOTING</b>: The job is starting.</li><li>● <b>FAILURE_ON_SUBMIT</b>: The job failed to be submitted.</li><li>● <b>RUNNING</b>: The job is running.</li><li>● <b>SUCCEEDED</b>: The job was successfully executed.</li><li>● <b>FAILED</b>: The job execution failed.</li><li>● <b>UNKNOWN</b>: The job status is unknown.</li><li>● <b>NEVER_EXECUTED</b>: The job was not executed.</li></ul>
isStoppingIncrement	String	Whether to stop incremental data migration
is-execute-auto	Boolean	Whether to execute the job as scheduled
last-update-date	Long	Time when the job was last updated
last-udpate-user	String	User who last updated the job status
isDeleteJob	Boolean	Whether to delete the job after it is executed

## Example Requests

```
PUT /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/6ec9a0a4-76be-4262-8697-e7af1fac7920/cdm/job/jdbc2hive/start
```

## Example Responses

**Status code: 200**

ok

```
{
  "submissions" : [ {
    "job-name" : "jdbc2hive",
    "creation-user" : "cdm",
    "creation-date" : "1536905778725",
    "progress" : 1,
    "status" : "BOOTING"
  } ]
}
```

## Status Codes

Status Code	Description
200	ok

## Error Codes

See [Error Codes](#).

## 5.2.8 Querying Job Status

### Function

This API is used to query the job status.

### URI

GET /v1.1/{project\_id}/clusters/{cluster\_id}/cdm/job/{job\_name}/status

**Table 5-123** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID
job_name	Yes	String	Job name

## Request Parameters

**Table 5-124** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

## Response Parameters

**Status code: 200**

**Table 5-125** Response body parameters

Parameter	Type	Description
submissions	Array of <a href="#">Submission</a> objects	Job running information. For details, see the descriptions of <b>submission</b> parameters.

**Table 5-126** Submission

Parameter	Type	Description
isIncrementing	Boolean	Whether the job migrates incremental data
job-name	String	Job name
counters	<a href="#">counters</a> object	Job running result statistics. This parameter is available only when <b>status</b> is <b>SUCCEEDED</b> . For details, see the description of the <b>counters</b> parameter.
isStoppingIncrement	String	Whether to stop incremental data migration
is-execute-auto	Boolean	Whether to execute the job as scheduled
last-update-date	Long	Time when the job was last updated
last-update-user	String	User who last updated the job status
isDeleteJob	Boolean	Whether to delete the job after it is executed
creation-user	String	User who created the job



Parameter	Type	Description
creation-date	Long	Creation time
external-id	String	Job ID
progress	Float	Job progress. If a job fails, the value is <b>-1</b> . Otherwise, the value ranges from 0 to 100.
submission-id	Integer	Job submission ID
delete_rows	Integer	Number of deleted rows
update_rows	Integer	Number of updated rows
write_rows	Integer	Number of written rows
execute-date	Long	Execution time
status	String	Job status <ul style="list-style-type: none"> <li>● <b>BOOTING</b>: The job is starting.</li> <li>● <b>FAILURE_ON_SUBMIT</b>: The job failed to be submitted.</li> <li>● <b>RUNNING</b>: The job is running.</li> <li>● <b>SUCCEEDED</b>: The job was successfully executed.</li> <li>● <b>FAILED</b>: The job execution failed.</li> <li>● <b>UNKNOWN</b>: The job status is unknown.</li> <li>● <b>NEVER_EXECUTED</b>: The job was not executed.</li> </ul>
error-details	String	Error details. This parameter is available only when <b>status</b> is <b>FAILED</b> .
error-summary	String	Error summary. This parameter is available only when <b>status</b> is <b>FAILED</b> .

**Table 5-127** counters

Parameter	Type	Description
org.apache.hadoop.mapreduce.jobcounters	<b>counter</b> object	Job running result statistics. For details, see the descriptions of <b>counter</b> parameters.

**Table 5-128** counter

Parameter	Type	Description
BYTES_WRITTEN	Long	Number of bytes that are written
TOTAL_FILES	Integer	Total number of files
ROWS_READ	Long	Number of rows that are read
BYTES_READ	Long	Number of bytes that are read
ROWS_WRITTEN	Long	Number of rows that are written
FILES_WRITTEN	Integer	Number of files that are written
FILES_READ	Integer	Number of files that are read
TOTAL_SIZE	Long	Total number of bytes
FILES_SKIPPED	Integer	Number of files that are skipped
ROWS_WRITTEN_SKIPPED	Long	Number of rows that are skipped

## Example Requests

```
GET /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/6ec9a0a4-76be-4262-8697-e7af1fac7920/cdm/job/jdbc2hive/status
```

## Example Responses

**Status code: 200**

ok

```
{
  "submissions" : [ {
    "job-name" : "jdbc2hive",
    "creation-user" : "cdm",
    "creation-date" : "1536905778725",
    "progress" : 1,
    "status" : "BOOTING"
  } ]
}
```

## Status Codes

Status Code	Description
200	ok

## Error Codes

See [Error Codes](#).

## 5.2.9 Querying Job Execution History

### Function

This API is used to query the job execution history.

### URI

GET /v1.1/{project\_id}/clusters/{cluster\_id}/cdm/submissions

**Table 5-129** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID

**Table 5-130** Query Parameters

Parameter	Mandatory	Type	Description
jname	Yes	String	Job name

### Request Parameters

**Table 5-131** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

### Response Parameters

Status code: 200

**Table 5-132** Response body parameters

Parameter	Type	Description
submissions	Array of <a href="#">Submission</a> objects	Job running information. For details, see the descriptions of <b>submission</b> parameters.
total	Integer	Total number of historical records for a job
page_no	Integer	Page number
page_size	Integer	Number of records on each page. The default value is <b>10</b> .

**Table 5-133** Submission

Parameter	Type	Description
isIncrementing	Boolean	Whether the job migrates incremental data
job-name	String	Job name
counters	<a href="#">counters</a> object	Job running result statistics. This parameter is available only when <b>status</b> is <b>SUCCEEDED</b> . For details, see the description of the <b>counters</b> parameter.
isStoppingIncrement	String	Whether to stop incremental data migration
is-execute-auto	Boolean	Whether to execute the job as scheduled
last-update-date	Long	Time when the job was last updated
last-udpate-user	String	User who last updated the job status
isDeleteJob	Boolean	Whether to delete the job after it is executed
creation-user	String	User who created the job
creation-date	Long	Creation time
external-id	String	Job ID
progress	Float	Job progress. If a job fails, the value is <b>-1</b> . Otherwise, the value ranges from 0 to 100.
submission-id	Integer	Job submission ID
delete_rows	Integer	Number of deleted rows
update_rows	Integer	Number of updated rows

Parameter	Type	Description
write_rows	Integer	Number of written rows
execute-date	Long	Execution time
status	String	Job status <ul style="list-style-type: none"> <li>• <b>BOOTING</b>: The job is starting.</li> <li>• <b>FAILURE_ON_SUBMIT</b>: The job failed to be submitted.</li> <li>• <b>RUNNING</b>: The job is running.</li> <li>• <b>SUCCEEDED</b>: The job was successfully executed.</li> <li>• <b>FAILED</b>: The job execution failed.</li> <li>• <b>UNKNOWN</b>: The job status is unknown.</li> <li>• <b>NEVER_EXECUTED</b>: The job was not executed.</li> </ul>
error-details	String	Error details. This parameter is available only when <b>status</b> is <b>FAILED</b> .
error-summary	String	Error summary. This parameter is available only when <b>status</b> is <b>FAILED</b> .

**Table 5-134** counters

Parameter	Type	Description
org.apache.sqoop.submission.counter.SqoopCounters	<b>counter</b> object	Job running result statistics. For details, see the descriptions of <b>counter</b> parameters.

**Table 5-135** counter

Parameter	Type	Description
BYTES_WRITTEN	Long	Number of bytes that are written
TOTAL_FILES	Integer	Total number of files
ROWS_READ	Long	Number of rows that are read
BYTES_READ	Long	Number of bytes that are read
ROWS_WRITTEN	Long	Number of rows that are written

Parameter	Type	Description
FILES_WRITTEN	Integer	Number of files that are written
FILES_READ	Integer	Number of files that are read
TOTAL_SIZE	Long	Total number of bytes
FILES_SKIPPED	Integer	Number of files that are skipped
ROWS_WRITTEN_SKIPPED	Long	Number of rows that are skipped

## Example Requests

```
GET /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/6ec9a0a4-76be-4262-8697-e7af1fac7920/cdm/submissions?jname=jdbc2hive
```

## Example Responses

**Status code: 200**

ok

```
{  
  "submissions" : [ {  
    "job-name" : "jdbc2hive",  
    "creation-user" : "cdm",  
    "creation-date" : "1536905778725",  
    "progress" : 1,  
    "status" : "BOOTING"  
  } ]  
}
```

## Status Codes

Status Code	Description
200	ok

## Error Codes

See [Error Codes](#).

# 5.3 Link Management

## 5.3.1 Creating a Link

### Function

This API is used to create a link.

### URI

POST /v1.1/{project\_id}/clusters/{cluster\_id}/cdm/link

**Table 5-136** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID

**Table 5-137** Query Parameters

Parameter	Mandatory	Type	Description
validate	No	String	When the parameter is set to <b>true</b> , the API only validates whether the parameters are correctly configured, but does not create any link.

### Request Parameters

**Table 5-138** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

**Table 5-139** Request body parameters

Parameter	Mandatory	Type	Description
links	Yes	Array of <a href="#">links</a> objects	Link list. For details, see the descriptions of <a href="#">links</a> parameters.

Table 5-140 links

Parameter	Mandatory	Type	Description
link-config-values	Yes	<a href="#">link-config-values</a> object	Link parameters. For details, see the descriptions of <b>link-config-values</b> parameters.
creation-user	No	String	User who created the link
name	Yes	String	Link name
id	No	Integer	Link ID
creation-date	No	Long	Time when the link was created
connector-name	Yes	String	Connector name. The mappings between the connectors and links are as follows: <b>generic-jdbc-connector</b> : link to a relational database <b>obs-connector</b> : OBS link <b>hdfs-connector</b> : HDFS link <b>hbase-connector</b> : HBase or CloudTable link <b>hive-connector</b> : Hive link <b>ftp-connector/sftp-connector</b> : link to an FTP or SFTP server <b>mongodb-connector</b> : MongoDB link <b>redis-connector</b> : Redis or DCS link <b>kafka-connector</b> : Kafka link <b>dis-connector</b> : DIS link <b>elasticsearch-connector</b> : Elasticsearch or CSS link <b>dli-connector</b> : DLI link <b>http-connector</b> : HTTP or HTTPS link. This type of link does not have parameters. <b>dms-kafka-connector</b> : DMS Kafka link
update-date	No	Long	Time when the link was updated
enabled	No	Boolean	Whether to activate the link. The default value is <b>true</b> .
update-user	No	String	User who updated the link



**Table 5-141** link-config-values

Parameter	Mandatory	Type	Description
configs	Yes	Array of <b>configs</b> objects	Data structure of link parameters. For details, see the descriptions of <b>configs</b> parameters.
extended-configs	No	<b>extended-configs</b> object	Extended configuration. For details, see the descriptions of <b>extended-configs</b> parameters.
validators	No	Array of strings	Validator

**Table 5-142** configs

Parameter	Mandatory	Type	Description
inputs	Yes	Array of <b>input</b> objects	Input parameter list. Each element in the list is in <b>name,value</b> format. For details, see the descriptions of <b>inputs</b> parameters. In the <b>from-config-values</b> data structure, the value of this parameter varies with the source link type. For details, see section "Source Job Parameters" in the <b>Cloud Data Migration User Guide</b> . In the <b>to-cofig-values</b> data structure, the value of this parameter varies with the destination link type. For details, see section "Destination Job Parameters" in the <b>Cloud Data Migration User Guide</b> . For details about the <b>inputs</b> parameter in the <b>driver-config-values</b> data structure, see the job parameter descriptions.
name	Yes	String	Configuration name. The value is <b>fromJobConfig</b> for a source job, <b>toJobConfig</b> for a destination job, and <b>linkConfig</b> for a link.
id	No	Integer	Configuration ID

Parameter	Mandatory	Type	Description
type	No	String	Configuration type

**Table 5-143** Input

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name
value	Yes	String	Parameter value
type	No	String	Value type

**Table 5-144** extended-configs

Parameter	Mandatory	Type	Description
name	No	String	Name
value	No	String	Value

## Response Parameters

**Status code: 200**

**Table 5-145** Response body parameters

Parameter	Type	Description
name	String	Link name
validation-result	Array of <b>validationResult</b> objects	Validation structure. If a link fails to be created, the failure cause is returned. For details, see the descriptions of <b>validation-result</b> parameters. If a link is successfully created, an empty list is returned.

**Table 5-146** validationResult

Parameter	Type	Description
linkConfig	Array of <b>validationLinkConfig</b> objects	Validation result of link creation or update. For details, see the descriptions of <b>validationLinkConfig</b> parameters.

**Table 5-147** validationLinkConfig

Parameter	Type	Description
message	String	Error message
status	String	ERROR,WARNING Enumeration values: <ul style="list-style-type: none"> <li>• <b>ERROR</b></li> <li>• <b>WARNING</b></li> </ul>

**Status code: 400**

**Table 5-148** Response body parameters

Parameter	Type	Description
code	String	Return code
errCode	String	Error code
message	String	Error message
externalMessage	String	Additional information

**Status code: 500**

**Table 5-149** Response body parameters

Parameter	Type	Description
message	String	Error message
status	String	ERROR,WARNING Enumeration values: <ul style="list-style-type: none"> <li>• <b>ERROR</b></li> <li>• <b>WARNING</b></li> </ul>

## Example Requests

```
POST /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/6ec9a0a4-76be-4262-8697-e7af1fac7920/cdm/link
{
  "links": [ {
    "link-config-values": {
      "configs": [ {
        "inputs": [ {
          "name": "linkConfig.databaseType",
          "value": "MYSQL"
        } ], {
```

```
    "name" : "linkConfig.host",
    "value" : "100.94.8.163"
  }, {
    "name" : "linkConfig.port",
    "value" : "3306"
  }, {
    "name" : "linkConfig.database",
    "value" : "DB_name"
  }, {
    "name" : "linkConfig.username",
    "value" : "username"
  }, {
    "name" : "linkConfig.password",
    "value" : "DB_password"
  }, {
    "name" : "linkConfig.fetchSize",
    "value" : "100000"
  }, {
    "name" : "linkConfig.usingNative",
    "value" : false
  }
],
"name" : "linkConfig"
}]
},
"name" : "mysql_link",
"creation-date" : 1496654788622,
"connector-name" : "generic-jdbc-connector",
"update-date" : 1496654788622,
"enabled" : true
}]
}
```

## Example Responses

### Status code: 200

OK

```
{
  "name" : "rdb_link",
  "validation-result" : [ {} ]
}
```

### Status code: 400

Request error.

```
{
  "code" : "Cdm.0315",
  "errCode" : "Cdm.0315",
  "message" : "Link name [ftp_link] already exist or created by other user.",
  "externalMessage" : "Link name [ftp_link] already exist or created by other user."
}
```

### Status code: 500

An internal service error occurred. For details, see error codes.

```
{
  "validation-result" : [ {
    "linkConfig" : [ {
      "message" : "Can't connect to the database with given credentials: The authentication type 12 is not supported. Check that you have configured the pg_hba.conf file to include the client's IP address or subnet, and that it is using an authentication scheme supported by the driver.",
      "status" : "ERROR"
    }
  ]
}]
}
```

## Status Codes

Status Code	Description
200	OK
400	Request error.
401	Authentication failed.
403	You do not have required permissions to perform this operation.
404	The requested resource was not found.
500	An internal service error occurred. For details, see error codes.
503	Service unavailable.

## Error Codes

See [Error Codes](#).

### 5.3.2 Querying a Link

#### Function

This API is used to query a link.

#### URI

GET /v1.1/{project\_id}/clusters/{cluster\_id}/cdm/link/{link\_name}

**Table 5-150** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID
link_name	Yes	String	Link name

## Request Parameters

**Table 5-151** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

## Response Parameters

Status code: 200

**Table 5-152** Response body parameters

Parameter	Type	Description
links	Array of <a href="#">links</a> objects	Link list. For details, see the descriptions of <a href="#">links</a> parameters.
fromTo-unMapping	String	Source and destination data sources not supported by table/file migration
batchFromTo-mapping	String	Source and destination data sources supported by entire DB migration

**Table 5-153** links

Parameter	Type	Description
link-config-values	<a href="#">link-config-values</a> object	Link parameters. For details, see the descriptions of <a href="#">link-config-values</a> parameters.
creation-user	String	User who created the link
name	String	Link name
id	Integer	Link ID
creation-date	Long	Time when the link was created

Parameter	Type	Description
connector-name	String	Connector name. The mappings between the connectors and links are as follows: <b>generic-jdbc-connector</b> : link to a relational database <b>obs-connector</b> : OBS link <b>hdfs-connector</b> : HDFS link <b>hbase-connector</b> : HBase or CloudTable link <b>hive-connector</b> : Hive link <b>ftp-connector/sftp-connector</b> : link to an FTP or SFTP server <b>mongodb-connector</b> : MongoDB link <b>redis-connector</b> : Redis or DCS link <b>kafka-connector</b> : Kafka link <b>dis-connector</b> : DIS link <b>elasticsearch-connector</b> : Elasticsearch or CSS link <b>dli-connector</b> : DLI link <b>http-connector</b> : HTTP or HTTPS link. This type of link does not have parameters. <b>dms-kafka-connector</b> : DMS Kafka link
update-date	Long	Time when the link was updated
enabled	Boolean	Whether to activate the link. The default value is <b>true</b> .
update-user	String	User who updated the link

**Table 5-154** link-config-values

Parameter	Type	Description
configs	Array of <b>configs</b> objects	Data structure of link parameters. For details, see the descriptions of <b>configs</b> parameters.
extended-configs	<b>extended-configs</b> object	Extended configuration. For details, see the descriptions of <b>extended-configs</b> parameters.
validators	Array of strings	Validator

**Table 5-155** configs

Parameter	Type	Description
inputs	Array of <b>Input</b> objects	Input parameter list. Each element in the list is in <b>name,value</b> format. For details, see the descriptions of <b>inputs</b> parameters. In the <b>from-config-values</b> data structure, the value of this parameter varies with the source link type. For details, see section "Source Job Parameters" in the <b>Cloud Data Migration User Guide</b> . In the <b>to-cofig-values</b> data structure, the value of this parameter varies with the destination link type. For details, see section "Destination Job Parameters" in the <b>Cloud Data Migration User Guide</b> . For details about the <b>inputs</b> parameter in the <b>driver-config-values</b> data structure, see the job parameter descriptions.
name	String	Configuration name. The value is <b>fromJobConfig</b> for a source job, <b>toJobConfig</b> for a destination job, and <b>linkConfig</b> for a link.
id	Integer	Configuration ID
type	String	Configuration type

**Table 5-156** Input

Parameter	Type	Description
name	String	Parameter name
value	String	Parameter value
type	String	Value type

**Table 5-157** extended-configs

Parameter	Type	Description
name	String	Name
value	String	Value

## Example Requests

```
GET /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/6ec9a0a4-76be-4262-8697-e7af1fac7920/cdm/link/sftplink
```



## Example Responses

**Status code: 200**

OK

```
{
  "links" : [ {
    "link-config-values" : {
      "configs" : [ {
        "inputs" : [ {
          "name" : "linkConfig.server",
          "type" : "STRING",
          "value" : "100.94.8.163"
        }, {
          "name" : "linkConfig.port",
          "type" : "INTEGER",
          "value" : 22
        }, {
          "name" : "linkConfig.username",
          "type" : "STRING",
          "value" : "root"
        }, {
          "name" : "linkConfig.password",
          "type" : "STRING",
          "value" : "Add password here"
        }
      ],
      "name" : "linkConfig"
    }
  } ],
  "creation-user" : "cdm",
  "name" : "sftp_link",
  "creation-date" : 1516674482640,
  "connector-name" : "sftp-connector",
  "update-date" : 1516674476022,
  "enabled" : true,
  "update-user" : "cdm"
} ] }
```

## Status Codes

Status Code	Description
200	OK
400	Request error.
401	Authentication failed.
403	You do not have required permissions to perform this operation.
404	The requested resource was not found.
500	An internal service error occurred. For details, see error codes.
503	Service unavailable.

## Error Codes

See [Error Codes](#).

## 5.3.3 Deleting a Link

### Function

This API is used to delete a link.

### URI

DELETE /v1.1/{project\_id}/clusters/{cluster\_id}/cdm/link/{link\_name}

**Table 5-158** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID
link_name	Yes	String	Name of the link to be deleted

### Request Parameters

**Table 5-159** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

### Response Parameters

**Status code: 500**

**Table 5-160** Response body parameters

Parameter	Type	Description
errCode	String	Error code
externalMessage	String	Error message

### Example Requests

```
DELETE /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/6ec9a0a4-76be-4262-8697-e7af1fac7920/cdm/link/jdbclink
```

## Example Responses

### Status code: 500

An internal service error occurred. For details, see error codes.

```
{
  "errCode" : "Cdm.0021",
  "externalMessage" : "Given link name is in use"
}
```

## Status Codes

Status Code	Description
200	OK
400	Request error.
401	Authentication failed.
403	You do not have required permissions to perform this operation.
404	The requested resource was not found.
500	An internal service error occurred. For details, see error codes.
503	Service unavailable.

## Error Codes

See [Error Codes](#).

## 5.3.4 Modifying a Link

### Function

This API is used to modify a link.

### URI

PUT /v1.1/{project\_id}/clusters/{cluster\_id}/cdm/link/{link\_name}

**Table 5-161** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
cluster_id	Yes	String	Cluster ID
link_name	Yes	String	Link name

## Request Parameters

**Table 5-162** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API (value of X-Subject-Token in the response header).

**Table 5-163** Request body parameters

Parameter	Mandatory	Type	Description
links	Yes	Array of <a href="#">links</a> objects	Link list. For details, see the descriptions of <a href="#">links</a> parameters.

**Table 5-164** links

Parameter	Mandatory	Type	Description
link-config-values	Yes	<a href="#">link-config-values</a> object	Link parameters. For details, see the descriptions of <a href="#">link-config-values</a> parameters.
creation-user	No	String	User who created the link
name	Yes	String	Link name
id	No	Integer	Link ID
creation-date	No	Long	Time when the link was created

Parameter	Mandatory	Type	Description
connector-name	Yes	String	Connector name. The mappings between the connectors and links are as follows: <b>generic-jdbc-connector</b> : link to a relational database <b>obs-connector</b> : OBS link <b>hdfs-connector</b> : HDFS link <b>hbase-connector</b> : HBase or CloudTable link <b>hive-connector</b> : Hive link <b>ftp-connector/sftp-connector</b> : link to an FTP or SFTP server <b>mongodb-connector</b> : MongoDB link <b>redis-connector</b> : Redis or DCS link <b>kafka-connector</b> : Kafka link <b>dis-connector</b> : DIS link <b>elasticsearch-connector</b> : Elasticsearch or CSS link <b>dli-connector</b> : DLI link <b>http-connector</b> : HTTP or HTTPS link. This type of link does not have parameters. <b>dms-kafka-connector</b> : DMS Kafka link
update-date	No	Long	Time when the link was updated
enabled	No	Boolean	Whether to activate the link. The default value is <b>true</b> .
update-user	No	String	User who updated the link

**Table 5-165** link-config-values

Parameter	Mandatory	Type	Description
configs	Yes	Array of <b>configs</b> objects	Data structure of link parameters. For details, see the descriptions of <b>configs</b> parameters.
extended-configs	No	<b>extended-configs</b> object	Extended configuration. For details, see the descriptions of <b>extended-configs</b> parameters.
validators	No	Array of strings	Validator

**Table 5-166** configs

Parameter	Mandatory	Type	Description
inputs	Yes	Array of <b>Input</b> objects	Input parameter list. Each element in the list is in <b>name,value</b> format. For details, see the descriptions of <b>inputs</b> parameters. In the <b>from-config-values</b> data structure, the value of this parameter varies with the source link type. For details, see section "Source Job Parameters" in the <b>Cloud Data Migration User Guide</b> . In the <b>to-cofig-values</b> data structure, the value of this parameter varies with the destination link type. For details, see section "Destination Job Parameters" in the <b>Cloud Data Migration User Guide</b> . For details about the <b>inputs</b> parameter in the <b>driver-config-values</b> data structure, see the job parameter descriptions.
name	Yes	String	Configuration name. The value is <b>fromJobConfig</b> for a source job, <b>toJobConfig</b> for a destination job, and <b>linkConfig</b> for a link.
id	No	Integer	Configuration ID
type	No	String	Configuration type

**Table 5-167** Input

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name
value	Yes	String	Parameter value
type	No	String	Value type

**Table 5-168** extended-configs

Parameter	Mandatory	Type	Description
name	No	String	Name
value	No	String	Value

## Response Parameters

Status code: 200

**Table 5-169** Response body parameters

Parameter	Type	Description
validation-result	Array of <b>validationResult</b> objects	Validation structure. If a link fails to be created, the failure cause is returned. For details, see the descriptions of <b>validation-result</b> parameters. If a link is successfully created, an empty list is returned.

**Table 5-170** validationResult

Parameter	Type	Description
linkConfig	Array of <b>validationLinkConfig</b> objects	Validation result of link creation or update. For details, see the descriptions of <b>validationLinkConfig</b> parameters.

**Table 5-171** validationLinkConfig

Parameter	Type	Description
message	String	Error message
status	String	ERROR,WARNING Enumeration values: <ul style="list-style-type: none"> <li>• <b>ERROR</b></li> <li>• <b>WARNING</b></li> </ul>

Status code: 500

**Table 5-172** Response body parameters

Parameter	Type	Description
message	String	Error message
status	String	ERROR,WARNING Enumeration values: <ul style="list-style-type: none"> <li>● <b>ERROR</b></li> <li>● <b>WARNING</b></li> </ul>

## Example Requests

```
PUT /v1.1/1551c7f6c808414d8e9f3c514a170f2e/clusters/6ec9a0a4-76be-4262-8697-e7af1fac7920/cdm/link/rdb_link
```

```
{
  "links": [ {
    "link-config-values": {
      "configs": [ {
        "inputs": [ {
          "name": "linkConfig.databaseType",
          "value": "MYSQL"
        }, {
          "name": "linkConfig.host",
          "value": "100.94.8.163"
        }, {
          "name": "linkConfig.port",
          "value": "3306"
        }, {
          "name": "linkConfig.database",
          "value": "DB_name"
        }, {
          "name": "linkConfig.username",
          "value": "username"
        }, {
          "name": "linkConfig.password",
          "value": "DB_password"
        }, {
          "name": "linkConfig.fetchSize",
          "value": "100000"
        }, {
          "name": "linkConfig.usingNative",
          "value": false
        }
      ]
    },
    "name": "linkConfig"
  } ]
},
  "name": "mysql_link",
  "creation-date": 1496654788622,
  "connector-name": "generic-jdbc-connector",
  "update-date": 1496654788622,
  "enabled": true
} ]
```

## Example Responses

**Status code: 200**

OK

```
{
  "name": "rdb_link",
```



```
"validation-result" : { }  
}
```

**Status code: 500**

An internal service error occurred. For details, see error codes.

```
{  
  "validation-result" : [ {  
    "linkConfig" : [ {  
      "message" : "Can't connect to the database with given credentials: The authentication type 12 is not supported. Check that you have configured the pg_hba.conf file to include the client's IP address or subnet, and that it is using an authentication scheme supported by the driver.",  
      "status" : "ERROR"  
    } ]  
  } ]  
}
```

## Status Codes

Status Code	Description
200	OK
400	Request error.
401	Authentication failed.
403	You do not have required permissions to perform this operation.
404	The requested resource was not found.
500	An internal service error occurred. For details, see error codes.
503	Service unavailable.

## Error Codes

See [Error Codes](#).

## 5.4 Public Data Structures

### 5.4.1 Link Parameter Description

#### 5.4.1.1 Link to a Relational Database

##### Description

By creating a JDBC link, you can extract data from or load data to the following relational databases:

- Data Warehouse Service
- RDS for MySQL

- RDS for PostgreSQL
- RDS for SQL Server
- PostgreSQL
- Microsoft SQL Server
- SAP HANA

## Sample Link

```
{
  "links": [
    {
      "link-config-values": {
        "configs": [
          {
            "inputs": [
              {
                "name": "linkConfig.databaseType",
                "value": "MYSQL"
              },
              {
                "name": "linkConfig.host",
                "value": "10.120.205.30"
              },
              {
                "name": "linkConfig.port",
                "value": "3306"
              },
              {
                "name": "linkConfig.database",
                "value": "DB_name"
              },
              {
                "name": "linkConfig.username",
                "value": "username"
              },
              {
                "name": "linkConfig.password",
                "value": "Add password here"
              },
              {
                "name": "linkConfig.useAgent",
                "value": "false"
              },
              {
                "name": "linkConfig.fetchSize",
                "value": "10000"
              },
              {
                "name": "linkConfig.commitSize",
                "value": "10000"
              },
              {
                "name": "linkConfig.usingNative",
                "value": "false"
              },
              {
                "name": "linkConfig.useSSL",
                "value": "false"
              }
            ],
            "name": "linkConfig"
          }
        ],
        "name": "mysql_link",
        "connector-name": "generic-jdbc-connector"
      }
    }
  ]
}
```

```
}
]
}
```

## Link Parameters

Parameter	Mandatory	Type	Description
linkConfig.databaseType	Yes	Enumeration	Database type. The options are as follows: <ul style="list-style-type: none"> <li>• ORACLE</li> <li>• MYSQL</li> <li>• SQLSERVER</li> <li>• DB2</li> <li>• POSTGRESQL</li> <li>• DWS</li> <li>• DDM</li> <li>• SAP HANA</li> </ul>
linkConfig.host	Yes	String	IP address of the database server
linkConfig.port	Yes	String	Port number of the database server
linkConfig.databaseconfig	No	Enumeration	Oracle database link type. This parameter is available only when an Oracle link is created. The options are as follows: <ul style="list-style-type: none"> <li>• <b>SERVICENAME</b>: Use <b>SERVICE_NAME</b> to connect to the Oracle database.</li> <li>• <b>SID</b>: Use <b>SID</b> to connect to the Oracle database.</li> </ul>
linkConfig.sidname	No	String	Oracle instance ID, which is used to differentiate databases by instances. This parameter is available only when an Oracle link is created and the database link type <b>linkConfig.databaseconfig</b> is set to <b>SID</b> .
linkConfig.database	No	String	Database name
linkConfig.username	Yes	String	Username

Parameter	Mandatory	Type	Description
linkConfig.password	Yes	String	Password
linkConfig.useAgent	Yes	Boolean	Whether to obtain data from the data source through an agent
linkConfig.fetchSize	No	String	Number of data rows obtained each time
linkConfig.commitSize	No	String	Number of data rows submitted in each request
linkConfig.useNative	No	Boolean	Whether to use the local API acceleration function of the database  When creating a MySQL link, you can use the LOAD DATA function of MySQL to accelerate data import and improve the performance of importing data to the MySQL database.
linkConfig.isRds	No	Boolean	Whether RDS is supported. The default value <b>true</b> is used for cloud databases and <b>false</b> is used for other databases.
linkConfig.useSSL	No	Boolean	Whether to enable SSL encrypted transmission for RDS. This parameter is available only when you create a DWS connection.
linkConfig.jdbcProperties	No	Map	Link attribute, which specifies the JDBC connector attributes of the data source. For details about how to configure the link attributes, see the JDBC connector description of the corresponding database.

Parameter	Mandatory	Type	Description
linkConfig.version	No	Enumeration	<p>Oracle database version. This parameter is available only when you create an Oracle link. The options are as follows:</p> <ul style="list-style-type: none"> <li>• <b>HIGH_VERSION</b>: Select this value if the Oracle database version is later than 12.1.</li> <li>• <b>MED_VERSION</b>: Select this value if the Oracle database version is 12.1.</li> <li>• <b>LOW_VERSION</b>: Select this value if the Oracle database version is earlier than 12.1.</li> </ul> <p>If error message "java.sql.SQLException: Protocol violation" is displayed, select another option.</p>
dialect.identifierEnclose	No	String	Reference identifier, which is the delimiter between the referenced table names or column names. For details, see the product documentation of the corresponding database.

### 5.4.1.2 Link to OBS

#### Description

By creating an OBS link, you can extract files from or load files to OBS. Files in CSV, JSON, and binary format are supported.

#### Sample Link

```
{
  "links": [
    {
      "link-config-values": {
        "configs": [
          {
            "inputs": [
              {
                "name": "linkConfig.storageType",
                "value": "OBS"
              }
            ],
            {
```

```

        "name": "linkConfig.server",
        "value": "10.121.16.183"
      },
      {
        "name": "linkConfig.port",
        "value": "443"
      },
      {
        "name": "linkConfig.accessKey",
        "value": "RSO6TTEZMJ6TTFBBAACE"
      },
      {
        "name": "linkConfig.securityKey",
        "value": "Add password here"
      }
    ],
    "name": "linkConfig"
  }
]
},
"name": "obs_link",
"connector-name": "obs-connector"
}
]
}

```

## Link Parameters

Parameter	Mandatory	Type	Description
linkConfig.storageType	Yes	String	Storage class of an object
linkConfig.server	Yes	String	Endpoint of the OBS server. You can enter a bucket-level domain name.
linkConfig.port	Yes	String	Data transmission port. The HTTPS port number is 443 and the HTTP port number is 80.
linkConfig.accessKey	Yes	String	AK
linkConfig.securityKey	Yes	String	SK

### 5.4.1.3 Link to HDFS

#### Description

By creating an HDFS link, you can extract files from or load files to MRS, FusionInsight HD, or Apache Hadoop. Files in CSV, Parquet, and binary formats are supported.

#### Sample Link

```

{
  "links": [

```

```

{
  "link-config-values": {
    "configs": [
      {
        "inputs": [
          {
            "name": "linkConfig.hadoopType",
            "value": "FusionInsight HD"
          },
          {
            "name": "linkConfig.host",
            "value": "10.120.205.143"
          },
          {
            "name": "linkConfig.casPort",
            "value": "20009"
          },
          {
            "name": "linkConfig.port",
            "value": "28443"
          },
          {
            "name": "linkConfig.authType",
            "value": "KERBEROS"
          },
          {
            "name": "linkConfig.user",
            "value": "admin"
          },
          {
            "name": "linkConfig.password",
            "value": "Add password here"
          },
          {
            "name": "linkConfig.runMode",
            "value": "STANDALONE"
          }
        ],
        "name": "linkConfig"
      }
    ]
  },
  "name": "hdfslink",
  "connector-name": "hdfs-connector"
}

```

## Link Parameters

Parameter	Mandatory	Type	Description
linkConfig.hadoopType	Yes	Enumeration	Hadoop type. The options are as follows: <ul style="list-style-type: none"> <li>● <b>MRS</b>: link to HDFS of MRS</li> <li>● <b>FusionInsight HD</b>: link to HDFS of FusionInsight HD</li> <li>● <b>Apache Hadoop</b>: link to HDFS of Apache Hadoop</li> </ul>
linkConfig.uri	No	String	NameNode URI required for the link to Apache Hadoop. The format is <i>ip:port</i> .

Parameter	Mandatory	Type	Description
linkConfig.host	No	String	IP address of Manager required for the link to MRS or FusionInsight HD
linkConfig.port	No	String	Port number of Manager required for the link to FusionInsight HD
linkConfig.casPort	No	String	Port number of CAS Server that connects to FusionInsight HD required for the link to FusionInsight HD
linkConfig.user	No	String	Username for logging in to Manager. This parameter is not required if the cluster configuration is used.
linkConfig.password	No	String	Password for logging in to Manager. This parameter is not required if the cluster configuration is used.
linkConfig.authType	No	Enumeration	Authentication method. The options are as follows: <ul style="list-style-type: none"><li>• <b>Simple</b>: for non-security mode</li><li>• <b>Kerberos</b>: for security mode</li></ul>
linkConfig.principal	No	String	Account <b>principal</b> required for Kerberos authentication. You can contact the administrator to obtain the account. Before using the cluster configuration, you must set this parameter in cluster configuration management.
linkConfig.keytab	No	FileContent	Local absolute path of the <b>keytab</b> file required for Kerberos authentication. You can also contact the administrator to obtain the file. Before using the cluster configuration, you must set this parameter in cluster configuration management.



Parameter	Mandatory	Type	Description
linkConfig.run Mode	No	Enumeration	<p>Running mode of the HDFS link. The options are as follows:</p> <ul style="list-style-type: none"> <li>• <b>EMBEDDED</b>: The link instance runs with CDM. This mode delivers better performance.</li> <li>• <b>STANDALONE</b>: The link instance runs in an independent process. If CDM needs to connect to multiple Hadoop data sources (MRS, Hadoop, or CloudTable) with both Kerberos and Simple authentication methods, <b>STANDALONE</b> prevails. If <b>STANDALONE</b> is selected, CDM can migrate data between HDFSs of multiple MRS clusters.</li> <li>• <b>Agent</b>: The link instance runs on an agent. If <b>Agent</b> is not used, and the CDM cluster connects to two or more clusters with Kerberos authentication enabled and the same realm, only one cluster can be connected in <b>EMBEDDED</b> mode, and the other clusters must be in <b>STANDALONE</b> mode.</li> </ul>
linkConfig.properties	No	Map	<p>Properties. You can add configuration properties of the client. Each property must contain a name and a value.</p>

### 5.4.1.4 Link to HBase

#### Description

By creating an HBase link, you can extract data from or load data to HBase of MRS, FusionInsight HD, and Apache Hadoop.

## Sample Link

```
{
  "links": [
    {
      "link-config-values": {
        "configs": [
          {
            "inputs": [
              {
                "name": "linkConfig.hbaseType",
                "value": "MRS"
              },
              {
                "name": "linkConfig.host",
                "value": "192.168.0.34"
              },
              {
                "name": "linkConfig.user",
                "value": "zephyr"
              },
              {
                "name": "linkConfig.password",
                "value": "Add password here."
              },
              {
                "name": "linkConfig.authType",
                "value": "KERBEROS"
              },
              {
                "name": "linkConfig.serviceType",
                "value": "HDFS"
              },
              {
                "name": "linkConfig.hBaseVersion",
                "value": "HBASE_2_X"
              },
              {
                "name": "linkConfig.runMode",
                "value": "EMBEDDED"
              }
            ],
            "name": "linkConfig"
          }
        ],
        "extended-configs": {
          "name": "linkConfig.extendedFields",
          "value": "eyJL1c2VD9uZmlnUHLpbnNpcGFsIjoiemVwaHlyIn0="
        }
      },
      "name": "mrs_hbase_dlf",
      "connector-name": "hbase-connector"
    }
  ]
}
```

## Link Parameters

Parameter	Mandatory	Type	Description
linkConfig.hbaseType	Yes	Enumeration	HBase type. The options are as follows: <ul style="list-style-type: none"> <li>• <b>CloudTable</b>: link to CloudTable Service (CloudTable)</li> <li>• <b>MRS</b>: link to HBase of MRS</li> <li>• <b>FusionInsight HD</b>: link to HBase of FusionInsight HD</li> <li>• <b>Apache Hadoop</b>: link to HBase of Apache Hadoop</li> </ul>
linkConfig.uri	No	String	NameNode URI required for the link to Apache Hadoop. The format is <i>ip:port</i> .
linkConfig.host	No	String	IP address of Manager required for the link to MRS or FusionInsight HD
linkConfig.port	No	String	Port number of Manager required for the link to FusionInsight HD
linkConfig.casPort	No	String	Port number of CAS Server that connects to FusionInsight HD required for the link to FusionInsight HD
linkConfig.hbaseVersion	Yes	Enumeration	HBase version <ul style="list-style-type: none"> <li>• HBASE_1_X</li> <li>• HBASE_2_X</li> </ul>
linkConfig.username	No	String	Username for logging in to Manager. This parameter is not required if the cluster configuration is used.
linkConfig.password	No	String	Password for logging in to Manager. This parameter is not required if the cluster configuration is used.
linkConfig.authType	No	Enumeration	Authentication method. The options are as follows: <ul style="list-style-type: none"> <li>• <b>Simple</b>: for non-security mode</li> <li>• <b>Kerberos</b>: for security mode</li> </ul>

Parameter	Mandatory	Type	Description
linkConfig.principal	No	String	Account <b>principal</b> required for Kerberos authentication. You can contact the administrator to obtain the account.
linkConfig.keytab	No	FileContent	Local absolute path of the <b>keytab</b> file required for Kerberos authentication. You can also contact the administrator to obtain the file.
linkConfig.serviceType	No	String	Service type Currently, HDFS and HBase are supported.
linkConfig.runMode	No	Enumeration	This parameter is used only when the HBase version is <b>HBase_2_X</b> . Possible values are: <ul style="list-style-type: none"> <li>• <b>EMBEDDED</b>: The link instance runs with CDM. This mode delivers better performance.</li> <li>• <b>STANDALONE</b>: The link instance runs in an independent process. If CDM needs to connect to multiple Hadoop data sources (MRS, Hadoop, or CloudTable) with both Kerberos and Simple authentication methods, <b>STANDALONE</b> prevails. If <b>STANDALONE</b> is selected, CDM can migrate data between HDFSs of multiple MRS clusters.</li> <li>• <b>Agent</b>: The link instance runs on an agent. If <b>Agent</b> is not used, and the CDM cluster connects to two or more clusters with Kerberos authentication enabled and the same realm, only one cluster can be connected in <b>EMBEDDED</b> mode, and the other clusters must be in <b>STANDALONE</b> mode.</li> </ul>
linkConfig.properties	No	Map	Properties. You can add configuration properties of the client. Each property must contain a name and a value.

### 5.4.1.5 Link to CloudTable

#### Description

By creating a CloudTable link, you can extract data from or load data to CloudTable.

#### Sample Link

```
{
  "links": [
    {
      "link-config-values": {
        "configs": [
          {
            "inputs": [
              {
                "name": "linkConfig.hbaseType",
                "value": "CloudTable"
              },
              {
                "name": "linkConfig.zookeeperQuorum",
                "value": "cloudtable-pass-zk2-bae54VGN.cloudtable.com:2181,cloudtable-pass-zk1-
Fu828so2.cloudtable.com:2181"
              },
              {
                "name": "linkConfig.iamAuth",
                "value": "true"
              },
              {
                "name": "linkConfig.cloudtableUser",
                "value": "zane"
              },
              {
                "name": "linkConfig.accessKey",
                "value": "GRC2WR0IxxxxxxYLUW2"
              },
              {
                "name": "linkConfig.securityKey",
                "value": "Add password here"
              },
              {
                "name": "linkConfig.runMode",
                "value": "EMBEDDED"
              }
            ]
          },
          {
            "name": "linkConfig"
          }
        ]
      },
      "name": "cloudtablelink",
      "connector-name": "hbase-connector"
    }
  ]
}
```

## Link Parameters

Parameter	Mandatory	Type	Description
linkConfig.hbaseType	Yes	Enumeration	HBase type. The options are as follows: <ul style="list-style-type: none"> <li>• <b>CloudTable</b>: link to CloudTable</li> <li>• <b>MRS</b>: link to MRS</li> <li>• <b>FusionInsight HD</b>: link to FusionInsight HD</li> <li>• <b>Apache Hadoop</b>: link to Apache Hadoop</li> </ul>
linkConfig.zookeeperQuorum	Yes	String	ZooKeeper link of CloudTable. This parameter is mandatory for the <b>CloudTable</b> link.
linkConfig.iamAuth	Yes	Boolean	If you choose IAM for identity authentication, enter the username, AK, and SK.
linkConfig.runMode	Yes	Enumeration	Running mode of the HBase link. The options are as follows: <ul style="list-style-type: none"> <li>• <b>EMBEDDED</b>: The link instance runs with CDM. This mode delivers better performance.</li> <li>• <b>STANDALONE</b>: The link instance runs in an independent process. If CDM needs to connect to multiple Hadoop data sources (MRS, Hadoop, or CloudTable) with both Kerberos and Simple authentication methods, <b>STANDALONE</b> prevails.</li> </ul>
linkConfig.cloudtableUser	Yes	String	Username for accessing the CloudTable cluster
linkConfig.accessKey	Yes	String	AK for accessing the CloudTable cluster
linkConfig.securityKey	Yes	String	SK for accessing the CloudTable cluster

### 5.4.1.6 Link to Hive

#### Description

By creating a Hive link, you can extract data from or load data to Hive of MRS.

## Sample Link

```
{
  "links": [
    {
      "link-config-values": {
        "configs": [
          {
            "inputs": [
              {
                "name": "linkConfig.host",
                "value": "10.120.205.230"
              },
              {
                "name": "linkConfig.authType",
                "value": "KERBEROS"
              },
              {
                "name": "linkConfig.user",
                "value": "cdm"
              },
              {
                "name": "linkConfig.password",
                "value": "Add password here"
              }
            ],
            "name": "linkConfig"
          }
        ],
        "name": "hive_link",
        "connector-name": "hive-connector"
      }
    }
  ]
}
```

## Link Parameters

Parameter	Mandatory	Type	Description
linkConfig.host	Yes	String	IP address of MRS Manager
linkConfig.authType	Yes	Enumeration	Authentication method of MRS. The options are as follows: <ul style="list-style-type: none"> <li>● <b>SIMPLE</b>: for non-security mode</li> <li>● <b>KERBEROS</b>: for security mode</li> </ul>
linkConfig.principal	No	String	Account <b>principal</b> required for Kerberos authentication. You can contact the administrator to obtain the account. Before using the cluster configuration, you must set this parameter in cluster configuration management.

Parameter	Mandatory	Type	Description
linkConfig.keytab	No	FileContent	Local absolute path of the <b>keytab</b> file required for Kerberos authentication. You can also contact the administrator to obtain the file. Before using the cluster configuration, you must set this parameter in cluster configuration management.
linkConfig.hiveVersion	Yes	Enumeration	Hive version <ul style="list-style-type: none"><li>• HIVE_1_X</li><li>• HIVE_3_X</li></ul>
linkConfig.user	No	String	Username for logging in to Manager. This parameter is not required if the cluster configuration is used.
linkConfig.password	No	String	Password for logging in to Manager. This parameter is not required if the cluster configuration is used.
linkConfig.uri	No	String	NameNode URI required for the link to Apache Hadoop. The format is <i>ip:port</i> .
linkConfig.hiveMsUris	No	String	Hive metadata address for connecting to Apache Hadoop. For details, see the <b>hive.metastore.uris</b> configuration item. Example: <code>thrift://host-192-168-1-212:9083</code>
linkConfig.obsSupport	Yes	Boolean	The server must support OBS storage. When creating a Hive table, you can store the table in OBS.



Parameter	Mandatory	Type	Description
linkConfig.runMode	Yes	Enumeration	<p>This parameter is used only when the Hive version is <b>HIVE_3_X</b>. Possible values are:</p> <ul style="list-style-type: none"> <li>• <b>EMBEDDED</b>: The link instance runs with CDM. This mode delivers better performance.</li> <li>• <b>STANDALONE</b>: The link instance runs in an independent process. If CDM needs to connect to multiple Hadoop data sources (MRS, Hadoop, or CloudTable) with both Kerberos and Simple authentication modes, select <b>STANDALONE</b> or configure different agents.</li> </ul> <p>Note: The <b>STANDALONE</b> mode is used to solve the version conflict problem. If the connector versions of the source and destination ends of the same link are different, a JAR file conflict occurs. In this case, you need to place the source or destination end in the <b>STANDALONE</b> process to prevent the migration failure caused by the conflict.</p>
linkConfig.accessKey	No	String	AK This parameter is mandatory when OBS is supported.
linkConfig.securityKey	No	String	SK This parameter is mandatory when OBS is supported.
linkConfig.properties	No	Map	Properties. You can add configuration properties of the client. Each property must contain a name and a value.

### 5.4.1.7 Link to an FTP or SFTP Server

#### Description

By creating an FTP or SFTP link, you are able to extract files from or load files to the FTP or SFTP server. Files in CSV, JSON, and binary format are supported.

#### Sample Link

```
{
  "links": [
```

```

{
  "link-config-values": {
    "configs": [
      {
        "inputs": [
          {
            "name": "linkConfig.server",
            "value": "10.120.85.167"
          },
          {
            "name": "linkConfig.port",
            "value": "22"
          },
          {
            "name": "linkConfig.username",
            "value": "username"
          },
          {
            "name": "linkConfig.password",
            "value": "Add password here"
          }
        ],
        "name": "linkConfig"
      }
    ],
    "name": "sftp_link",
    "connector-name": "sftp-connector"
  }
}

```

## Link Parameters

Parameters for creating the FTP or SFTP link are the same.

Parameter	Mandatory	Type	Description
linkConfig.server	Yes	String	IP address of the FTP or SFTP server
linkConfig.port	Yes	String	Port number of the FTP or SFTP server
linkConfig.username	Yes	String	Username for logging in to the FTP or SFTP server
linkConfig.password	Yes	String	Password for logging in to the FTP or SFTP server

### 5.4.1.8 Link to MongoDB

#### Description

By creating a MongoDB link, you can extract data from or load data to MongoDB.

#### Sample Link

```

{
  "links": [

```

```

{
  "link-config-values": {
    "configs": [
      {
        "inputs": [
          {
            "name": "linkConfig.serverList",
            "value": "10.120.84.149:27017"
          },
          {
            "name": "linkConfig.database",
            "value": "DB_name"
          },
          {
            "name": "linkConfig.userName",
            "value": "username"
          },
          {
            "name": "linkConfig.password",
            "value": "Add password here"
          }
        ],
        "name": "linkConfig"
      }
    ],
    "name": "mongo_link",
    "connector-name": "mongodb-connector"
  }
}

```

## Link Parameters

Parameter	Mandatory	Type	Description
linkConfig.serverList	Yes	String	Server IP address list in <i>host1:port1;host2:port2</i> format
linkConfig.database	Yes	String	Name of the MongoDB database
linkConfig.userName	Yes	String	Username for logging in to the MongoDB server
linkConfig.password	Yes	String	Password for logging in to the MongoDB server

### 5.4.1.9 Link to Redis/DCS (to Be Brought Offline)

#### Description

By creating a Redis link, you can extract data from or load data to the Redis server. By creating a DCS link, you can load data to Data Cache Service (DCS), but not extract data for DCS. The data can be stored in string or hash format.

#### Sample Link

```

{
  "links": [

```

```
{
  "link-config-values": {
    "configs": [
      {
        "inputs": [
          {
            "name": "linkConfig.deploymentMode",
            "value": "Cluster"
          },
          {
            "name": "linkConfig.serverlist",
            "value": "10.120.84.149:7300"
          },
          {
            "name": "linkConfig.password",
            "value": "Add password here"
          },
          {
            "name": "linkConfig.dbIndex",
            "value": "0"
          }
        ],
        "name": "linkConfig"
      }
    ],
    "name": "redis_link",
    "connector-name": "redis-connector"
  }
}
```

## Link Parameters

Parameter	Mandatory	Type	Description
linkConfig.deploymentMode	Yes	Enumeration	Redis deployment mode. The options are as follows: <ul style="list-style-type: none"><li>● <b>Single</b>: single-node deployment</li><li>● <b>Cluster</b>: cluster deployment</li></ul>
linkConfig.serverlist	Yes	String	Server IP address list in <i>host1:port1;host2:port2</i> format
linkConfig.password	Yes	String	Password for logging in to the Redis server
linkConfig.dbIndex	Yes	String	Redis database index

### 5.4.1.10 Link to Kafka

#### Description

By creating a Kafka link, you are able to access open source Kafka and migrate data from Kafka to other data sources as required. Currently, only data export from Kafka is supported.

## Sample Link

```
{
  "links": [
    {
      "link-config-values": {
        "configs": [
          {
            "inputs": [
              {
                "name": "linkConfig.hadoopType",
                "value": "MRS"
              },
              {
                "name": "linkConfig.host",
                "value": "192.168.1.147"
              },
              {
                "name": "linkConfig.user",
                "value": "liuhuan1"
              },
              {
                "name": "linkConfig.password",
                "value": "Add password here."
              },
              {
                "name": "linkConfig.authType",
                "value": "KERBEROS"
              }
            ],
            "name": "linkConfig"
          }
        ],
        "extended-configs": {
          "name": "linkConfig.extendedFields",
          "value": "e30="
        }
      },
      "name": "mrs_kafka_link",
      "connector-name": "kafka-connector"
    }
  ]
}
```

## Link Parameters

Parameter	Mandatory	Type	Description
linkConfig.hadoopType	Yes	Enumeration	Hadoop type. The options are as follows: <ul style="list-style-type: none"> <li>• <b>MRS</b>: link to Kafka of MRS</li> <li>• <b>Apache Kafka</b>: link to Kafka of Apache</li> </ul>
linkConfig.brokerList	Yes	String	This parameter is mandatory for Apache Kafka links. Kafka broker list in <i>host1:port1,host2:port2</i> format

Parameter	Mandatory	Type	Description
linkConfig.host	Yes	String	Floating IP address of MRS Manager. Click <b>Select</b> next to the <b>Manager IP</b> text box to select an MRS cluster. CDM automatically fills in the authentication information.
linkConfig.user	Yes	String	Username used for logging in to MRS Manager.
linkConfig.password	Yes	String	Password used for logging in to MRS Manager.
linkConfig.authType	Yes	Enumeration	Authentication method. The options are as follows: <ul style="list-style-type: none"><li>• <b>Simple</b>: for non-security mode</li><li>• <b>Kerberos</b>: for security mode</li></ul>
linkConfig.properties	No	Map	Properties. You can add configuration properties of the client. Each property must contain a name and a value.

### 5.4.1.11 Link to Elasticsearch/Cloud Search Service

#### Description

By creating an Elasticsearch link, you can extract data from or load data to the Elasticsearch server or Cloud Search Service.

#### Sample Link

```
{
  "links": [
    {
      "link-config-values": {
        "configs": [
          {
            "inputs": [
              {
                "name": "linkConfig.host",
                "value": "192.168.0.50:9200;192.168.0.62:9200"
              },
              {
                "name": "linkConfig.safemode",
                "value": "true"
              },
              {
                "name": "linkConfig.user",
                "value": "admin"
              },
              {
                "name": "linkConfig.password",
                "value": "Add password here."
              }
            ]
          }
        ]
      }
    }
  ]
}
```

```

    },
    {
      "name": "linkConfig.linkType",
      "value": "CSS"
    }
  ],
  "name": "linkConfig"
}
],
"extended-configs": {
  "name": "linkConfig.extendedFields",
  "value": "eyJodHRwc0FjY2VzcyI6InRydWUifQ=="
}
},
"name": "css-cdm-autotest-nodel",
"connector-name": "elasticsearch-connector"
}
]
}

```

## Link Parameters

Parameter	Mandatory	Type	Description
linkConfig.host	Yes	String	List of one or more Elasticsearch servers, including the port number. The format is <i>ip:port</i> . Use semicolons (;) to separate multiple IP addresses. For example, <b>192.168.0.1:9200;192.168.0.2:9200</b> .
linkConfig.safeMode	No	Boolean	If you select the security authentication mode, you must enter the username and password, and choose whether to enable HTTPS access.
linkConfig.username	No	String	For Elasticsearch that supports username and password authentication, configure the username and password when creating a link.
linkConfig.password	No	String	Password for accessing the Elasticsearch server
linkConfig.linkType	Yes	String	Link type, which is used to distinguish the Elasticsearch link from the Cloud Search Service link

### 5.4.1.12 Link to DLI

#### Description

By creating a DLI link, you can import data to DLI. Currently, you cannot export data from DLI using CDM.

#### Sample Link

```
{
  "links": [
    {
      "link-config-values": {
        "configs": [
          {
            "inputs": [
              {
                "name": "linkConfig.ak",
                "value": "GRC2WR0IDC6NGROYLWU2"
              },
              {
                "name": "linkConfig.sk",
                "value": "Add password here"
              },
              {
                "name": "linkConfig.region",
                "value": "eu-west-101"
              },
              {
                "name": "linkConfig.projectId",
                "value": "c48475ce8e174a9f775706a3d5ebe2"
              }
            ],
            "name": "linkConfig"
          }
        ],
        "name": "dli",
        "connector-name": "dli-connector"
      }
    }
  ]
}
```

#### Link Parameters

Parameter	Mandatory	Type	Description
linkConfig.ak	Yes	String	AK for accessing the DLI database
linkConfig.sk	Yes	String	SK for accessing the DLI database
linkConfig.region	Yes	String	Region where DLI resides
linkConfig.projectId	Yes	String	Project ID of the DLI service



### 5.4.1.13 Link to DMS Kafka

#### Description

By creating a DMS Kafka link, you can connect to Kafka Basic or Kafka Platinum on DMS. Currently, you can only export data from DMS Kafka to Cloud Search Service.

#### Sample Link

```
{
  "links": [
    {
      "link-config-values": {
        "configs": [
          {
            "inputs": [
              {
                "name": "linkConfig.kafkaType",
                "value": "Platinum"
              },
              {
                "name": "linkConfig.brokerList",
                "value": "100.85.121.112:9094,100.85.220.134:9094,100.85.127.232:9094"
              },
              {
                "name": "linkConfig.isPlatinumInstance",
                "value": "false"
              }
            ]
          },
          {
            "name": "linkConfig"
          }
        ],
        "extended-configs": {
          "name": "linkConfig.extendedFields",
          "value": "e30="
        }
      },
      "name": "dms_kafka",
      "connector-name": "dms-kafka-connector"
    }
  ]
}
```

#### Link Parameters

Parameter	Mandatory	Type	Description
linkConfig.kafkaType	Yes	Enumeration	DMS Kafka edition. Currently, only the Platinum edition is available. <ul style="list-style-type: none"><li>● <b>Basic</b>: DMS Kafka Basic</li><li>● <b>Platinum</b>: DMS Kafka Platinum</li></ul>
linkConfig.brokerList	Yes	String	The DMS endpoint is in <b>host1:port1,host2:port2</b> format.

Parameter	Mandatory	Type	Description
linkConfig.isPlatinumInstance	Yes	Boolean	Whether to enable SSL authentication when a client connects to a Kafka premium instance. If Kafka SASL_SSL is enabled, data will be encrypted before transmission for higher security, but performance will suffer.
linkConfig.user	No	String	Username for connecting to DMS Kafka. This parameter is displayed when <b>Kafka SASL_SSL</b> is enabled.
linkConfig.password	No	String	Password for connecting to DMS Kafka. This parameter is displayed when <b>Kafka SASL_SSL</b> is enabled.

## 5.4.2 Source Job Parameters

### 5.4.2.1 From a Relational Database

#### Sample JSON File

```
"from-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "fromJobConfig.useSql",
          "value": "false"
        },
        {
          "name": "fromJobConfig.schemaName",
          "value": "rf_database"
        },
        {
          "name": "fromJobConfig.tableName",
          "value": "rf_from"
        },
        {
          "name": "fromJobConfig.columnList",
          "value": "AA&BB"
        },
        {
          "name": "fromJobConfig.incrMigration",
          "value": "false"
        }
      ]
    }
  ]
}
```

```

        "name": "fromJobConfig.createOutTable",
        "value": "false"
      }
    ],
    "name": "fromJobConfig"
  }
]
}

```

## Parameter Description

Parameter	Mandatory	Type	Description
fromJobConfig.useSql	Yes	Boolean	Whether to use the customized SQL statement to export data when exporting relational database data
fromJobConfig.sql	No	String	Customized SQL statement. CDM executes the SQL statement to export data.
fromJobConfig.schemaName	Yes	String	Database mode or tablespace. For example, <b>public</b> . <b>NOTE</b> The parameter value can contain wildcard characters (*), which is used to export all databases whose names start with a certain prefix or end with a certain suffix. The examples are as follows: <ul style="list-style-type: none"> <li>• <b>SCHEMA*</b> indicates that all databases whose names starting with <b>SCHEMA</b> are exported.</li> <li>• <b>*SCHEMA</b> indicates that all databases whose names ending with <b>SCHEMA</b> are exported.</li> <li>• <b>*SCHEMA*</b> indicates that all databases whose names containing <b>SCHEMA</b> are exported.</li> </ul>

Parameter	Mandatory	Type	Description
fromJobConfig.tableName	Yes	String	<p>Table name. For example, <b>TBL_EXAMPLE</b>.</p> <p><b>NOTE</b> The table name can contain wildcard characters (*), which is used to export all tables whose names start with a certain prefix or end with a certain suffix. The number and types of fields in the tables must be the same. The examples are as follows:</p> <ul style="list-style-type: none"> <li>• <b>table*</b> indicates that all tables whose names starting with <b>table</b> are exported.</li> <li>• <b>*table</b> indicates that all tables whose names ending with <b>table</b> are exported.</li> <li>• <b>*table*</b> indicates that all tables whose names containing <b>table</b> are exported.</li> </ul>
fromJobConfig.whereClause	No	String	<p>WHERE clause used to specify the data to be extracted. If no WHERE clause is configured, the entire table will be extracted. For example, <b>age &gt; 18 and age &lt;= 60</b>.</p>
fromJobConfig.columnList	No	String	<p>List of fields to be extracted. Use <b>&amp;</b> to separate field names. For example, <b>id&amp;gid&amp;name</b>.</p>
fromJobConfig.partitionColumn	No	String	<p>Partition field to be extracted, by which a job is split in multiple sub-jobs executed concurrently. For example, <b>id</b>.</p>
fromJobConfig.usePartition	No	Boolean	<p>When data is exported from the Oracle database, data can be extracted from each partition in a partitioned table. When this function is enabled, you can use the <b>fromJobConfig.partitionList</b> parameter to specify the partitions in the Oracle table. This function does not support non-partitioned tables.</p>

Parameter	Mandatory	Type	Description
fromJobConfig.partitionList	No	String	Oracle table partitions to be migrated. Separate multiple partitions with ampersands (&). If you do not set this parameter, all partitions will be migrated.

### 5.4.2.2 From Object Storage

#### Sample JSON File

```
"from-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "fromJobConfig.bucketName",
          "value": "cdm-est"
        },
        {
          "name": "fromJobConfig.inputDirectory",
          "value": "/obsfrom/varchar.txt"
        },
        {
          "name": "fromJobConfig.inputFormat",
          "value": "CSV_FILE"
        },
        {
          "name": "fromJobConfig.columnList",
          "value": "1&2&3"
        },
        {
          "name": "fromJobConfig.fieldSeparator",
          "value": ","
        },
        {
          "name": "fromJobConfig.quoteChar",
          "value": "false"
        },
        {
          "name": "fromJobConfig.regexSeparator",
          "value": "false"
        },
        {
          "name": "fromJobConfig.firstRowAsHeader",
          "value": "false"
        },
        {
          "name": "fromJobConfig.encodeType",
          "value": "UTF-8"
        },
        {
          "name": "fromJobConfig.fromCompression",
          "value": "NONE"
        },
        {
          "name": "fromJobConfig.splitType",
          "value": "FILE"
        }
      ],
      "name": "fromJobConfig"
    }
  ]
}
```

```

    }
  ]
}

```

## Parameter Description

Parameter	Mandatory	Type	Description
fromJobConfig.bucketName	Yes	String	Bucket name
fromJobConfig.inputDirectory	Yes	String	Path for storing files to be extracted. You can enter a maximum of 50 file paths, which are separated by vertical bars ( ). You can also customize the separators. For example, <b>FROM/example.csv FROM/b.txt</b> .
fromJobConfig.inputFormat	Yes	Enumeration	File format required for data transmission. Currently, the following file formats are supported: <ul style="list-style-type: none"> <li>• <b>CSV_FILE</b>: CSV format, used to migrate files to data tables</li> <li>• <b>JSON_FILE</b>: JSON format, used to migrate files to data tables</li> <li>• <b>BINARY_FILE</b>: Files (even not in binary format) will be directly transferred without resolution. It is applicable to file copy.</li> </ul> If you select <b>BINARY_FILE</b> , the migration destination must also be a file system.
fromJobConfig.lineSeparator	No	String	Line feed character in the file. For example, \n. By default, \n, \r, or \r\n is automatically identified.
fromJobConfig.columnList	No	String	Numbers of columns to be extracted. Use & to separate column numbers in ascending order. For example, <b>1&amp;3&amp;5</b> .

Parameter	Mandatory	Type	Description
fromJobConfig.lineSeparator	No	String	Line feed character. This parameter is valid only when the file format is <b>CSV_FILE</b> . The default value is <code>\r\n</code> .
fromJobConfig.regexSeparator	No	Boolean	Whether to use the regular expression to separate fields. This parameter is valid only when the file format is <b>CSV_FILE</b> .
fromJobConfig.regex	No	String	Regular expression. This parameter is valid only when the regular expression is used to separate fields.
fromJobConfig.fieldSeparator	No	String	Field delimiter. This parameter is valid only when the file format is <b>CSV_FILE</b> . The default value is <code>,</code> .
fromJobConfig.quoteChar	No	Boolean	Whether to use the encircling symbol. If this parameter is set to <b>true</b> , the field delimiters in the encircling symbol are regarded as a part of the string value. Currently, the default encircling symbol of CDM is double quotation mark ( <code>"</code> ).
fromJobConfig.firstRowAsHeader	No	Boolean	Whether to regard the first line as the heading line. This parameter is valid only when the file format is <b>CSV_FILE</b> . When you migrate a CSV file to a table, CDM writes all data to the table by default. If this parameter is set to <b>true</b> , CDM uses the first line of the CSV file as the heading line and does not write the line to the destination table.

Parameter	Mandatory	Type	Description
fromJobConfig.fromCompression	No	Enumeration	Compression format. This parameter is valid only when the file format is <b>CSV_FILE</b> or <b>JSON</b> . The options are as follows: <ul style="list-style-type: none"> <li>• <b>NONE</b>: Files in all formats are transferred.</li> <li>• <b>GZIP</b>: Files in gzip format are transferred.</li> <li>• <b>ZIP</b>: Files in Zip format are transferred.</li> </ul>
fromJobConfig.jsonReferenceNode	No	String	Reference node. This parameter is valid when the file format is <b>JSON_FILE</b> . Resolve data on the JSON node. If the data corresponding to the node is a JSON array, the system extracts data from the array in the same mode. Nested JSON nodes are separated by periods (.). For example, <b>data.list</b> .
fromJobConfig.encodingType	No	String	Encoding type. For example, <b>UTF_8</b> or <b>GBK</b> .
fromJobConfig.fromFileOpType	No	Enumeration	Source file processing mode. After a job is completed, operations on the source file can be performed. The source file can be renamed or deleted.
fromJobConfig.useMarkerFile	No	Boolean	Whether to start a job by a marker file. A job is started only when a marker file for starting the job exists in the source path. Otherwise, the job will be suspended for a period of time specified by <b>fromJobConfig.waitTime</b> .



Parameter	Mandatory	Type	Description
fromJobConfig.markerFile	No	String	Name of the marker file for starting a job. After a marker file is specified, the task is executed only when the file exists in the source path. If the marker file is not specified, this function is disabled by default. For example, <b>ok.txt</b> .
fromJobConfig.waitTime	No	String	Period of waiting for a marker file. If you set <b>Start Job by Marker File</b> to <b>Yes</b> but no marker file exists in the source path, the job fails upon suspension timeout.  If you set this parameter to <b>0</b> and no marker file exists in the source path, the job will fail immediately.  Unit: second
fromJobConfig.filterType	No	Enumeration	Filter type. Possible values are as follows: <ul style="list-style-type: none"> <li>• <b>WILDCARD</b>: Enter a wildcard character to filter paths or files. CDM will migrate the paths or files that meet the filter condition.</li> <li>• <b>TIME</b>: Specify a time filter. CDM will migrate the files modified after the specified time point.</li> </ul>
fromJobConfig.pathFilter	No	String	Path filter, which is configured when the filter type is <b>WILDCARD</b> . It is used to filter the file directories. For example, <b>*input</b> .

Parameter	Mandatory	Type	Description
fromJobConfig.fileFilter	No	String	File filter, which is configured when the filter type is <b>WILDCARD</b> . It is used to filter files in the specified directory. Use commas (,) to separate multiple files. For example, <b>*.csv,*.txt</b> .
fromJobConfig.startTime	No	String	<p>If you set <b>Filter Type</b> to <b>Time Filter</b>, and specify a point in time for this parameter, only the files modified after the specified time are transferred. The time format must be <i>yyyy-MM-dd HH:mm:ss</i>.</p> <p>This parameter can be set to a macro variable of date and time. For example, <b>\${timestamp(dateformat(yyy-MM-dd HH:mm:ss,-90,DAY))}</b> indicates that only files generated within the latest 90 days are migrated.</p>
fromJobConfig.endTime	No	String	<p>If you set <b>Filter Type</b> to <b>Time Filter</b>, and specify a point in time for this parameter, only the files modified before the specified time are transferred. The time format must be <i>yyyy-MM-dd HH:mm:ss</i>.</p> <p>This parameter can be set to a macro variable of date and time. For example, <b>\${timestamp(dateformat(yyy-MM-dd HH:mm:ss))}</b> indicates that only the files whose modification time is earlier than the current time are migrated.</p>

Parameter	Mandatory	Type	Description
fromJobConfig.fileSeparator	No	String	File separator. If you enter multiple file paths in <b>fromJobConfig.inputDirectory</b> , CDM uses the file separator to separate files. The default value is  .
fromJobConfig.decryption	No	Enumeration	Whether to decrypt the encrypted file before export and the decryption method. The options are as follows: <ul style="list-style-type: none"> <li>• <b>NONE</b>: Do not decrypt but directly export the file.</li> <li>• <b>AES-256-GCM</b>: Use the AES-256-GCM (NoPadding) algorithm to decrypt the file and then export the file.</li> </ul>
fromJobConfig.dek	No	String	Data decryption key. The key is a string of 64-bit hexadecimal numbers and must be the same as the data encryption key <b>toJobConfig.dek</b> configured during encryption. If the encryption and decryption keys are inconsistent, the system does not report an exception, but the decrypted data is incorrect.
fromJobConfig.iv	No	String	Initialization vector required for decryption. The initialization vector is a string of 32-bit hexadecimal numbers and must be the same as the initialization vector <b>toJobConfig.iv</b> configured during encryption. If the initialization vectors are inconsistent, the system does not report an exception, but the decrypted data is incorrect.

Parameter	Mandatory	Type	Description
fromJobConfig.md5FileSuffix	No	String	Check whether the files extracted by CDM are consistent with those in the migration source.

### 5.4.2.3 From HDFS

#### Sample JSON File

```
"from-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "fromJobConfig.inputDirectory",
          "value": "/hdfsfrom/from_hdfs_est.csv"
        },
        {
          "name": "fromJobConfig.inputFormat",
          "value": "CSV_FILE"
        },
        {
          "name": "fromJobConfig.columnList",
          "value": "1"
        },
        {
          "name": "fromJobConfig.jsonType",
          "value": "JSON_OBJECT"
        },
        {
          "name": "fromJobConfig.fieldSeparator",
          "value": ","
        },
        {
          "name": "fromJobConfig.quoteChar",
          "value": "false"
        },
        {
          "name": "fromJobConfig.regexSeparator",
          "value": "false"
        },
        {
          "name": "fromJobConfig.firstRowAsHeader",
          "value": "false"
        },
        {
          "name": "fromJobConfig.encodeType",
          "value": "UTF-8"
        },
        {
          "name": "fromJobConfig.fromCompression",
          "value": "NONE"
        },
        {
          "name": "fromJobConfig.compressedFileSuffix",
          "value": ""
        },
        {
          "name": "fromJobConfig.splitType",
          "value": "FILE"
        }
      ]
    }
  ]
}
```

```

    "name": "fromJobConfig.fromFileOpType",
    "value": "DO_NOTHING"
  },
  {
    "name": "fromJobConfig.useMarkerFile",
    "value": "false"
  },
  {
    "name": "fromJobConfig.fileSeparator",
    "value": "|"
  },
  {
    "name": "fromJobConfig.filterType",
    "value": "NONE"
  }
],
"name": "fromJobConfig"
}
]
}

```

### Parameter Description

- HDFS job parameter description

Parameter	Mandatory	Type	Description
fromJobConfig.inputDirectory	Yes	String	Path for storing data to be extracted. For example, / <b>data_dir</b> .
fromJobConfig.inputFormat	Yes	Enumeration	File format required for data transmission. Currently, the following file formats are supported: <ul style="list-style-type: none"> <li>• <b>CSV_FILE</b>: CSV format</li> <li>• <b>PARQUET_FILE</b>: Parquet format</li> <li>• <b>BINARY_FILE</b>: binary format</li> </ul> If you select <b>BINARY_FILE</b> , the migration destination must also be a file system.
fromJobConfig.columnList	No	String	Numbers of columns to be extracted. Use <b>&amp;</b> to separate column numbers in ascending order. For example, <b>1&amp;3&amp;5</b> .
fromJobConfig.lineSeparator	No	String	Line feed character. This parameter is valid only when the file format is <b>CSV_FILE</b> . The default value is <b>\r\n</b> .

Parameter	Mandatory	Type	Description
fromJobConfig.fieldSeparator	No	String	Field delimiter. This parameter is valid only when the file format is <b>CSV_FILE</b> . The default value is ,.
fromJobConfig.encodeType	No	String	Encoding type. For example, <b>UTF_8</b> or <b>GBK</b> .
fromJobConfig.firstRowAsHeader	No	Boolean	Whether to regard the first line as the heading line. This parameter is valid only when the file format is <b>CSV_FILE</b> . When you migrate a CSV file to a table, CDM writes all data to the table by default. If this parameter is set to <b>true</b> , CDM uses the first line of the CSV file as the heading line and does not write the line to the destination table.
fromJobConfig.fromCompression	No	Enumeration	Compression format. Only the source files in specified compression format are transferred. <b>NONE</b> indicates files in all formats are transferred.

Parameter	Mandatory	Type	Description
fromJobConfig. splitType	No	Enumeration	<p>Whether to split files by file or size. If HDFS files are split, each shard is regarded as a file.</p> <ul style="list-style-type: none"> <li>• <b>FILE:</b> Split files by file quantity. If there are 10 files and <b>throttlingConfig.numExtractors</b> is set to <b>5</b>, each shard consists of two files.</li> <li>• <b>SIZE:</b> Split files by file size. Files will not be split for balance. Suppose there are 10 files, among which nine are 10 MB and one is 200 MB in size. If <b>throttlingConfig.numExtractors</b> is set to <b>2</b>, two shards will be created, one for processing the nine 10 MB files, the other for processing the 200 MB file.</li> </ul>
fromJobConfig. fromFileOperation	No	Enumeration	<p>Source file processing mode. After a job is completed, operations on the source file can be performed. The source file can be renamed or deleted.</p>
fromJobConfig. markerFile	No	String	<p>Name of the marker file for starting a job. After a marker file is specified, the task is executed only when the file exists in the source path. If the marker file is not specified, this function is disabled by default. For example, <b>ok.txt</b>.</p>

Parameter	Mandatory	Type	Description
fromJobConfig.filterType	No	Enumeration	Filter type. Possible values are as follows: <ul style="list-style-type: none"> <li>• <b>WILDCARD</b>: Enter a wildcard character to filter paths or files. CDM will migrate the paths or files that meet the filter condition.</li> <li>• <b>TIME</b>: Specify a time filter. CDM will migrate the files modified after the specified time point.</li> </ul>
fromJobConfig.pathFilter	No	String	Path filter, which is configured when the filter type is <b>WILDCARD</b> . It is used to filter the file directories. For example, <b>*input</b> .
fromJobConfig.fileFilter	No	String	File filter, which is configured when the filter type is <b>WILDCARD</b> . It is used to filter files in the specified directory. Use commas (,) to separate multiple files. For example, <b>*.csv,*.txt</b> .
fromJobConfig.startTime	No	String	If you set <b>Filter Type</b> to <b>Time Filter</b> , and specify a point in time for this parameter, only the files modified after the specified time are transferred. The time format must be <i>yyyy-MM-dd HH:mm:ss</i> .  This parameter can be set to a macro variable of date and time. For example, <b>\$ {timestamp(dateformat(yyyy-MM-dd HH:mm:ss,-90,DAY))}</b> indicates that only files generated within the latest 90 days are migrated.



Parameter	Mandatory	Type	Description
fromJobConfig.endTime	No	String	<p>If you set <b>Filter Type</b> to <b>Time Filter</b>, and specify a point in time for this parameter, only the files modified before the specified time are transferred. The time format must be <i>yyyy-MM-dd HH:mm:ss</i>.</p> <p>This parameter can be set to a macro variable of date and time. For example, <b>\$ {timestamp(dateformat(yyyy-MM-dd HH:mm:ss))}</b> indicates that only the files whose modification time is earlier than the current time are migrated.</p>
fromJobConfig.createSnapshot	No	Boolean	<p>If this parameter is set to <b>true</b>, CDM creates a snapshot for the source directory to be migrated (the snapshot cannot be created for a single file) before it reads files from HDFS. Then CDM migrates the data in the snapshot.</p> <p>Only the HDFS administrator can create a snapshot. After the CDM job is completed, the snapshot is deleted.</p>
fromJobConfig.formats	No	Data structure	<p>Time format. This parameter is mandatory only when <b>fromJobConfig.inputFormat</b> is set to <b>CSV_FILE</b> and the time field exists in the file. For details, see <a href="#">Description of the fromJobConfig.formats parameter</a>.</p>

Parameter	Mandatory	Type	Description
fromJobConfig.deryption	No	Enumeration	<p>This parameter is available only when <b>fromJobConfig.inputFormat</b> is set to <b>BINARY_FILE</b>. It specifies whether to decrypt the encrypted file before export, and the decryption method. The options are as follows:</p> <ul style="list-style-type: none"> <li>• <b>NONE</b>: Do not decrypt but directly export the file.</li> <li>• <b>AES-256-GCM</b>: Use the AES-256-GCM (NoPadding) algorithm to decrypt the file and then export the file.</li> </ul>
fromJobConfig.dek	No	String	<p>Data decryption key. The key is a string of 64-bit hexadecimal numbers and must be the same as the data encryption key <b>toJobConfig.dek</b> configured during encryption. If the encryption and decryption keys are inconsistent, the system does not report an exception, but the decrypted data is incorrect.</p>
fromJobConfig.iv	No	String	<p>Initialization vector required for decryption. The initialization vector is a string of 32-bit hexadecimal numbers and must be the same as the initialization vector <b>toJobConfig.iv</b> configured during encryption. If the initialization vectors are inconsistent, the system does not report an exception, but the decrypted data is incorrect.</p>

- Description of the **fromJobConfig.formats** parameter

Parameter	Mandatory	Type	Description
name	Yes	String	Column number. For example, <b>1</b> .
value	Yes	String	Time format. For example, <i>yyyy-MM-dd</i> .

## 5.4.2.4 From Hive

### Sample JSON File

```
"from-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "fromJobConfig.hive",
          "value": "hive"
        },
        {
          "name": "fromJobConfig.database",
          "value": "rf_database"
        },
        {
          "name": "fromJobConfig.table",
          "value": "rf_from"
        },
        {
          "name": "fromJobConfig.columnList",
          "value": "tiny&small&int&integer&bigint&float&double&timestamp&char&varchar&text"
        }
      ],
      "name": "fromJobConfig"
    }
  ]
}
```

### Parameter Description

Parameter	Mandatory	Type	Description
fromJobConfig.hive	No	String	Data source to be extracted. If the data source is Hive, set this parameter to <b>hive</b> .
fromJobConfig.database	No	String	Database from which data is extracted. For example, <b>default</b> .
fromJobConfig.table	Yes	String	Name of the table from which data is extracted. For example, <b>cdm</b> .
fromJobConfig.columnList	No	String	Numbers of columns to be extracted. Use <b>&amp;</b> to separate column numbers in ascending order. For example, <b>1&amp;3&amp;5</b> .

### 5.4.2.5 From HBase/CloudTable

#### Sample JSON File

```
"from-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "fromJobConfig.table",
          "value": "rf_from"
        },
        {
          "name": "fromJobConfig.columnFamily",
          "value": "rowkey&f"
        },
        {
          "name": "fromJobConfig.columns",
          "value": "rowkey:rowkey&f_small"
        },
        {
          "name": "fromJobConfig.formats",
          "value": {
            "f_date": "yyyy-MM-dd",
            "f_timestamp": "yyyy-MM-dd HH:mm:ss"
          }
        }
      ],
      "name": "fromJobConfig"
    }
  ]
}
```

#### Parameter Description

- HBase/CloudTable job parameter description

Parameter	Mandatory	Type	Description
fromJobConfig.table	Yes	String	Name of the table from which data is extracted. For example, <b>cdm</b> .
fromJobConfig.columnFamilies	No	String	Column family to which the data to be extracted belongs
fromJobConfig.columns	No	String	Columns to be extracted. Use <b>&amp;</b> to separate column numbers and <b>:</b> to separate column families and columns. For example, <b>cf1:c1&amp;cf2:c2</b> .
fromJobConfig.isSplit	No	Boolean	Whether to split the rowkey. For example, <b>true</b> .

Parameter	Mandatory	Type	Description
fromJobConfig.delimiter	No	String	Delimiter used for splitting rowkeys. If this parameter is not set, row keys will not be split. For example, vertical bars ( ).
fromJobConfig.startTime	No	String	Minimum timestamp of the time range (the time point is included). The format is <i>yyyy-MM-dd hh:mm:ss</i> . Only the data created at this point in time and later is extracted.
fromJobConfig.endTime	No	String	Maximum timestamp of the time range (the time point is not included). The format is <i>yyyy-MM-dd hh:mm:ss</i> . Only the data created before this point in time is extracted.
fromJobConfig.formats	No	Data structure	Time format. For details, see <a href="#">Description of the fromJobConfig.formats parameter</a> .

- Description of the **fromJobConfig.formats** parameter

Parameter	Mandatory	Type	Description
name	Yes	String	Column number. For example, 1.
value	Yes	String	Time format. For example, <i>yyyy-MM-dd</i> .

### 5.4.2.6 From FTP/SFTP/NAS (to Be Brought Offline)/SFS (to Be Brought Offline)

#### Sample JSON File

```
"from-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "fromJobConfig.inputDirectory",
          "value": "/sftpfrom/from_sftp.csv"
        },
        {
          "name": "fromJobConfig.inputFormat",
          "value": "CSV_FILE"
        }
      ]
    }
  ]
}
```

```

{
  "name": "fromJobConfig.columnList",
  "value": "1&2&3&4&5&6&7&8&9&10&11&12"
},
{
  "name": "fromJobConfig.fieldSeparator",
  "value": ","
},
{
  "name": "fromJobConfig.regexSeparator",
  "value": "false"
},
{
  "name": "fromJobConfig.firstRowAsHeader",
  "value": "false"
},
{
  "name": "fromJobConfig.encodeType",
  "value": "UTF-8"
},
{
  "name": "fromJobConfig.fromCompression",
  "value": "NONE"
},
{
  "name": "fromJobConfig.splitType",
  "value": "FILE"
}
],
"name": "fromJobConfig"
}
]
}

```

### Parameter Description

Source link job parameters of FTP and SFTP are the same. [Table 5-173](#) describes the parameters.

**Table 5-173** Source link job parameters of file systems

Parameter	Mandatory	Type	Description
fromJobConfig.inputDirectory	Yes	String	Path for storing files to be extracted. You can enter a maximum of 50 file paths, which are separated by vertical bars ( ). You can also customize the separators. For example, <b>FROM/example.csv FROM/b.txt</b> .

Parameter	Mandatory	Type	Description
fromJobConfig.inputFormat	Yes	Enumeration	File format required for data transmission. Currently, the following file formats are supported: <ul style="list-style-type: none"> <li>• <b>CSV_FILE</b>: CSV format, used to migrate files to data tables</li> <li>• <b>JSON_FILE</b>: JSON format, used to migrate files to data tables</li> <li>• <b>BINARY_FILE</b>: Files (even not in binary format) will be directly transferred without resolution. It is applicable to file copy. If you select <b>BINARY_FILE</b>, the migration destination must also be a file system.</li> </ul>
fromJobConfig.lineSeparator	No	String	Line feed character in the file. For example, <code>\n</code> . By default, <code>\n</code> , <code>\r</code> , or <code>\r\n</code> is automatically identified.
fromJobConfig.columnList	No	String	Numbers of columns to be extracted. Use <b>&amp;</b> to separate column numbers in ascending order. For example, <b>1&amp;3&amp;5</b> .
fromJobConfig.lineSeparator	No	String	Line feed character. This parameter is valid only when the file format is <b>CSV_FILE</b> . The default value is <code>\r\n</code> .
fromJobConfig.fieldSeparator	No	String	Field delimiter. This parameter is valid only when the file format is <b>CSV_FILE</b> . The default value is <code>,</code> .
fromJobConfig.quoteChar	No	Boolean	Whether to use the encircling symbol. If this parameter is set to <b>true</b> , the field delimiters in the encircling symbol are regarded as a part of the string value. Currently, the default encircling symbol of CDM is double quotation mark ( <code>"</code> ).

Parameter	Mandatory	Type	Description
fromJobConfig.regexSeparator	No	Boolean	Whether to use the regular expression to separate fields. This parameter is valid only when the file format is <b>CSV_FILE</b> .
fromJobConfig.regex	No	String	Regular expression. This parameter is valid only when the regular expression is used to separate fields.
fromJobConfig.firstRowAsHeader	No	Boolean	Whether to regard the first line as the heading line. This parameter is valid only when the file format is <b>CSV_FILE</b> . When you migrate a CSV file to a table, CDM writes all data to the table by default. If this parameter is set to <b>true</b> , CDM uses the first line of the CSV file as the heading line and does not write the line to the destination table.
fromJobConfig.fromCompression	No	Enumeration	Compression format. This parameter is valid only when the file format is <b>CSV_FILE</b> or <b>JSON</b> . The options are as follows: <ul style="list-style-type: none"> <li>• <b>NONE</b>: Files in all formats are transferred.</li> <li>• <b>GZIP</b>: Files in gzip format are transferred.</li> <li>• <b>ZIP</b>: Files in Zip format are transferred.</li> </ul>
fromJobConfig.jsonReferenceNode	No	String	Reference node. This parameter is valid when the file format is <b>JSON_FILE</b> . Resolve data on the JSON node. If the data corresponding to the node is a JSON array, the system extracts data from the array in the same mode. Nested JSON nodes are separated by periods (.). For example, <b>data.list</b> .



Parameter	Mandatory	Type	Description
fromJobConfig.encodingType	No	String	Encoding type. For example, <b>UTF_8</b> or <b>GBK</b> .
fromJobConfig.fromFileOpType	No	Enumeration	Source file processing mode. After a job is completed, operations on the source file can be performed. The source file can be renamed or deleted.
fromJobConfig.useMarkerFile	No	Boolean	Whether to start a job by a marker file. A job is started only when a marker file for starting the job exists in the source path. Otherwise, the job will be suspended for a period of time specified by <b>fromJobConfig.waitTime</b> .
fromJobConfig.markerFile	No	String	Name of the marker file for starting a job. After a marker file is specified, the task is executed only when the file exists in the source path. If the marker file is not specified, this function is disabled by default. For example, <b>ok.txt</b> .
fromJobConfig.waitTime	No	String	Period of waiting for a marker file. If you set <b>Start Job by Marker File</b> to <b>Yes</b> but no marker file exists in the source path, the job fails upon suspension timeout.  If you set this parameter to <b>0</b> and no marker file exists in the source path, the job will fail immediately.  Unit: second

Parameter	Mandatory	Type	Description
fromJobConfig.filterType	No	Enumeration	Filter type. Possible values are as follows: <ul style="list-style-type: none"> <li>• <b>WILDCARD</b>: Enter a wildcard character to filter paths or files. CDM will migrate the paths or files that meet the filter condition.</li> <li>• <b>TIME</b>: Specify a time filter. CDM will migrate the files modified after the specified time point.</li> </ul>
fromJobConfig.pathFilter	No	String	Path filter, which is configured when the filter type is <b>WILDCARD</b> . It is used to filter the file directories. For example, <b>*input</b> .
fromJobConfig.fileFilter	No	String	File filter, which is configured when the filter type is <b>WILDCARD</b> . It is used to filter files in the specified directory. Use commas (,) to separate multiple files. For example, <b>*.csv,*.txt</b> .
fromJobConfig.startTime	No	String	If you set <b>Filter Type</b> to <b>Time Filter</b> , and specify a point in time for this parameter, only the files modified after the specified time are transferred. The time format must be <i>yyyy-MM-dd HH:mm:ss</i> .  This parameter can be set to a macro variable of date and time. For example, <b> \${timestamp(dateformat(yy-MM-dd HH:mm:ss,-90,DAY))}</b> indicates that only files generated within the latest 90 days are migrated.

Parameter	Mandatory	Type	Description
fromJobConfig.endTime	No	String	<p>If you set <b>Filter Type</b> to <b>Time Filter</b>, and specify a point in time for this parameter, only the files modified before the specified time are transferred. The time format must be <i>yyyy-MM-dd HH:mm:ss</i>.</p> <p>This parameter can be set to a macro variable of date and time. For example, <b><code>\${timestamp(dateformat(yyyy-MM-dd HH:mm:ss))}</code></b> indicates that only the files whose modification time is earlier than the current time are migrated.</p>
fromJobConfig.fileSeparator	No	String	<p>File separator. If you enter multiple file paths in <b>fromJobConfig.inputDirectory</b>, CDM uses the file separator to separate files. The default value is  .</p>
fromJobConfig.decrypt	No	Enumeration	<p>Whether to decrypt the encrypted file before export and the decryption method. The options are as follows:</p> <ul style="list-style-type: none"> <li>• <b>NONE</b>: Do not decrypt but directly export the file.</li> <li>• <b>AES-256-GCM</b>: Use the AES-256-GCM (NoPadding) algorithm to decrypt the file and then export the file.</li> </ul>

Parameter	Mandatory	Type	Description
fromJobConfig.dek	No	String	Data decryption key. The key is a string of 64-bit hexadecimal numbers and must be the same as the data encryption key <b>toJobConfig.dek</b> configured during encryption. If the encryption and decryption keys are inconsistent, the system does not report an exception, but the decrypted data is incorrect.
fromJobConfig.iv	No	String	Initialization vector required for decryption. The initialization vector is a string of 32-bit hexadecimal numbers and must be the same as the initialization vector <b>toJobConfig.iv</b> configured during encryption. If the initialization vectors are inconsistent, the system does not report an exception, but the decrypted data is incorrect.
fromJobConfig.md5FileSuffix	No	String	Check whether the files extracted by CDM are consistent with those in the migration source.

### 5.4.2.7 From HTTP/HTTPS

#### Sample JSON File

```

"from-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "fromJobConfig.inputDirectory",
          "value": "http://10.114.196.186:8080/httpfrom/symbol.txt"
        },
        {
          "name": "fromJobConfig.inputFormat",
          "value": "BINARY_FILE"
        },
        {
          "name": "fromJobConfig.fromCompression",
          "value": "TARGZ"
        }
      ]
    }
  ]
}

```

```

        "name": "fromJobConfig.compressedFileSuffix",
        "value": "*"
    },
    {
        "name": "fromJobConfig.fileSeparator",
        "value": "|"
    }
],
"name": "fromJobConfig"
}
]
}

```

## Parameter Description

Parameter	Mandatory	Type	Description
fromJobConfig.inputDirectory	Yes	String	URL of the file to be extracted These connectors are used to read files with an HTTP/HTTPS URL, such as reading public files on the third-party object storage system and web disks.
fromJobConfig.inputFormat	Yes	Enumeration	File format required for data transmission. Currently, only the binary format is supported.
fromJobConfig.fromCompression	No	Enumeration	Compression format of the source files. The options are as follows: <ul style="list-style-type: none"> <li>• <b>NONE</b>: Files in all formats are transferred.</li> <li>• <b>GZIP</b>: Files in gzip format are transferred.</li> <li>• <b>ZIP</b>: Files in Zip format are transferred.</li> <li>• <b>TAR.GZ</b>: Files in TAR.GZ format are transferred.</li> </ul>
fromJobConfig.compressedFileSuffix	No	String	Extension of the files to be decompressed. The decompression operation is performed only when the file name extension is used in a batch of files. Otherwise, files are transferred in the original format. If you enter * or leave the parameter blank, all files are decompressed.
fromJobConfig.fileSeparator	No	String	File separator. When multiple files are transferred, CDM uses the file separator to separate files. The default value is  .

Parameter	Mandatory	Type	Description
fromJobConfig.useQuery	No	Boolean	<ul style="list-style-type: none"> <li>If you set this parameter to <b>true</b>, the name of the objects uploaded to OBS does not carry the <b>query</b> parameter.</li> <li>If you set this parameter to <b>false</b>, the name of the objects uploaded to OBS carries the <b>query</b> parameter.</li> </ul>
fromJobConfig.decrypt	No	Enumeration	<p>Whether to decrypt the encrypted file before export and the decryption method. The options are as follows:</p> <ul style="list-style-type: none"> <li><b>NONE</b>: Do not decrypt but directly export the file.</li> <li><b>AES-256-GCM</b>: Use the AES-256-GCM (NoPadding) algorithm to decrypt the file and then export the file.</li> </ul>
fromJobConfig.dek	No	String	<p>Data decryption key. The key is a string of 64-bit hexadecimal numbers and must be the same as the data encryption key <b>toJobConfig.dek</b> configured during encryption. If the encryption and decryption keys are inconsistent, the system does not report an exception, but the decrypted data is incorrect.</p>
fromJobConfig.iv	No	String	<p>Initialization vector required for decryption. The initialization vector is a string of 32-bit hexadecimal numbers and must be the same as the initialization vector <b>toJobConfig.iv</b> configured during encryption. If the initialization vectors are inconsistent, the system does not report an exception, but the decrypted data is incorrect.</p>
fromJobConfig.md5FileSuffix	No	String	<p>Check whether the files extracted by CDM are consistent with those in the migration source.</p>

### 5.4.2.8 From MongoDB/DDS

#### Sample JSON File

```
"from-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "fromJobConfig.database",
          "value": "cdm"
        },
        {
          "name": "fromJobConfig.collectionName",
          "value": "rf_from"
        },
        {
          "name": "fromJobConfig.columnList",
          "value": "TINYTEST&SMALLTEST&INTTEST&INTEGERTEST&BIGINTTEST&FLOATTEST"
        },
        {
          "name": "fromJobConfig.isBatchMigration",
          "value": "false"
        },
        {
          "name": "fromJobConfig.filters",
          "value": "{\"last_name\": 'Smith'}"
        }
      ],
      "name": "fromJobConfig"
    }
  ]
}
```

#### Parameter Description

Parameter	Mandatory	Type	Description
fromJobConfig.database	Yes	String	Name of the MongoDB/DDS database
fromJobConfig.collectionName	Yes	String	Name of the MongoDB/DDS collection
fromJobConfig.columnList	No	String	List of fields to be extracted. Use <b>&amp;</b> to separate field names. For example, <b>id&amp;gid&amp;name</b> .
fromJobConfig.isBatchMigration	No	Boolean	Whether to migrate all data in the database

Parameter	Mandatory	Type	Description
fromJobConfig.filters	No	String	<p>Filter condition for files. CDM migrates only the data that meets the filter condition.</p> <p>Examples:</p> <ol style="list-style-type: none"> <li>Filter by expression: <b>{'last_name': 'Smith'}</b> indicates that all files whose <b>last_name</b> value is <b>Smith</b> are queried.</li> <li>Filter by parameter: <b>{ x : "john" }, { z : 1 }</b> indicates that all <b>z</b> fields whose <b>x</b> is <b>john</b> are queried.</li> <li>Filter by condition: <b>{ "field" : { \$gt: 5 } }</b> indicates that the <b>field</b> values greater than 5 are queried.</li> </ol>

### 5.4.2.9 From Redis/DCS (to Be Brought Offline)

#### Sample JSON File

```

"from-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "fromJobConfig.isBatchMigration",
          "value": "false"
        },
        {
          "name": "fromJobConfig.keyPrefix",
          "value": "rf_string_from"
        },
        {
          "name": "fromJobConfig.keySeparator",
          "value": ":"
        },
        {
          "name": "fromJobConfig.valueStoreType",
          "value": "STRING"
        },
        {
          "name": "fromJobConfig.valueSeparator",
          "value": ","
        },
        {
          "name": "fromJobConfig.columnList",
          "value": "1&2&3&4&5&6&7&8&9&10&11&12"
        }
      ],
      "name": "fromJobConfig"
    }
  ]
}

```



## Parameter Description

- Redis job parameter description

Parameter	Mandatory	Type	Description
fromJobConfig.isBatchMigration	No	Boolean	Whether to migrate all data in the database
fromJobConfig.keyPrefix	Yes	String	Key prefix, which is the name of the corresponding association table. Mapping between Redis and the association table: <i>Name of the association table + delimiter</i> is a Redis key, and a row of data in the association table is a Redis value.
fromJobConfig.keySeparator	Yes	String	Key delimiter, which separates the association table and primary key
fromJobConfig.valueStoreType	Yes	String	Storage mode of rows of data in the association table on Redis. The options are <b>string</b> and <b>hash</b> . <ul style="list-style-type: none"><li><b>STRING</b>: indicates that a row of data is stored as a character string using delimiters to separate columns. This mode reduces storage space occupation.</li><li><b>HASH</b>: indicates that a row of data is stored in <i>column name:column value</i> format in the hash table.</li></ul>
fromJobConfig.valueSeparator	No	String	Value delimiter. The default value is <code>\tab</code> . This parameter is valid when <b>valueStoreType</b> is set to <b>STRING</b> .
fromJobConfig.columnList	No	String	List of fields to be extracted. Use <b>&amp;</b> to separate field names. For example, <b>id&amp;gid&amp;name</b> .

Parameter	Mandatory	Type	Description
fromJobConfig.formats	No	Data structure	Time format. For details, see <a href="#">Description of the fromJobConfig.formats parameter</a> .

- Description of the **fromJobConfig.formats** parameter

Parameter	Mandatory	Type	Description
name	Yes	String	Column number. For example, <b>1</b> .
value	Yes	String	Time format. For example, <i>yyyy-MM-dd</i> .

## 5.4.2.10 From DIS

### Sample JSON File

```
"from-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "fromJobConfig.streamName",
          "value": "cdm"
        },
        {
          "name": "fromJobConfig.disConsumerStrategy",
          "value": "FROM_LAST_STOP"
        },
        {
          "name": "fromJobConfig.isPermanency",
          "value": "true"
        },
        {
          "name": "fromJobConfig.maxPollRecords",
          "value": "100"
        },
        {
          "name": "fromJobConfig.shardId",
          "value": "0"
        },
        {
          "name": "fromJobConfig.separator",
          "value": ","
        }
      ],
      "name": "fromJobConfig"
    }
  ]
}
```

## Parameter Description

Parameter	Mandatory	Type	Description
fromJobConfig.streamName	Yes	String	DIS stream name
fromJobConfig.disConsumerStrategy	Yes	Enumeration	Used to set the initial offset when data is pulled from DIS. The options are as follows: <ul style="list-style-type: none"> <li>• <b>LATEST</b>: maximum offset, that is, the latest data</li> <li>• <b>FROM_LAST_STOP</b>: data after the last stop</li> <li>• <b>EARLIEST</b>: minimum offset, that is, the earliest data</li> </ul>
fromJobConfig.isPermanency	Yes	Boolean	Whether to run permanently
fromJobConfig.maxPollRecords	No	String	Maximum number of requests that can be sent to DIS each time
fromJobConfig.partitionId	Yes	String	ID of the DIS partition. You can enter multiple partition IDs, which are separated by commas (,).
fromJobConfig.dataFormat	Yes	Enumeration	Format used for parsing data. The options are as follows: <ul style="list-style-type: none"> <li>• <b>BINARY</b>: Data is transferred without being parsed, which is applicable to file migration.</li> <li>• <b>CSV</b>: Source data will be migrated after being parsed in CSV format.</li> </ul>
fromJobConfig.separator	No	String	Field delimiter
fromJobConfig.appName	No	String	Unique identifier of the consumer application

### 5.4.2.11 From Kafka

#### Sample JSON File

```
"from-config-values": {
  "configs": [
    {
```

```

"inputs": [
  {
    "name": "fromJobConfig.topicsList",
    "value": "est1,est2"
  },
  {
    "name": "fromJobConfig.kafkaConsumerStrategy",
    "value": "EARLIEST"
  },
  {
    "name": "fromJobConfig.isPermanency",
    "value": "true"
  }
],
"name": "fromJobConfig"
}
]
}

```

## Parameter Description

Parameter	Mandatory	Type	Description
fromJobConfig.topicsList	Yes	String	List of Kafka topics. Separate multiple topics by commas (,).
fromJobConfig.kafkaConsumerStrategy	Yes	Enumeration	Used to set the initial offset when data is pulled from Kafka. The options are as follows: <ul style="list-style-type: none"> <li>• <b>LATEST</b>: maximum offset, that is, the latest data</li> <li>• <b>EARLIEST</b>: minimum offset, that is, the earliest data</li> </ul>
fromJobConfig.isPermanency	Yes	Boolean	Whether to run permanently
fromJobConfig.groupId	No	String	Consumer group ID If you export data from DMS Kafka, enter any value for Kafka Platinum but a valid consumer group ID for Kafka Basic.
fromJobConfig.dataFormat	Yes	Enumeration	Format used for parsing data. The options are as follows: <ul style="list-style-type: none"> <li>• <b>BINARY</b>: Data is transferred without being parsed, which is applicable to file migration.</li> <li>• <b>CSV</b>: Source data will be migrated after being parsed in CSV format.</li> </ul>

Parameter	Mandatory	Type	Description
fromJobConfig. maxPollRecords	No	String	Maximum number of requests that can be sent to Kafka each time
fromJobConfig. maxPollInterval	No	String	Maximum interval between each poll
fromJobConfig.s eparator	No	String	Field delimiter

### 5.4.2.12 From Elasticsearch/Cloud Search Service

#### Sample JSON File

```
"from-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "fromJobConfig.index",
          "value": "cdm"
        },
        {
          "name": "fromJobConfig.type",
          "value": "es"
        },
        {
          "name": "fromJobConfig.columnList",
          "value": "a1:numeric&s1:string"
        },
        {
          "name": "fromJobConfig.splitNestedField",
          "value": "true"
        },
        {
          "name": "fromJobConfig.queryString",
          "value": "last_name:Smith"
        }
      ],
      "name": "fromJobConfig"
    }
  ]
}
```

#### Parameter Description

Parameter	Mandatory	Type	Description
fromJobConfig.i ndex	Yes	String	Index of the extracted data, which is similar to the database name in the relational database

Parameter	Mandatory	Type	Description
fromJobConfig.type	Yes	String	Type of the extracted data, which is similar to the table name in the relational database
fromJobConfig.columnList	No	String	List of fields to be extracted. Use <b>&amp;</b> to separate field names. For example, <b>id&amp;gid&amp;name</b> .
fromJobConfig.splitNestedField	No	Boolean	Whether to split the JSON content of the <b>nested</b> field. For example, <b>a:{ b:{ c:1, d:{ e:2, f:3 } } }</b> can be split into <b>a.b.c</b> , <b>a.b.d.e</b> , and <b>a.b.d.f</b> .
fromJobConfig.queryString	No	String	Whether to use the Elasticsearch query string to filter the source data. CDM migrates only the data that meets the filter criteria.

## 5.4.3 Destination Job Parameters

### 5.4.3.1 To a Relational Database

#### Sample JSON File

```
"to-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "toJobConfig.schemaName",
          "value": "cdm"
        },
        {
          "name": "toJobConfig.tablePreparation",
          "value": "DROP_AND_CREATE"
        },
        {
          "name": "toJobConfig.tableName",
          "value": "rf_to"
        },
        {
          "name": "toJobConfig.columnList",
          "value": "id&gid&name"
        },
        {
          "name": "toJobConfig.isCompress",
          "value": "false"
        },
        {
          "name": "toJobConfig.orientation",
          "value": "ROW"
        }
      ],
    }
  ]
}
```

```

        "name": "toJobConfig.useStageTable",
        "value": "false"
    },
    {
        "name": "toJobConfig.shouldClearTable",
        "value": "false"
    },
    {
        "name": "toJobConfig.extendCharLength",
        "value": "false"
    }
    ],
    "name": "toJobConfig"
}
]
}

```

## Parameter Description

Parameter	Mandatory	Type	Description
toJobConfig.schemaName	Yes	String	Database mode or tablespace
toJobConfig.tablePreparation	Yes	Enumeration	<p>This parameter is available only when both the source and destination databases are relational databases. The options for data write to tables are as follows:</p> <ul style="list-style-type: none"> <li>• <b>DO_NOTHING</b>: Do not create the table automatically.</li> <li>• <b>CREATE_WHEN_NOT_EXISTS</b>: If the destination database does not contain the table specified by <b>tableName</b>, CDM automatically creates the table.</li> <li>• <b>DROP_AND_CREATE</b>: Delete the table specified by <b>tableName</b>, and then create the table again.</li> </ul>
toJobConfig.tableName	Yes	String	Name of the table to which data is written
toJobConfig.columnList	No	String	List of fields to be loaded. Use <b>&amp;</b> to separate field names. For example, <b>id&amp;gid&amp;name</b> .

Parameter	Mandatory	Type	Description
toJobConfig.beforeImportType	No	Enumeration	<p>Whether to clear the data in the target table before data import. The options are as follows:</p> <ul style="list-style-type: none"> <li>• <b>none</b>: Do not clear the data in the target table before data import but append data to the table.</li> <li>• <b>shouldClearTable</b>: Clear the data in the target table before data import.</li> <li>• <b>whereClause</b>: To clear data in the target table based on the WHERE clause, set the <b>toJobConfig.whereClause</b> parameter. CDM deletes the data from the target table as specified.</li> </ul>
toJobConfig.whereClause	No	String	WHERE clause used to delete data from the target table before data import
toJobConfig.orientation	No	Enumeration	<p>Storage mode. This parameter is enabled only for the DWS database. When the DWS database table needs to be automatically created, the optional data storage modes of the table are as follows:</p> <ul style="list-style-type: none"> <li>• <b>ROW</b>: Data in the table is stored in rows.</li> <li>• <b>COLUMN</b>: Data in the table is stored in columns.</li> </ul>
toJobConfig.isCompress	No	Boolean	Whether to perform compression. This parameter is enabled only for the DWS database. When the DWS database table needs to be automatically created, you can specify whether to store the data in the table after compression.



Parameter	Mandatory	Type	Description
oJobConfig.useStageTable	No	Boolean	Whether to import data to the phase table first. If this parameter is set to <b>true</b> , the data is imported to the phase table before it is imported to the destination table. After the data is successfully imported to the phase table, it is then imported from the phase table to the destination table. In this way, the data that is successfully imported to the destination table remains in case the data import fails.
toJobConfig.extendCharLength	No	Boolean	Whether to extend the length of the character string field. If this parameter is set to <b>true</b> , the length of the character string field in the destination table is three times the length of the corresponding field in the source table when the destination table needs to be automatically created.
toJobConfig.useNullable	No	Boolean	If you choose to create a target table automatically and specify the NOT NULL constraint, keep the NOT NULL constraints of the source and target tables consistent.

### 5.4.3.2 To OBS

#### Sample JSON File

```

"to-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "toJobConfig.bucketName",
          "value": "cdm"
        },
        {
          "name": "toJobConfig.outputDirectory",
          "value": "/obsfrom/advance/"
        },
        {
          "name": "toJobConfig.outputFormat",
          "value": "CSV_FILE"
        }
      ]
    }
  ]
}

```

```

    "name": "toJobConfig.fieldSeparator",
    "value": ",",
  },
  {
    "name": "toJobConfig.writeToTempFile",
    "value": "false"
  },
  {
    "name": "toJobConfig.validateMD5",
    "value": "false"
  },
  {
    "name": "toJobConfig.recordMD5Result",
    "value": "false"
  },
  {
    "name": "toJobConfig.encodeType",
    "value": "UTF-8"
  },
  {
    "name": "toJobConfig.markerFile",
    "value": "finish.txt"
  },
  {
    "name": "toJobConfig.duplicateFileOpType",
    "value": "REPLACE"
  },
  {
    "name": "toJobConfig.shouldClearTable",
    "value": "false"
  },
  {
    "name": "toJobConfig.columnList",
    "value": "1&2"
  },
  {
    "name": "toJobConfig.quoteChar",
    "value": "false"
  },
  {
    "name": "toJobConfig.encryption",
    "value": "NONE"
  },
  {
    "name": "toJobConfig.copyContentType",
    "value": "false"
  }
},
"name": "toJobConfig"
}
]
}

```

## Parameter Description

Parameter	Mandatory	Type	Description
toJobConfig.bucketName	Yes	String	OBS bucket name. For example, <b>cdm</b> .
toJobConfig.outputDirectory	Yes	String	Path to which data is written. For example, <b>data_dir</b> .

Parameter	Mandatory	Type	Description
toJobConfig.outputFormat	Yes	Enumeration	<p>File format required for data writes (except the binary format). Currently, the following file formats are supported:</p> <ul style="list-style-type: none"><li>• <b>CSV_FILE</b>: Write data in CSV format.</li><li>• <b>BINARY_FILE</b>: Files are directly transferred without resolving the content. CDM writes the file without changing the file format.</li></ul> <p>If you select <b>BINARY_FILE</b>, the migration source must also be a file system.</p>
toJobConfig.fieldSeparator	No	String	<p>Column delimiter. This parameter is valid only when <b>toJobConfig.outputFormat</b> is <b>CSV_FILE</b>. The default value is ,.</p>
toJobConfig.lineSeparator	No	String	<p>Line feed character. This parameter is valid only when <b>toJobConfig.outputFormat</b> is <b>CSV_FILE</b>. The default value is <code>\r\n</code>.</p>
toJobConfig.writeFileSize	No	String	<p>Whether to fragment multiple files by size so that the files are exported in proper size. The unit is MB. This parameter is valid when the migration source is a database.</p>

Parameter	Mandatory	Type	Description
toJobConfig.duplicateFileType	No	Enumeration	Method for processing duplicate files. If the name and size of a file are the same as those of another file, the file is regarded as a duplicate file. Duplicate files can be processed in the following ways: <ul style="list-style-type: none"><li>● <b>REPLACE</b>: Replace duplicate files.</li><li>● <b>SKIP</b>: Skip duplicate files.</li><li>● <b>ABANDON</b>: Stop the job when any duplicate file is found.</li></ul>
toJobConfig.encryption	No	Enumeration	Whether to encrypt the uploaded data and the encryption method. The options are as follows: <ul style="list-style-type: none"><li>● <b>NONE</b>: Directly write data without encryption.</li><li>● <b>KMS</b>: Use KMS in Data Encryption Workshop (DEW) for encryption. If KMS encryption is enabled, MD5 verification for data cannot be performed.</li><li>● <b>AES-256-GCM</b>: Use the AES 256-bit encryption algorithm to encrypt data. Currently, only the AES-256-GCM (NoPadding) encryption algorithm is supported.</li></ul>

Parameter	Mandatory	Type	Description
toJobConfig.dek	No	String	Data encryption key. This parameter is available when <b>toJobConfig.encryption</b> is set to <b>AES-256-GCM</b> . The key is a string of 64-bit hexadecimal numbers.  Remember the key configured here because the decryption key must be the same as that configured here. If the encryption and decryption keys are inconsistent, the system does not report an exception, but the decrypted data is incorrect.
toJobConfig.iv	No	String	Initialization vector. This parameter is available when <b>toJobConfig.encryption</b> is set to <b>AES-256-GCM</b> . The initialization vector is a string of 32-bit hexadecimal numbers.  Remember the initialization vector configured here because the initialization vector used for decryption must be the same as that configured here. If the initialization vectors are inconsistent, the system does not report an exception, but the decrypted data is incorrect.
toJobConfig.kmsID	No	String	Key used for encryption during data upload. You must create a key in KMS before data upload.
toJobConfig.projectID	No	String	ID of the project to which the KMS key belongs.

Parameter	Mandatory	Type	Description
toJobConfig.validateMD5	No	Boolean	Whether to verify the MD5 value. MD5 verification cannot be used together with KMS encryption. MD5 values can be verified only when files are transferred in binary format.  Calculate the MD5 value of the source file and verify it with the MD5 value returned by OBS. If an MD5 file exists on the source end, directly read the MD5 file and verify the MD5 file with the MD5 value returned by OBS.
toJobConfig.recordMD5Result	No	Boolean	Whether to record the verification result when the MD5 value is verified
toJobConfig.recordMD5Link	No	String	OBS link where the bucket to which the MD5 verification result is written resides
toJobConfig.recordMD5Bucket	No	String	OBS bucket to which the MD5 verification result is written
toJobConfig.recordMD5Directory	No	String	Directory to which the MD5 verification result is written
toJobConfig.encodingType	No	String	Encoding type. For example, <b>UTF_8</b> or <b>GBK</b> .
toJobConfig.markerFile	No	String	Whether to generate a marker file with a custom name in the destination directory after a job is executed successfully. If you do not specify a file name, this function is disabled by default.

Parameter	Mandatory	Type	Description
toJobConfig.copyContentType	No	Boolean	<p>This parameter is displayed only when <b>toJobConfig.outputFormat</b> is <b>Binary</b> and both the migration source and destination are object storage.</p> <p>If you set this parameter to <b>Yes</b>, the Content-Type attribute of the source file is copied during object file migration. This function is mainly used for static website migration</p> <p>The Content-Type attribute cannot be written to Archive buckets. Therefore, if you set this parameter to <b>Yes</b>, the migration destination must be a non-Archive bucket.</p>
toJobConfig.quoteChar	No	Boolean	<p>This parameter is available only when <b>toJobConfig.outputFormat</b> is <b>CSV</b>. It is used when database tables are migrated to file systems.</p> <p>If you set this parameter to <b>Yes</b> and a field in the source data table contains a field delimiter or line separator, CDM uses double quotation marks (") as the quote character to quote the field content as a whole to prevent a field delimiter from dividing a field into two fields, or a line separator from dividing a field into different lines. For example, if the <b>hello,world</b> field in the database is quoted, it will be exported to the CSV file as a whole.</p>

Parameter	Mandatory	Type	Description
toJobConfig.firstRowAsHeader	No	Boolean	This parameter is available only when <b>toJobConfig.outputFormat</b> is <b>CSV</b> . When a table is migrated to a CSV file, CDM does not migrate the heading line of the table by default. If this parameter is set to <b>Yes</b> , CDM writes the heading line of the table to the file.

### 5.4.3.3 To HDFS

#### Sample JSON File

```

"to-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "toJobConfig.outputDirectory",
          "value": "/hdfsto"
        },
        {
          "name": "toJobConfig.outputFormat",
          "value": "BINARY_FILE"
        },
        {
          "name": "toJobConfig.writeToTempFile",
          "value": "false"
        },
        {
          "name": "toJobConfig.duplicateFileOpType",
          "value": "REPLACE"
        },
        {
          "name": "toJobConfig.compression",
          "value": "NONE"
        },
        {
          "name": "toJobConfig.appendMode",
          "value": "true"
        }
      ],
      "name": "toJobConfig"
    }
  ]
}

```

#### Parameter Description

Parameter	Mandatory	Type	Description
toJobConfig.outputDirectory	Yes	String	Path to which data is written. For example, <b>/data_dir</b> .



Parameter	Mandatory	Type	Description
toJobConfig.outputFormat	Yes	Enumeration	<p>File format required for data writes (except the binary format). Currently, the following file formats are supported:</p> <ul style="list-style-type: none"> <li>• <b>CSV_FILE</b>: Write data in CSV format.</li> <li>• <b>BINARY_FILE</b>: Files are directly transferred without resolving the content. CDM writes the file without changing the file format.</li> </ul> <p>If you select <b>BINARY_FILE</b>, the migration source must also be a file system.</p>
toJobConfig.lineSeparator	No	String	<p>Line feed character. This parameter is valid only when <b>toJobConfig.outputFormat</b> is <b>CSV_FILE</b>. The default value is <code>\r\n</code>.</p>
toJobConfig.fieldSeparator	No	String	<p>Column delimiter. This parameter is valid only when <b>toJobConfig.outputFormat</b> is <b>CSV_FILE</b>. The default value is <code>,</code>.</p>
toJobConfig.writeToTempFile	No	Boolean	<p>The binary file is written to a <b>.tmp</b> file first. After the migration is successful, run the <b>rename</b> or <b>move</b> command at the migration destination to restore the file.</p>
toJobConfig.duplicateFileOpType	No	Enumeration	<p>Method for processing duplicate files. If the name and size of a file are the same as those of another file, the file is regarded as a duplicate file. Duplicate files can be processed in the following ways:</p> <ul style="list-style-type: none"> <li>• <b>REPLACE</b>: Replace duplicate files.</li> <li>• <b>SKIP</b>: Skip duplicate files.</li> <li>• <b>ABANDON</b>: Stop the job when any duplicate file is found.</li> </ul>

Parameter	Mandatory	Type	Description
toJobConfig.compression	No	Enumeration	<p>After the file is written, select the compression format of the file. The following compression formats are supported:</p> <ul style="list-style-type: none"> <li>• <b>NONE</b>: Do not compress the file.</li> <li>• <b>DEFLATE</b>: Compress the file in DEFLATE format.</li> <li>• <b>GZIP</b>: Compress the file in gzip format.</li> <li>• <b>BZIP2</b>: Compress the file in bzip2 format.</li> <li>• <b>LZ4</b>: Compress the file in LZ4 format.</li> <li>• <b>SNAPPY</b>: Compress the file in Snappy format.</li> </ul>
toJobConfig.appendMode	Yes	Boolean	Whether to write data when one or more files exist in the loading path. The default value is <b>false</b> .
toJobConfig.encryption	No	Enumeration	<p>This parameter is available only when <b>toJobConfig.outputFormat</b> is set to <b>BINARY_FILE</b>. It specifies whether to encrypt the uploaded data, and the encryption method. The options are as follows:</p> <ul style="list-style-type: none"> <li>• <b>NONE</b>: Directly write data without encryption.</li> <li>• <b>AES-256-GCM</b>: Use the AES 256-bit encryption algorithm to encrypt data. Currently, only the AES-256-GCM (NoPadding) encryption algorithm is supported.</li> </ul>

Parameter	Mandatory	Type	Description
toJobConfig.dek	No	String	<p>Data encryption key. This parameter is available when <b>toJobConfig.encryption</b> is set to <b>AES-256-GCM</b>. The key is a string of 64-bit hexadecimal numbers.</p> <p>Remember the key configured here because the decryption key must be the same as that configured here. If the encryption and decryption keys are inconsistent, the system does not report an exception, but the decrypted data is incorrect.</p>
toJobConfig.iv	No	String	<p>Initialization vector. This parameter is available when <b>toJobConfig.encryption</b> is set to <b>AES-256-GCM</b>. The initialization vector is a string of 32-bit hexadecimal numbers.</p> <p>Remember the initialization vector configured here because the initialization vector used for decryption must be the same as that configured here. If the initialization vectors are inconsistent, the system does not report an exception, but the decrypted data is incorrect.</p>

### 5.4.3.4 To Hive

#### Sample JSON File

```

"to-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "toJobConfig.hive",
          "value": "hive"
        },
        {
          "name": "toJobConfig.database",
          "value": "rf_database"
        },
        {
          "name": "toJobConfig.table",
          "value": "rf_to"
        }
      ]
    }
  ]
}

```

```

    "name": "toJobConfig.tablePreparation",
    "value": "DO_NOTHING"
  },
  {
    "name": "toJobConfig.columnList",
    "value": "aa&bb&cc&dd"
  },
  {
    "name": "toJobConfig.shouldClearTable",
    "value": "true"
  }
],
"name": "toJobConfig"
}
]
}

```

## Parameter Description

Parameter	Mandatory	Type	Description
toJobConfig.hive	No	String	Data source to which data is written
toJobConfig.database	No	String	Name of the database to which data is written. For example, <b>default</b> .
toJobConfig.table	Yes	String	Name of the table to which data is written
toJobConfig.tablePreparation	Yes	Enumeration	<p>The options for data write to tables are as follows:</p> <ul style="list-style-type: none"> <li>• <b>DO_NOTHING</b>: Do not create the table automatically.</li> <li>• <b>CREATE_WHEN_NOT_EXISTS</b>: If the destination database does not contain the table specified by <b>tableName</b>, CDM automatically creates the table.</li> <li>• <b>DROP_AND_CREATE</b>: Delete the table specified by <b>tableName</b>, and then create the table again.</li> </ul>
toJobConfig.columnList	No	String	List of fields to be loaded. Use <b>&amp;</b> to separate field names. For example, <b>id&amp;gid&amp;name</b> .

Parameter	Mandatory	Type	Description
toJobConfig.shouldClearTable	No	Boolean	Whether to clear the data in the target table before data import. If this parameter is set to <b>true</b> , the data in the target table is cleared before the job is started.

### 5.4.3.5 To HBase/CloudTable

#### Sample JSON File

```
"to-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "toJobConfig.table",
          "value": "rf_to"
        },
        {
          "name": "toJobConfig.storageType",
          "value": "PUTLIST"
        },
        {
          "name": "toJobConfig.columns",
          "value": "AA:AA&BB:BB&CC:CC&DD:DD"
        },
        {
          "name": "toJobConfig.rowKeyColumn",
          "value": "AA:AA"
        },
        {
          "name": "toJobConfig.isOverride",
          "value": "false"
        },
        {
          "name": "toJobConfig.isRowkeyRedundancy",
          "value": "false"
        },
        {
          "name": "toJobConfig.algorithm",
          "value": "NONE"
        },
        {
          "name": "toJobConfig.writeToWAL",
          "value": "true"
        },
        {
          "name": "toJobConfig.transType",
          "value": "false"
        }
      ]
    },
    {
      "name": "toJobConfig"
    }
  ]
}
```

## Parameter Description

Parameter	Mandatory	Type	Description
toJobConfig.table	Yes	String	Name of the table to which data is written. For example, <b>TBL_EXAMPLE</b> .
toJobConfig.storageType	Yes	Enumeration	Mode for writing data to an HBase table. The options are as follows: <ul style="list-style-type: none"><li>• <b>PUTLIST</b>: Data is written using the putList() function.</li></ul>
toJobConfig.columns	No	String	Columns to be extracted. Use <b>&amp;</b> to separate column numbers and <b>:</b> to separate column families and columns. For example, <b>cf1:c1&amp;cf2:c2</b> .
toJobConfig.rowKeyColumn	Yes	String	Columns serve as rowkeys. Use <b>&amp;</b> to separate column numbers and <b>:</b> to separate column families and columns. For example, <b>cf1:c1&amp;cf2:c2</b> .
toJobConfig.isOverride	No	Boolean	Whether to clear data when data is imported in BULKLOAD mode. For example, <b>true</b> .
toJobConfig.delimiter	No	String	Delimiter used for separating columns when multiple columns are used as rowkeys. For example, vertical bars ( ).
toJobConfig.isRowkeyRedundancy	No	Boolean	Whether to write rowkey data to the HBase column at the same time
toJobConfig.algorithm	No	Enumeration	Compression algorithm used when a new HBase table is created. The Snappy and GZ algorithms are supported. The default value is <b>None</b> .

Parameter	Mandatory	Type	Description
toJobConfig.writeToWAL	No	Boolean	<p>Whether to enable Write Ahead Log (WAL) of HBase. The options are as follows:</p> <ul style="list-style-type: none"> <li>• <b>Yes:</b> If the HBase server breaks down after the function is enabled, you can replay the operations that have not been performed in WAL.</li> <li>• <b>No:</b> If you set this parameter to <b>No</b>, the write performance is improved. However, if the HBase server breaks down, data may be lost.</li> </ul>
toJobConfig.transType	No	Boolean	<ul style="list-style-type: none"> <li>• <b>true:</b> Data of the Short, Int, Long, Float, Double, and Decimal columns in the source database is converted into Byte[] arrays (binary) and written into HBase. Other types of data are written as character strings. If several types of data mentioned above are combined as rowkeys, they will be written as character strings. This function saves storage space. In specific scenarios, the rowkey distribution is even.</li> <li>• <b>false:</b> All types of data in the source database are written into HBase as character strings.</li> </ul>

### 5.4.3.6 To FTP/SFTP/NAS (to Be Brought Offline)/SFS (to Be Brought Offline)

#### Sample JSON File

```

"to-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "toJobConfig.outputDirectory",
          "value": "/opt/data"
        },
        {

```

```

        "name": "toJobConfig.outputFormat",
        "value": "CSV_FILE"
    },
    {
        "name": "toJobConfig.fieldSeparator",
        "value": ","
    },
    {
        "name": "toJobConfig.duplicateFileOpType",
        "value": "REPLACE"
    }
    ],
    "name": "toJobConfig"
}
]
}

```

## Parameter Description

Parameter	Mandatory	Type	Description
toJobConfig.outputDirectory	Yes	String	Path to which data is written. For example, <b>/data_dir</b> .
toJobConfig.outputFormat	Yes	Enumeration	File format required for data writes (except the binary format). Currently, the following file formats are supported: <ul style="list-style-type: none"> <li>• <b>CSV_FILE</b>: Write data in CSV format.</li> <li>• <b>BINARY_FILE</b>: Files are directly transferred without resolving the content. CDM writes the file without changing the file format.</li> </ul> If you select <b>BINARY_FILE</b> , the migration source must also be a file system.
toJobConfig.duplicateFileOpType	No	Enumeration	Method for processing duplicate files. If the name and size of a file are the same as those of another file, the file is regarded as a duplicate file. Duplicate files can be processed in the following ways: <ul style="list-style-type: none"> <li>• <b>REPLACE</b>: Replace duplicate files.</li> <li>• <b>SKIP</b>: Skip duplicate files.</li> <li>• <b>ABANDON</b>: Stop the job when any duplicate file is found.</li> </ul>



Parameter	Mandatory	Type	Description
toJobConfig.lineSeparator	No	String	Line feed character. This parameter is valid only when <b>toJobConfig.outputFormat</b> is <b>CSV_FILE</b> . The default value is <code>\r\n</code> .
toJobConfig.fieldSeparator	No	String	Column delimiter. This parameter is valid only when <b>toJobConfig.outputFormat</b> is <b>CSV_FILE</b> . The default value is <code>,</code> .
toJobConfig.encodingType	No	String	Encoding type. For example, <b>UTF_8</b> or <b>GBK</b> .
toJobConfig.writeToTempFile	No	Boolean	The binary file is written to a <b>.tmp</b> file first. After the migration is successful, run the <b>rename</b> or <b>move</b> command at the migration destination to restore the file.
toJobConfig.recordMD5Result	No	Boolean	This parameter is invalid when <b>File Format</b> is set to <b>Binary</b> . An MD5 hash value is generated for each transferred file, and the value is recorded in a new <b>.md5</b> file. You can specify the directory where the MD5 value is generated.
toJobConfig.recordMD5Directory	No	String	Directory for storing MD5 values
toJobConfig.markerFile	No	String	Whether to generate a marker file with a custom name in the destination directory after a job is executed successfully. If you do not specify a file name, this function is disabled by default.
toJobConfig.firstRowAsHeader	No	Boolean	This parameter is available only when <b>toJobConfig.outputFormat</b> is <b>CSV</b> . When a table is migrated to a CSV file, CDM does not migrate the heading line of the table by default. If this parameter is set to <b>Yes</b> , CDM writes the heading line of the table to the file.

Parameter	Mandatory	Type	Description
toJobConfig.encryption	No	Enumeration	<p>Whether to encrypt the uploaded data and the encryption method. The options are as follows:</p> <ul style="list-style-type: none"> <li>• <b>NONE</b>: Directly write data without encryption.</li> <li>• <b>AES-256-GCM</b>: Use the AES 256-bit encryption algorithm to encrypt data. Currently, only the AES-256-GCM (NoPadding) encryption algorithm is supported.</li> </ul>
toJobConfig.dek	No	String	<p>Data encryption key. This parameter is available when <b>toJobConfig.encryption</b> is set to <b>AES-256-GCM</b>. The key is a string of 64-bit hexadecimal numbers.</p> <p>Remember the key configured here because the decryption key must be the same as that configured here. If the encryption and decryption keys are inconsistent, the system does not report an exception, but the decrypted data is incorrect.</p>
toJobConfig.iv	No	String	<p>Initialization vector. This parameter is available when <b>toJobConfig.encryption</b> is set to <b>AES-256-GCM</b>. The initialization vector is a string of 32-bit hexadecimal numbers.</p> <p>Remember the initialization vector configured here because the initialization vector used for decryption must be the same as that configured here. If the initialization vectors are inconsistent, the system does not report an exception, but the decrypted data is incorrect.</p>

### 5.4.3.7 To DDS

#### Sample JSON File

```
"to-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "toJobConfig.database",
          "value": "demo"
        },
        {
          "name": "toJobConfig.collectionName",
          "value": "cdmbase"
        },
        {
          "name": "toJobConfig.columnList",
          "value": "_char&_varchar"
        },
        {
          "name": "toJobConfig.isBatchMigration",
          "value": "false"
        }
      ]
    },
    {
      "name": "toJobConfig"
    }
  ]
}
```

#### Parameter Description

Parameter	Mandatory	Type	Description
toJobConfig.database	Yes	String	Name of the MongoDB/DDS database
toJobConfig.collectionName	Yes	String	Name of the MongoDB/DDS collection
toJobConfig.columnList	No	String	List of fields to be extracted. Use <b>&amp;</b> to separate field names. For example, <b>id&amp;gid&amp;name</b> .
toJobConfig.isBatchMigration	No	Boolean	Whether to migrate all data in the database

### 5.4.3.8 To DCS

#### Sample JSON File

```
"to-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "toJobConfig.isBatchMigration",
          "value": "false"
        },
        {
          "name": "toJobConfig.shouldClearDatabase",

```

```

        "value": "false"
    },
    {
        "name": "toJobConfig.keyPrefix",
        "value": "cdm_string"
    },
    {
        "name": "toJobConfig.keySeparator",
        "value": ":"
    },
    {
        "name": "toJobConfig.primaryKeyList",
        "value": "1"
    },
    {
        "name": "toJobConfig.valueStoreType",
        "value": "STRING"
    },
    {
        "name": "toJobConfig.valueSeparator",
        "value": ","
    },
    {
        "name": "toJobConfig.columnList",
        "value": "1&2&3&4&5&6&7&8&9&10&11&12"
    }
],
"name": "toJobConfig"
}
]
}

```

## Parameter Description

- Parameter description

Parameter	Mandatory	Type	Description
toJobConfig.isBatchMigration	No	Boolean	Whether to migrate all data in the database
toJobConfig.shouldClearDatabase	No	Boolean	Whether to clear data before import
toJobConfig.keyPrefix	Yes	String	Key prefix, which is similar to the table name of a relational database  Mapping between Redis and the association table: <i>Name of the association table + delimiter</i> is a Redis key, and a row of data in the association table is a Redis value.
toJobConfig.keySeparator	Yes	String	Key delimiter, which separates the association table and primary key
toJobConfig.primaryKeyList	Yes	String	List of primary keys. Use <b>&amp;</b> to separate field names. For example, <b>id&amp;gid</b> .

Parameter	Mandatory	Type	Description
toJobConfig.valueStoreType	Yes	Enumeration	Storage mode of rows of data in the association table on Redis. The options are <b>string</b> and <b>hash</b> . <ul style="list-style-type: none"> <li>• <b>STRING</b>: indicates that a row of data is stored as a character string, in which columns in the row are separated by <b>valueSeparator</b>.</li> <li>• <b>Hash</b>: indicates that a row of data is stored in <i>column name:column value</i> format in the hash table.</li> </ul>
toJobConfig.valueSeparator	No	String	Value delimiter. The default value is <code>\tab</code> . This parameter is valid when <b>valueStoreType</b> is set to <b>string</b> .
toJobConfig.columnList	No	String	List of fields to be written. Use <b>&amp;</b> to separate field names. For example, <b>id&amp;gid&amp;name</b> .
toJobConfig.formats	No	Data structure	Time format. For details, see <a href="#">Description of the toJobConfig.formats parameter</a> .

- Description of the **toJobConfig.formats** parameter

Parameter	Mandatory	Type	Description
name	Yes	String	Column number. For example, <b>1</b> .
value	Yes	String	Time format. For example, <i>yyyy-MM-dd</i> .

### 5.4.3.9 To Elasticsearch/Cloud Search Service

#### Sample JSON File

```
"to-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "toJobConfig.index",
```

```

        "value": "cdm"
      },
      {
        "name": "toJobConfig.type",
        "value": "type1"
      },
      {
        "name": "toJobConfig.shouldClearType",
        "value": "false"
      },
      {
        "name": "toJobConfig.pipeLine",
        "value": "es_03"
      }
    ],
    "name": "toJobConfig"
  }
}

```

### Parameter Description

Parameter	Mandatory	Type	Description
toJobConfig.index	Yes	String	Index of the written data, which is similar to the database name in the relational database
toJobConfig.type	Yes	String	Type of the written data, which is similar to the table name in the relational database
toJobConfig.shouldClearType	No	Boolean	Whether to clear data before import
toJobConfig.primaryKey	No	String	Primary key or unique index
toJobConfig.columnList	No	String	List of fields to be written. Use <b>&amp;</b> to separate field names. For example, <b>id&amp;gid&amp;name</b> .
toJobConfig.pipeline	No	String	This parameter is available only after a pipeline ID is created in Kibana. It is used to convert the data format using the data transformation pipeline of Cloud Search Service or Elasticsearch after data is transferred to Cloud Search Service or Elasticsearch.

Parameter	Mandatory	Type	Description
toJobConfig.createIndexStrategy	No	Enumeration	<p>For streaming jobs that continuously write data to Elasticsearch, CDM periodically creates indexes and writes data to the indexes, which helps you delete expired data. The indexes can be created based on the following periods:</p> <ul style="list-style-type: none"> <li>• <b>EveryHour:</b> CDM creates indexes on the hour. The new indexes are named in the format of <i>Index name+Year+Month+Day+Hour</i>, for example, <b>index2018121709</b>.</li> <li>• <b>EveryDay:</b> CDM creates indexes at 00:00 every day. The new indexes are named in the format of <i>Index name+Year+Month+Day</i>, for example, <b>index20181217</b>.</li> <li>• <b>EveryWeek:</b> CDM creates indexes at 00:00 every Monday. The new indexes are named in the format of <i>Index name+Year+Week</i>, for example, <b>index201842</b>.</li> <li>• <b>EveryMonth:</b> CDM creates indexes at 00:00 on the first day of each month. The new indexes are named in the format of <i>Index name+Year+Month</i>, for example, <b>index201812</b>.</li> </ul> <p>When extracting data from a file, you must configure a single extractor, which means setting <b>Concurrent Extractors</b> to <b>1</b>. Otherwise, this parameter is invalid.</p>

### 5.4.3.10 To DLI

#### Sample JSON File

```

"to-config-values": {
  "configs": [
    {
      "inputs": [

```

```

    {
      "name": "toJobConfig.queue",
      "value": "cdm"
    },
    {
      "name": "toJobConfig.database",
      "value": "sqoop"
    },
    {
      "name": "toJobConfig.table",
      "value": "est1"
    },
    {
      "name": "toJobConfig.columnList",
      "value":
"string_&int_&date_&double_&boolean_&short_&timestamp_&long_&smallint_&bigint_"
    },
    {
      "name": "toJobConfig.shouldClearTable",
      "value": "false"
    }
  ],
  "name": "toJobConfig"
}
]
}

```

### Parameter Description

Parameter	Mandatory	Type	Description
toJobConfig.queue	Yes	String	Resource queue to which data is written
toJobConfig.database	Yes	String	DLI database to which data is written
toJobConfig.table	Yes	String	Name of the table to which data is written
toJobConfig.columnList	No	String	List of fields to be loaded. Use <b>&amp;</b> to separate field names. For example, <b>id&amp;gid&amp;name</b> .
toJobConfig.shouldClearTable	No	Boolean	Whether to clear data in the resource queue before data import

### 5.4.3.11 To DIS

#### Sample JSON File

```

"to-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "toJobConfig.streamName",
          "value": "cdm"
        },
        {

```



```

        "name": "toJobConfig.separator",
        "value": " ",
      },
      {
        "name": "toJobConfig.identifierEnclose",
        "value": ""
      }
    ],
    "name": "toJobConfig"
  }
]
}

```

## Parameter description

Parameter	Mandatory	Type	Description
toJobConfig.streamName	Yes	String	DIS stream name
toJobConfig.separator	No	String	Field separator. The default value is a space.
toJobConfig.identifierEnclose	No	String	Delimiter used to separate referenced table names or column names. By default, this parameter is left blank.

## 5.4.4 Job Parameter Description

When [Creating a Job in a Specified Cluster](#) or [Creating and Executing a Job in a Random Cluster](#), the **driver-config-values** parameter specifies the job configuration, which includes the following functions:

- **Retry upon Failure:** If a job fails to be executed, you can choose whether to automatically restart the job.
- **Job Group:** CDM allows you to group jobs. You can filter, delete, start, or export jobs by group.
- **Schedule Execution:** Specify whether to execute scheduled jobs.
- **Concurrent Extractors:** Enter the number of concurrent extractors.
- **Write Dirty Data:** Specify this parameter if data that fails to be processed or filtered out during job execution needs to be written to OBS for future viewing. Before writing dirty data, create an OBS link.
- **Delete Job After Completion:** Specify whether to delete a job after the job is executed.

## Sample JSON File

```

"driver-config-values": {
  "configs": [
    {
      "inputs": [
        {
          "name": "throttlingConfig.numExtractors",
          "value": "1"
        }
      ]
    }
  ]
}

```

```

    {
      "name": "throttlingConfig.numLoaders",
      "value": "1"
    },
    {
      "name": "throttlingConfig.recordDirtyData",
      "value": "false"
    }
  ],
  "name": "throttlingConfig"
},
{
  "inputs": [],
  "name": "jarConfig"
},
{
  "inputs": [
    {
      "name": "schedulerConfig.isSchedulerJob",
      "value": "false"
    },
    {
      "name": "schedulerConfig.disposableType",
      "value": "NONE"
    }
  ],
  "name": "schedulerConfig"
},
{
  "inputs": [],
  "name": "transformConfig"
},
{
  "inputs": [
    {
      "name": "retryJobConfig.retryJobType",
      "value": "NONE"
    }
  ],
  "name": "retryJobConfig"
}
]
}

```

## Parameter Description

Parameter	Mandatory	Type	Description
throttlingConfig.numExtractors	No	Integer	Maximum number of concurrent extraction jobs. For example, <b>20</b> .
groupJobConfig.groupName	No	Enumeration	Group to which a job belongs. The default group is <b>DEFAULT</b> .
throttlingConfig.numLoaders	No	Integer	This parameter is available only when HBase or Hive serves as the destination data source. Maximum number of loading jobs. For example, <b>5</b> .
throttlingConfig.recordDirtyData	No	Boolean	Whether to write dirty data. For example, <b>true</b> .

Parameter	Mandatory	Type	Description
throttlingConfig.writeToLink	No	String	Link to which dirty data is written. Currently, dirty data can be written only to OBS or HDFS. For example, <b>obslink</b> .
throttlingConfig.obsBucket	No	String	Name of the OBS bucket to which dirty data is written. This parameter is valid only when dirty data is written to OBS. For example, <b>dirtyData</b> .
throttlingConfig.dirtyDataDirectory	No	String	Directory to which dirty data is written <ul style="list-style-type: none"> <li>To write dirty data to HDFS, set this parameter to the specified HDFS directory.</li> <li>To write dirty data to OBS, set this parameter to the directory in the OBS bucket. For example, <b>/data/dirtydata/</b>.</li> </ul>
throttlingConfig.maxErrorRecords	No	String	Maximum number of error records in a single shard. When the number of error records of a map exceeds the upper limit, the task automatically ends. The imported data will not be rolled back.
schedulerConfig.isSchedulerJob	No	Boolean	Whether to enable a scheduled task. For example, <b>true</b> .
schedulerConfig.cycleType	No	String	Cycle type of a scheduled task. The options are as follows: <ul style="list-style-type: none"> <li><b>minute</b>: minute</li> <li><b>hour</b>: hour</li> <li><b>day</b>: day</li> <li><b>week</b>: week</li> <li><b>month</b>: month</li> </ul>
schedulerConfig.cycle	No	Integer	Cycle of a scheduled task. If <b>cycleType</b> is set to <b>minute</b> and <b>cycle</b> is set to <b>10</b> , the scheduled task is executed every 10 minutes.

Parameter	Mandatory	Type	Description
schedulerConfig. runAt	No	String	<p>Time when a scheduled task is triggered in a cycle. This parameter is valid only when <b>cycleType</b> is set to <b>hour</b>, <b>week</b>, or <b>month</b>.</p> <ul style="list-style-type: none"> <li>If <b>cycleType</b> is set to <b>month</b>, <b>cycle</b> is set to <b>1</b>, and <b>runAt</b> is set to <b>15</b>, the scheduled task is executed on the 15th day of each month. You can set <b>runAt</b> to multiple values and separate the values with commas (,). For example, if <b>runAt</b> is set to <b>1,2,3,4,5</b>, the scheduled task is executed on the first day, second day, third day, fourth day, and fifth day of each month.</li> <li>If <b>cycleType</b> is set to <b>week</b> and <b>runAt</b> is set to <b>mon,tue,wed,thu,fri</b>, the scheduled task is executed on Monday to Friday.</li> <li>If <b>cycleType</b> is set to <b>hour</b> and <b>runAt</b> is set to <b>27,57</b>, the scheduled task is executed at the 27th and 57th minute in the cycle.</li> </ul>
schedulerConfig. startDate	No	String	<p>Start time of a scheduled task. For example, <b>2018-01-24 19:56:19</b>.</p>
schedulerConfig. stopDate	No	String	<p>End time of a scheduled task. For example, <b>2018-01-27 23:59:00</b>.</p> <p>If you do not set the end time, the scheduled task is always executed and will never stop.</p>

Parameter	Mandatory	Type	Description
schedulerConfig. disposableType	No	Enumeration	Whether to delete a job after the job is executed. The options are as follows: <ul style="list-style-type: none"><li>• <b>NONE</b>: A job will not be deleted after it is executed.</li><li>• <b>DELETE_AFTER_SUCCEED</b>: A job will be deleted only after it is successfully executed. It is applicable to massive one-time jobs.</li><li>• <b>DELETE</b>: A job will be deleted after it is executed, regardless of the execution result.</li></ul>
retryJobConfig. retryJobType	No	Enumeration	Whether to automatically retry if a job fails to be executed. The options are as follows: <ul style="list-style-type: none"><li>• <b>NONE</b>: Do not retry.</li><li>• <b>RETRY_TRIPLE</b>: Retry three times.</li></ul>

# 6 DataArts Factory APIs

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## 6.1 Connection Management APIs

### 6.1.1 Creating a Connection

#### Function

This API is used to create a connection. The supported connection types include DWS, DLI, Spark SQL, RDS, CloudTable, and Hive.

#### URI

- URI format  
POST /v1/{project\_id}/connections
- Parameter description

**Table 6-1** URI parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .

## Request

**Table 6-2** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

**Table 6-3** Connection parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Connection name. The name contains a maximum of 100 characters, including only letters, numbers, hyphens (-), and underscores (_). The connection name must be unique.
type	Yes	String	Connection type. <ul style="list-style-type: none"><li>• DWS</li><li>• DLI</li><li>• SparkSQL</li><li>• HIVE</li><li>• RDS</li><li>• CloudTable</li><li>• HOST</li></ul>
config	No	Map<String,String>	Connection configuration item. The configuration item varies with the connection type. You do not need to set the <b>config</b> parameter for DLI connections. For other types of connections, see the description of connection configuration items.
description	No	String	Description of the connection. The description contains a maximum of 255 characters.

**Table 6-4** DWS connection parameters

Parameter	Mandatory	Type	Description
clusterName	No	String	<p>Name of a DWS cluster.</p> <p>Perform the following operations to obtain the DWS cluster name:</p> <ol style="list-style-type: none"> <li>1. Log in to the management console.</li> <li>2. Click <b>Data Warehouse Service</b> and select <b>Cluster Management</b> from the list on the left.</li> </ol> <p>You can obtain the cluster name from the cluster management list.</p> <p>By default, this parameter is left blank.</p>
ip	No	String	<p>IP address for accessing the DWS cluster.</p> <p>Perform the following operations to obtain the DWS access address:</p> <ol style="list-style-type: none"> <li>1. Log in to the management console.</li> <li>2. Click <b>Data Warehouse Service</b> and select <b>Cluster Management</b> from the list on the left.</li> <li>3. Click the cluster name. The basic information page of the cluster is displayed.</li> </ol> <p>You can obtain the private network IP address on the <b>Database Attribute</b> tab page. If there are multiple IP addresses, select the first IP address.</p> <p>By default, this parameter is left blank.</p>
port	No	String	<p>Port for accessing the DWS cluster.</p> <p>Perform the following operations to obtain the DWS access port:</p> <ol style="list-style-type: none"> <li>1. Log in to the management console.</li> <li>2. Click <b>Data Warehouse Service</b> and select <b>Cluster Management</b> from the list on the left.</li> <li>3. Click the cluster name. The basic information page of the cluster is displayed.</li> </ol> <p>You can obtain the port information on the <b>Database Attribute</b> tab page.</p> <p>For example, set <b>port</b> to <b>8000</b>. By default, this parameter is left blank.</p>



Parameter	Mandatory	Type	Description
userName	Yes	String	Username of the database. This username is the username entered during the creation of the DWS cluster.
password	Yes	String	Password for accessing the database. This password is the password entered during the creation of the DWS cluster.
sslEnable	Yes	boolean	Specifies whether to enable the SSL connection.
kmsKey	Yes	String	Name of a KMS key. Perform the following operations to obtain the key: <ol style="list-style-type: none"> <li>1. Log in to the management console.</li> <li>2. Click <b>Key Management Service</b> and select <b>Key Management Service</b> from the list on the left.</li> </ol> You can obtain the key name from the key list.
agentName	Yes	String	Name of a CDM cluster. You can obtain the cluster name from the CDM cluster list on the <b>DataArts Migration</b> page of the DataArts Studio console.

**Table 6-5** Spark SQL connection parameters

Parameter	Mandatory	Type	Description
clusterName	Yes	String	Name of an MRS cluster. Perform the following operations to obtain the MRS cluster name: <ol style="list-style-type: none"> <li>1. Log in to the management console.</li> <li>2. Click <b>MapReduce Service</b> and select <b>Active Clusters</b> from the list on the left.</li> </ol> You can obtain the cluster name from the active clusters, such as <b>mrsCluster1</b> .

Parameter	Mandatory	Type	Description
connectionMethod	Yes	String	Method to connect. <ul style="list-style-type: none"> <li>• <b>agent</b>: connected through an agent.</li> <li>• <b>direct</b>: connected directly.</li> </ul>
userName	No	String	Username of the MRS cluster. This parameter is mandatory when <b>connectionMethod</b> is set to <b>agent</b> .
password	No	String	Password for accessing the MRS cluster. This parameter is mandatory when <b>connectionMethod</b> is set to <b>agent</b> .
agentName	No	String	Name of a CDM cluster. This parameter is mandatory when <b>connectionMethod</b> is set to <b>agent</b> . You can obtain the cluster name from the CDM cluster list on the <b>DataArts Migration</b> page of the DataArts Studio console.
kmsKey	No	String	Name of a KMS key. This parameter is mandatory when <b>connectionMethod</b> is set to <b>agent</b> . Perform the following operations to obtain the key: <ol style="list-style-type: none"> <li>1. Log in to the management console.</li> <li>2. Click <b>Key Management Service</b> and select <b>Key Management Service</b> from the list on the left.</li> </ol> You can obtain the key name from the key list.

**Table 6-6** Hive connection parameters

Parameter	Mandatory	Type	Description
clusterName	Yes	String	Name of an MRS cluster, for example, <b>mrsCluster1</b> .
connectionMethod	Yes	String	Method to connect. <ul style="list-style-type: none"> <li>• <b>agent</b>: connected through an agent.</li> <li>• <b>direct</b>: connected directly.</li> </ul>

Parameter	Mandatory	Type	Description
userName	No	String	Username of the MRS cluster. This parameter is mandatory when <b>connectionMethod</b> is set to <b>agent</b> .
password	No	String	Password for accessing the MRS cluster. This parameter is mandatory when <b>connectionMethod</b> is set to <b>agent</b> .
agentName	No	String	Name of a CDM cluster. This parameter is mandatory when <b>connectionMethod</b> is set to <b>agent</b> .  You can obtain the cluster name from the CDM cluster list on the <b>DataArts Migration</b> page of the DataArts Studio console.
kmsKey	No	String	Name of a KMS key. This parameter is mandatory when <b>connectionMethod</b> is set to <b>agent</b> .  Perform the following operations to obtain the key:  1. Log in to the management console. 2. Click <b>Key Management Service</b> and select <b>Key Management Service</b> from the list on the left.  You can obtain the key name from the key list.

**Table 6-7** RDS connection parameters

Parameter	Mandatory	Type	Description
ip	Yes	String	<p>Address for accessing RDS.</p> <p>Perform the following operations to obtain the RDS access address:</p> <ol style="list-style-type: none"> <li>1. Log in to the management console.</li> <li>2. Click <b>Relational Database Service</b> and select <b>Instance Management</b> from the list on the left.</li> <li>3. Click the name of an instance. The basic information page of the instance is displayed.</li> </ol> <p>You can obtain the IP address on the <b>Connection Information</b> tab.</p>
port	Yes	String	<p>Port for accessing RDS.</p> <p>Perform the following operations to obtain the RDS access port:</p> <ol style="list-style-type: none"> <li>1. Log in to the management console.</li> <li>2. Click <b>Relational Database Service</b> and select <b>Instance Management</b> from the list on the left.</li> <li>3. Click the name of an instance. The basic information page of the instance is displayed.</li> </ol> <p>You can obtain the database port on the <b>Connection Information</b> tab page.</p>
userName	Yes	String	<p>Username of the database. This username is the username entered during the creation of the cluster.</p>
password	Yes	String	<p>Password for accessing the database. This password is the password entered during the creation of the cluster.</p>
kmsKey	Yes	String	<p>Name of a KMS key.</p> <p>Perform the following operations to obtain the key:</p> <ol style="list-style-type: none"> <li>1. Log in to the management console.</li> <li>2. Click <b>Key Management Service</b> and select <b>Key Management Service</b> from the list on the left.</li> </ol> <p>You can obtain the key name from the key list.</p>

Parameter	Mandatory	Type	Description
agentName	Yes	String	Name of a CDM cluster. You can obtain the cluster name from the CDM cluster list on the <b>DataArts Migration</b> page of the DataArts Studio console.
driverName	Yes	String	Name of the driver. <ul style="list-style-type: none"><li>• com.mysql.jdbc.Driver</li><li>• org.postgresql.Driver</li></ul>
driverPath	Yes	String	Path of the driver on OBS.

**Table 6-8** CloudTable connection parameters

Parameter	Mandatory	Type	Description
clusterName	Yes	String	Name of a CloudTable cluster. Perform the following operations to obtain the cluster name: <ol style="list-style-type: none"><li>1. Log in to the management console.</li><li>2. Click <b>CloudTable Service</b> and select <b>Cluster Mode</b> from the list on the left.</li></ol> You can obtain the cluster name from the cluster list.

**Table 6-9** HOST connection parameters

Parameter	Mandatory	Type	Description
ip	Yes	String	IP address of the host
port	Yes	String	SSH port number of the host
userName	Yes	String	Username for logging in to the host
password	Yes	String	Password for logging in to the host

Parameter	Mandatory	Type	Description
agentName	Yes	String	Name of a CDM cluster. You can obtain the cluster name from the CDM cluster list on the <b>DataArts Migration</b> page of the DataArts Studio console.
kmsKey	Yes	String	Name of a KMS key. Perform the following operations to obtain the key: <ol style="list-style-type: none"><li>1. Log in to the management console.</li><li>2. Click <b>Key Management Service</b> and select <b>Key Management Service</b> from the list on the left.</li></ol> You can obtain the key name from the key list.

## Response

None.

## Example Request

Create a connection.

- Request  
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/connections  

```
{
  "name": "connection1",
  "type": "DWS",
  "config": {
    "clusterName": "test",
    "userName": "dbadmin",
    "password": "*****",
    "kmsKey": "cdm-dlf",
    "agentName": "cdm-donotdelete",
    "sslEnable": false
  }
}
```

## Example Response

- Success response  
HTTP status code 204
- Failure response  
HTTP status code 400

```
{
  "error_code": "DLF.6309",
  "error_msg": "The name already exists."
}
```

## Status Codes

See [Status Codes](#).

## 6.1.2 Querying a Connection List

### Function

This API is used to query a connection list.

### URI

- URI format  
GET /v1/{project\_id}/connections?  
offset={offset}&limit={limit}&connectionName={connectionName}
- Parameter description

**Table 6-10** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
offset	No	Integer	The value is no less than <b>0</b> . The default value is <b>0</b> .
limit	No	Integer	The maximum number of records on each page. Value range: 1 to 100 Default value: <b>10</b>
connectionName	No	String	Name of a connection.

### Request

**Table 6-11** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

## Response

Parameter	Mandatory	Type	Description
total	Yes	Integer	The total number of connections.
connections	Yes	List<Connections>	Connection list.

**Table 6-12** connections parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Connection name. The name contains a maximum of 100 characters, including only letters, numbers, hyphens (-), and underscores (_). The connection name must be unique.
type	Yes	String	Connection type. <ul style="list-style-type: none"> <li>• DWS</li> <li>• DLI</li> <li>• SparkSQL</li> <li>• HIVE</li> <li>• RDS</li> <li>• CloudTable</li> <li>• HOST</li> </ul>
config	No	Map<String,String>	Connection configuration item. The configuration item varies with the connection type. You do not need to set the <b>config</b> parameter for DLI connections. For other types of connections, see the description of connection configuration items.
description	No	String	Description of the connection. The description contains a maximum of 255 characters.

## Example Request

Query connections.

- Request  
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/connections



## Example Response

- Success response

HTTP status code 200

```
{
  "total":1,
  "connections":[
    {
      "name":"connection1",
      "type":"DWS",
      "config":{
        "clusterName":"test",
        "userName":"dbadmin",
        "password":"*****",
        "kmsKey":"cdm-dlf",
        "agentName":"cdm-donotdelete",
        "sslEnable":false
      }
    }
  ]
}
```

- Failure response

HTTP status code 400

```
{
  "error_code":"DLF.3051",
  "error_msg":"The request parameter is invalid."
}
```

## 6.1.3 Querying Connection Details

### Function

This API is used to query details of a connection.

### URI

- URI format  
GET /v1/{project\_id}/connections/{connection\_name}
- Parameter description

**Table 6-13** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
connection_name	Yes	String	Name of a connection.

## Request

**Table 6-14** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

## Response

**Table 6-15** Connection parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Connection name. The name contains a maximum of 100 characters, including only letters, numbers, hyphens (-), and underscores (_). The connection name must be unique.
type	Yes	String	Connection type. <ul style="list-style-type: none"><li>• DWS</li><li>• DLI</li><li>• SparkSQL</li><li>• HIVE</li><li>• RDS</li><li>• CloudTable</li><li>• HOST</li></ul>
config	No	Map<String,String>	Connection configuration item. The configuration item varies with the connection type. You do not need to set the <b>config</b> parameter for DLI connections. For other types of connections, see the description of connection configuration items.
description	No	String	Description of the connection. The description contains a maximum of 255 characters.

## Example Request

Query connection details.

- Request  
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/connections/connection1

## Example Response

- Success response

HTTP status code 200

```
{
  "name": "connection1",
  "type": "DWS",
  "config": {
    "clusterName": "test",
    "userName": "dbadmin",
    "password": "*****",
    "kmsKey": "cdm-dlf",
    "agentName": "cdm-donotdelete",
    "sslEnable": false
  }
}
```

- Failure response

HTTP status code 400

```
{
  "error_code": "DLF.6322",
  "error_msg": "The data connection does not exist."
}
```

## Status Codes

See [Status Codes](#).

## 6.1.4 Editing a Connection

### Function

This API is used to edit a connection.

### URI

- URI format  
PUT /v1/{project\_id}/connections/{connection\_name}?ischeck=true
- Parameter description

**Table 6-16** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .

Parameter	Mandatory	Type	Description
connection_name	Yes	String	Name of a connection.
ischeck	No	String	Indicates whether to perform check. The default value is <b>No</b> .

## Request

**Table 6-17** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"> <li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>To query data in other workspaces, this header must be carried.</li> </ul>

**Table 6-18** Connection parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Connection name. The name contains a maximum of 100 characters, including only letters, numbers, hyphens (-), and underscores (_). The connection name must be unique.
type	Yes	String	Connection type. <ul style="list-style-type: none"> <li>DWS</li> <li>DLI</li> <li>SparkSQL</li> <li>HIVE</li> <li>RDS</li> <li>CloudTable</li> <li>HOST</li> </ul>

Parameter	Mandatory	Type	Description
config	No	Map<String,String>	Connection configuration item. The configuration item varies with the connection type. You do not need to set the <b>config</b> parameter for DLI connections. For other types of connections, see the description of connection configuration items.
description	No	String	Description of the connection. The description contains a maximum of 255 characters.

## Response

None.

## Example Request

Modify a connection.

- Request

```
PUT /v1/b384b9e9ab9b4ee8994c8633aabc9505/connections/connection1?ischeck=true
{
  "name":"connection1",
  "type":"DWS",
  "config":{
    "clusterName":"test",
    "userName":"dbadmin",
    "password":"*****",
    "kmsKey":"cdm-dlf",
    "agentName":"cdm-donotdelete",
    "sslEnable":false
  }
}
```

## Example Response

- Success response  
HTTP status code 204
- Failure response  
HTTP status code 400

```
{
  "error_code":"DLF.6322",
  "error_msg":"The data connection does not exist."
}
```

## Status Codes

See [Status Codes](#).

## 6.1.5 Deleting a Connection

### Function

This API is used to delete a connection.

### URI

- URI format  
DELETE /v1/{project\_id}/connections/{connection\_name}
- Parameter description

**Table 6-19** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
connection_name	Yes	String	Name of a connection.

### Request

**Table 6-20** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"> <li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>• To query data in other workspaces, this header must be carried.</li> </ul>

### Response

None.

### Example

Delete the connection.

- Request  
DELETE /v1/b384b9e9ab9b4ee8994c8633aabc9505/connections/connection1

- Success response  
HTTP status code 204

## 6.1.6 Exporting a Connection

### Function

This API is used to export all connection information that is compressed in ZIP format.

### URI

- URI format  
POST /v1/{project\_id}/connections/export
- Parameter description

**Table 6-21** URI parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .

### Request

**Table 6-22** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

### Response

The value of **Content-Type** in the response message is **application/octet-stream** that needs to be converted into a file. For details, see [Parsing a Stream in a Response Message](#). Response messages are compressed as a file. The file name format is **DLF\_All\_DataConnections.zip**. The file directory is as follows:

```
connections
├──{dwsConnection}.conn
```

## Example

Export a connection.

- Request  
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/connections/export
- Success response  
HTTP status code 200  
Response messages are compressed as a file. The file directory is as follows:  
connections  
└─{dwsConnection}.conn
- Failure response  
HTTP status code 400  

```
{
  "error_code":"DLF.6322",
  "error_msg":"The data connection does not exist."
}
```

## Status Codes

See [Status Codes](#).

## 6.2 Script Development APIs

### 6.2.1 Deleting a Script

#### Function

This API is used to delete a specific script.

#### URI

- URI format  
DELETE /v1/{project\_id}/scripts/{script\_name}
- Parameter description

**Table 6-23** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
script_name	Yes	String	Script name.



## Request

**Table 6-24** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>To query data in other workspaces, this header must be carried.</li></ul>

## Response

None.

## Example

- Request  
DELETE /v1/b384b9e9ab9b4ee8994c8633aabc9505/scripts/echoTime
- Success response  
HTTP status code 204
- Failure response  
HTTP status code 400  

```
{  
  "error_code": "DLF.6201",  
  "error_msg": "The script does not exist."  
}
```

## Status Codes

See [Status Codes](#).

## 6.2.2 Executing a Script

### Function

This API is used to execute a specific script, which can be a DWS SQL, DLI SQL, RDS SQL, Flink SQL, Hive SQL, Presto SQL, or Spark SQL script. A script instance is generated each time the script is executed. You can call the API [Querying the Execution Result of a Script Instance](#) to obtain script execution results.

### URI

- URI format  
POST /v1/{project\_id}/scripts/{script\_name}/execute
- Parameter description

**Table 6-25** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
script_name	Yes	String	Script name.

## Request

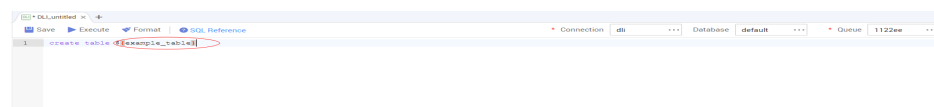
**Table 6-26** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"> <li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>To query data in other workspaces, this header must be carried.</li> </ul>

**Table 6-27** Parameters

Parameter	Mandatory	Type	Description
params	No	Object	Script parameters of the Map<String,String> type. If a parameter is defined in the script, the parameter value is carried in the params. By default, this parameter is left blank.

Script parameters refer to the parameters in the script content, as shown in the following figure.



## Response

**Table 6-28** Response parameters

Parameter	Mandatory	Type	Description
instanceId	Yes	String	ID of the instance that executes the script. You can obtain the execution result by using the instance ID in <a href="#">Querying the Execution Result of a Script Instance</a> .

## Example Request

- Request  
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/scripts/dws\_sql/execute  
{  
  "params":{"tableVar":"citys",  
  "time":"2019-07-25"}  
}

## Example Response

- Success response  
HTTP status code 200
- Failure response  
HTTP status code 400  
{  
  "error\_code":"DLF.6201",  
  "error\_msg":"The script does not exist."  
}

## Status Codes

See [Status Codes](#).

## 6.2.3 Stopping Executing a Script Instance

### Function

This API is used to stop executing a script instance.

### URI

- URI format  
POST /v1/{project\_id}/scripts/{script\_name}/instances/{instance\_id}/stop
- Parameter description

**Table 6-29** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
script_name	Yes	String	Script name.
instance_id	Yes	String	ID of the script instance.

## Request

**Table 6-30** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"> <li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>To query data in other workspaces, this header must be carried.</li> </ul>

## Response

None.

## Example

- Request  
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/scripts/dwscript/instances/a1ad-448a-9d56-4154193d49c5/stop
- Success response  
HTTP status code 204
- Failure response  
HTTP status code 400  

```
{
  "error_code": "DLF.6205",
  "error_msg": "The script running history does not exist."
}
```

## Status Codes

See [Status Codes](#).

## 6.3 Resource Management APIs

### 6.3.1 Deleting a Resource

#### Function

This API is used to delete a resource.

#### URI

- URI format  
DELETE /v1/{project\_id}/resources/{resource\_id}
- Parameter description

**Table 6-31** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
resource_id	Yes	String	Resource ID. For details about how to obtain the resource ID, see <a href="#">Querying a Resource List</a> . The returned ID is <b>resource_id</b> .

#### Request

**Table 6-32** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

#### Response

None.

## Example

- Request  
DELETE /v1/b384b9e9ab9b4ee8994c8633aabc9505/resources/3624d1c3-5df5-4f20-9af9-98eadad6c5f9
- Success response  
HTTP status code 204
- Failure response  
HTTP status code 400  

```
{
  "error_code": "DLF.6241",
  "error_msg": "The resource information does not exist."
}
```

## Status Codes

See [Status Codes](#).

# 6.4 Job Development APIs

## 6.4.1 Viewing a Job File

### Function

This API is used to check whether there are jobs and scripts in the job file to be imported from OBS to DLF.

### URI

- URI format  
POST /v1/{project\_id}/jobs/check-file
- Parameter description

**Table 6-33** URI parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .

## Request

**Table 6-34** Request parameters

Parameter	Mandatory	Type	Description
path	No	String	If OBS is deployed, the job definition file is stored on OBS, for example, obs://myBucket/jobs.zip.

## Response

**Table 6-35** Response parameters

Parameter	Mandatory	Type	Description
jobs	No	List<Job>	Job information. For details, see <a href="#">Table 6-36</a> .
scripts	No	List<Script>	Script information. For details, see <a href="#">Table 6-37</a> .

**Table 6-36** job data structure description

Parameter	Mandatory	Type	Description
params	No	Map<String,String>	Job parameter.
name	Yes	String	Job name.
path	Yes	String	Path of the job.

**Table 6-37** Data structure description of **Script**

Parameter	Mandatory	Type	Description
name	Yes	String	Script name.
path	Yes	String	Path of the script.

**Table 6-38** Data structure description of **Resource**

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the resource.
status	Yes	Int	Resource status. <b>0</b> indicates that the resource does not exist; <b>1</b> indicates that the resource exists.
type	Yes	String	Resource type. <ul style="list-style-type: none"> <li>• DWS_CLUSTER</li> <li>• DWS_CONNECTION</li> <li>• DLI_QUEUE</li> <li>• DLI_CONNECTION</li> <li>• CDM_CLUSTER</li> <li>• GES_GRAPH</li> </ul>

### Example Request

Query the parameter definitions in the job file on OBS.

- Request

```
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/check-file
{
  "path": "obs://aaaaa/DLF_myJob.zip"
}
```

### Example Response

- Success response

```
{
  "jobs":[
    {
      "name":"test",
      "path":"/test",
      "params":{
        "ddd":"dddd"
      }
    },
    {
      "name":"test1",
      "path":"/test",
      "params":{
        "ddd":"dddd"
      }
    }
  ],
  "scripts":[
    {
      "name":"script1",
      "path":"/path1"
    },
    {
      "name":"script2",
      "path":"/path1"
    }
  ]
}
```



```
]
}
```

- Failure response

HTTP status code 400

```
{
  "error_code": "DLF0815",
  "error_msg": "Fail to read OBS file."
}
```

## Status Codes

See [Status Codes](#).

## 6.4.2 Stopping a Job

### Function

This API is used to stop a job.

### URI

- URI format  
POST /v1/{project\_id}/jobs/{job\_name}/stop
- Parameter description

**Table 6-39** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
job_name	Yes	String	Job name.

### Request

**Table 6-40** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

## Response

None.

## Example

Stops job **myJob**.

- Request  
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/myJob/stop
- Success response  
HTTP status code 204
- Failure response  
HTTP status code 400

```
{  
  "error_code": "DLF.0100",  
  "error_msg": "The job does not exists."  
}
```

## 6.4.3 Deleting a Job

### Function

This API is used to delete a job.

### URI

- URI format  
DELETE /v1/{project\_id}/jobs/{job\_name}
- Parameter description

**Table 6-41** URI parameters

Parameter	Man dator y	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
job_name	Yes	String	Job name.

## Request

**Table 6-42** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>To query data in other workspaces, this header must be carried.</li></ul>

## Response

None.

## Example

- Request  
DELETE /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/job\_a
- Response  
HTTP status code 204
- Failure response  
HTTP status code 400

```
{  
  "error_code": "DLF.0100",  
  "error_msg": "The job does not exists."  
}
```

## Status Codes

See [Status Codes](#).

## 6.4.4 Stopping a Job Instance

### Function

This API is used to stop a specific job instance. A job instance can be stopped only when it is in the running state.

### URI

- URI format  
POST /v1/{project\_id}/jobs/{job\_name}/instances/{instance\_id}/stop
- Parameter description

**Table 6-43** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
job_name	Yes	String	Job name.
instance_id	Yes	Long	Job instance ID. For details about how to obtain it, see <a href="#">Viewing a Job Instance List</a> .

## Request

**Table 6-44** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>To query data in other workspaces, this header must be carried.</li></ul>

## Response

None.

## Example

- Request  
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/job\_batch/instances/34765/stop
- Success response  
HTTP status code 204
  - Failure response  
HTTP status code 400

```
{
  "error_code": "DLF.0137",
  "error_msg": "Job instance does not exist."
}
```

## 6.4.5 Retrying a Job Instance

### Function

This API is used to retry a specific job instance. A job instance can be retried only when it is in the successful, failed, or canceled state.

### URI

- URI format  
POST /v1/{project\_id}/jobs/{job\_name}/instances/{instance\_id}/restart
- Parameter description

**Table 6-45** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
job_name	Yes	String	Job name.
instance_id	Yes	Long	Job instance ID. For details about how to obtain it, see <a href="#">Viewing a Job Instance List</a> .

### Request

**Table 6-46** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

### Response

None.

### Example

- Request

```
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/job_batch/instances/34765/restart
```

- Response

HTTP status code 204

- Failure response

HTTP status code 400

```
{
  "error_code": "DLF.0137",
  "error_msg": "Job instance does not exist."
}
```

## 6.5 APIs to Be Taken Offline

### 6.5.1 Creating a Job

#### Function

This API is used to create a job. A job consists of one or more nodes, such as Hive SQL and CDM Job nodes. DLF supports two types of jobs: batch jobs and real-time jobs.

#### URI

- URI format  
POST /v1/{project\_id}/jobs
- Parameter description

**Table 6-47** URI parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .

## Request

**Table 6-48** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	<p>Workspace ID.</p> <ul style="list-style-type: none"> <li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>To query data in other workspaces, this header must be carried.</li> </ul>

**Table 6-49** Parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Job name. The name contains a maximum of 128 characters, including only letters, numbers, hyphens (-), underscores (_), and periods (.). The job name must be unique.
nodes	Yes	List<Node>	Node definition. For details, see <a href="#">Table 6-50</a> .
schedule	Yes	Schedule data structure	Scheduling configuration. For details, see <a href="#">Table 6-51</a> .
params	No	List<Param>	Job parameter definition. For details, see <a href="#">Table 6-52</a> .
directory	No	String	Directory for saving the job. The value must be an existing directory, for example, /dir/a/. The default value is the <b>root</b> directory.
processType	Yes	String	<p>Job type.</p> <ul style="list-style-type: none"> <li><b>REAL_TIME</b>: real-time processing</li> <li><b>BATCH</b>: batch processing</li> </ul>
basicConfig	No	BasicConfig data structure	Basic job information. For details, see <a href="#">Table 6-73</a> .

**Table 6-50** Node data structure description

Parameter	Mandatory	Type	Description
name	Yes	String	Node name. The name contains a maximum of 128 characters, including only letters, numbers, hyphens (-), underscores (_), and periods (.). Names of the nodes in a job must be unique.
type	Yes	String	Node type. The options are as follows: <ul style="list-style-type: none"> <li>● <b>Hive SQL</b>: Runs Hive SQL scripts.</li> <li>● <b>Spark SQL</b>: Runs Spark SQL scripts.</li> <li>● <b>DWS SQL</b>: Runs DWS SQL scripts.</li> <li>● <b>DLISQL</b>: Runs DLI SQL scripts.</li> <li>● <b>Shell</b>: Runs shell SQL scripts.</li> <li>● <b>CDM Job</b>: Runs CDM jobs.</li> <li>● <b>CloudTable Manager</b>: Manages CloudTable tables, including creating and deleting tables.</li> <li>● <b>OBS Manager</b>: Manages OBS paths, including creating and deleting paths.</li> <li>● <b>RESTAPI</b>: Sends REST API requests.</li> <li>● <b>SMN</b>: Sends short messages or emails.</li> <li>● <b>MRS Spark</b>: Runs Spark jobs of MRS.</li> <li>● <b>MapReduce</b>: Runs MapReduce jobs of MRS.</li> <li>● <b>DLI Spark</b>: Runs Spark jobs of DLF.</li> <li>● <b>RDS SQL</b>: Transfers SQL statements to RDS for execution.</li> </ul>
location	Yes	Location data structure	Location of a node on the job canvas. For details, see <a href="#">Table 6-53</a> .
preNodeName	No	List<String>	Name of the previous node on which the current node depends.
conditions	No	List<Condition>	Node execution condition. Whether the node is executed or not depends on the calculation result of the EL expression saved in the expression field of condition. For details, see <a href="#">Table 6-54</a> .



Parameter	Mandatory	Type	Description
properties	Yes	List	<p>Node property. Each type of node has its own property definition.</p> <ul style="list-style-type: none"> <li>• Hive SQL: For details, see <a href="#">Table 6-60</a>.</li> <li>• Spark SQL: For details, see <a href="#">Table 6-61</a>.</li> <li>• DWS SQL: For details, see <a href="#">Table 6-62</a>.</li> <li>• DLI SQL: For details, see <a href="#">Table 6-63</a>.</li> <li>• Shell: For details, see <a href="#">Table 6-64</a>.</li> <li>• CDM Job: For details, see <a href="#">Table 6-65</a>.</li> <li>• CloudTableManager: For details, see <a href="#">Table 6-66</a>.</li> <li>• OBSManager: For details, see <a href="#">Table 6-67</a>.</li> <li>• RESTAPI: For details, see <a href="#">Table 6-68</a>.</li> <li>• SMN: For details, see <a href="#">Table 6-69</a>.</li> <li>• MRS Spark: For details, see <a href="#">Table 6-70</a>.</li> <li>• MapReduce: For details, see <a href="#">Table 6-71</a>.</li> <li>• DLI Spark: For details, see <a href="#">Table 6-72</a>.</li> </ul>
pollingInterval	No	Int	<p>Interval at which node running results are checked.</p> <p>Unit: second; value range: 1 to 60</p> <p>Default value: <b>10</b></p>
maxExecutionTime	No	Int	<p>Maximum execution time of a node. If a node is not executed within the maximum execution time, the node is set to the failed state.</p> <p>Unit: minute; value range: 5 to 1440</p> <p>Default value: <b>60</b></p>
retryTimes	No	Int	<p>Number of the node retries. The value ranges from 0 to 5. <b>0</b> indicates no retry.</p> <p>Default value: <b>0</b></p>
retryInterval	No	Int	<p>Interval at which a retry is performed upon a failure. The value ranges from 5 to 120.</p> <p>Unit: second</p> <p>Default value: <b>120</b></p>

Parameter	Mandatory	Type	Description
failPolicy	No	String	Node failure policy. <ul style="list-style-type: none"> <li>● <b>FAIL</b>: Terminate the execution of the current job.</li> <li>● <b>IGNORE</b>: Continue to execute the next node.</li> <li>● <b>SUSPEND</b>: Suspend the execution of the current job.</li> <li>● <b>FAIL_CHILD</b>: Terminate the execution of the subsequent node. The default value is <b>FAIL</b>.</li> </ul>
eventTrigger	No	Event data structure	Event trigger for the real-time job node. For details, see <a href="#">Table 6-57</a> .
cronTrigger	No	Cron data structure	Cron trigger for the real-time job node. For details, see <a href="#">Table 6-55</a> .

**Table 6-51** Schedule data structure description

Parameter	Mandatory	Type	Description
type	Yes	String	Scheduling type. <ul style="list-style-type: none"> <li>● <b>EXECUTE_ONCE</b>: The job runs immediately and runs only once.</li> <li>● <b>CRON</b>: The job runs periodically.</li> <li>● <b>EVENT</b>: The job is triggered by events.</li> </ul>
cron	No	Data structure	When <b>type</b> is set to <b>CRON</b> , configure the scheduling frequency and start time. For details, see <a href="#">Table 6-56</a> .
event	No	Data structure	When <b>type</b> is set to <b>EVENT</b> , configure information such as the event source. For details, see <a href="#">Table 6-57</a> .

**Table 6-52** Param data structure description

Parameter	Mandatory	Type	Description
name	Yes	String	Name of a parameter. The name contains a maximum of 64 characters, including only letters, numbers, hyphens (-), and underscores (_).

Parameter	Mandatory	Type	Description
value	Yes	String	Value of the parameter. It cannot exceed 1024 characters.
type	No	String	Parameter type. <ul style="list-style-type: none"> <li>• variable</li> <li>• constants</li> </ul> Default value: <b>variable</b>

**Table 6-53** Location data structure description

Parameter	Mandatory	Type	Description
x	Yes	Int	Position of the node on the horizontal axis of the job canvas.
y	Yes	Int	Position of the node on the vertical axis of the job canvas.

**Table 6-54** condition data structure description

Parameter	Mandatory	Type	Description
preNodeName	Yes	String	Name of the previous node on which the current node depends.
expression	Yes	String	EL expression. If the calculation result of the EL expression is true, this node is executed.

**Table 6-55** CronTrigger data structure description

Parameter	Mandatory	Type	Description
startTime	Yes	String	Scheduling start time in the format of yyyy-MM-dd'T'HH:mm:ssZ, which is an ISO 8601 time format. For example, 2018-10-22T23:59:59+08, which indicates that a job starts to be scheduled at 23:59:59 on October 22nd, 2018.

Parameter	Mandatory	Type	Description
endTime	No	String	Scheduling end time in the format of yyyy-MM-dd'T'HH:mm:ssZ, which is an ISO 8601 time format. For example, 2018-10-22T23:59:59+08, which indicates that a job stops to be scheduled at 23:59:59 on October 22nd, 2018. If the end time is not set, the job will continuously be executed based on the scheduling period.
expression	Yes	String	Cron expression in the format of <second><minute><hour><day><month>><week>. For details about the value input in each field, see <a href="#">Table 6-58</a> .
expressionTime Zone	No	String	Time zone corresponding to the Cron expression, for example, GMT+8. Default value: time zone where DataArts Studio is located
period	Yes	String	Job execution interval consisting of a time and time unit Example: <b>1 hours, 1 days, 1 weeks, 1 months</b> The value must match the value of <b>expression</b> .
dependPrePeriod	No	Boolean	Indicates whether to depend on the execution result of the current job's dependent job in the previous scheduling period. Default value: false
dependJobs	No	DependJobs data structure	Job dependency configuration. For details, see <a href="#">Table 6-59</a> .
concurrent	No	Integer	Number of concurrent executions allowed

**Table 6-56** Cron data structure description

Parameter	Mandatory	Type	Description
startTime	Yes	String	Scheduling start time in the format of yyyy-MM-dd'T'HH:mm:ssZ, which is an ISO 8601 time format. For example, 2018-10-22T23:59:59+08, which indicates that a job starts to be scheduled at 23:59:59 on October 22nd, 2018.
endTime	No	String	Scheduling end time in the format of yyyy-MM-dd'T'HH:mm:ssZ, which is an ISO 8601 time format. For example, 2018-10-22T23:59:59+08, which indicates that a job stops to be scheduled at 23:59:59 on October 22nd, 2018. If the end time is not set, the job will continuously be executed based on the scheduling period.
expression	Yes	String	Cron expression in the format of <second><minute><hour><day><month><week>. For details about the value input in each field, see <a href="#">Table 6-58</a> .
expressionTime Zone	No	String	Time zone corresponding to the Cron expression, for example, GMT+8. Default value: time zone where DataArts Studio is located
dependPrePeriod	No	Boolean	Indicates whether to depend on the execution result of the current job's dependent job in the previous scheduling period. Default value: false
dependJobs	No	DependJobs data structure	Job dependency configuration. For details, see <a href="#">Table 6-59</a> .

**Table 6-57** Event data structure description

Parameter	Mandatory	Type	Description
eventType	Yes	String	<p>Select the corresponding connection name and topic. When a new Kafka message is received, the job is triggered. Set this parameter to <b>KAFKA</b>.</p> <p>Event type. Currently, only newly reported data events from the DIS stream can be monitored. Each time a data record is reported, the job runs once.</p> <p>This parameter is set to <b>DIS</b>.</p> <p>Select the OBS path to be listened to. If new files exist in the path, scheduling is triggered. The path name can be referenced using variable Job.trigger.obsNewFiles. The prerequisite is that DIS notifications have been configured for the OBS path. Set this parameter to <b>OBS</b>.</p>
failPolicy	No	String	<p>Job failure policy.</p> <ul style="list-style-type: none"> <li>• <b>SUSPEND</b>: Suspend the event.</li> <li>• <b>IGNORE</b>: Ignore the failure and process with the next event.</li> </ul> <p>Default value: <b>SUSPEND</b></p>
concurrent	No	int	<p>Number of the concurrently scheduled jobs.</p> <p>Value range: 1 to 128</p> <p>Default value: <b>1</b></p>
readPolicy	No	String	<p>Access policy.</p> <ul style="list-style-type: none"> <li>• <b>LAST</b>: Access data from the last location.</li> <li>• <b>NEW</b>: Access data from a new location.</li> </ul> <p>Default value: <b>LAST</b></p>

**Table 6-58** Values in the Cron expression fields

Field	Value Range	Allowed Special Character	Description
Second	0-59	, - * /	In the current version, only <b>0</b> is allowed.
Minute	0-59	, - * /	-
Hour	0-23	, - * /	-
Day	1-31	, - * ? / L W C	-
Month	1-12	, - * /	In the current version, only <b>*</b> is allowed.
Week	1-7	, - * ? / L C #	Starting from Sunday.

**Table 6-59** DependJobs data structure description

Parameter	Mandatory	Type	Description
jobs	Yes	List<String >	A list of dependent jobs. Only the existing jobs can be depended on.
dependPeriod	No	String	<p>Dependency period.</p> <ul style="list-style-type: none"> <li>• <b>SAME_PERIOD</b>: To run a job or not depends on the execution result of its depended job in the current scheduling period.</li> <li>• <b>PRE_PERIOD</b>: To run a job or not depends on the execution result of its depended job in the previous scheduling period.</li> </ul> <p>Default value: SAME_PERIOD</p>
dependFailPolicy	No	String	<p>Dependency job failure policy.</p> <ul style="list-style-type: none"> <li>• <b>FAIL</b>: Stop the job and set the job to the failed state.</li> <li>• <b>IGNORE</b>: Continue to run the job.</li> <li>• <b>SUSPEND</b>: Suspend the job.</li> </ul> <p>Default value: <b>FAIL</b></p>

**Table 6-60** Parameters of the Hive SQL node

Parameter	Mandatory	Type	Description
scriptName	Yes	String	Script name.
database	No	String	Database name. Database in the MRS Hive. The default value is <b>default</b> .
connectionName	No	String	Name of a connection.
scriptArgs	No	String	Script parameter in format of key and value. Multiple parameters are separated by newlines (\n), for example, <b>key1=value1\nkey2=value2</b> .

**Table 6-61** Parameters of the Spark SQL node

Parameter	Mandatory	Type	Description
scriptName	Yes	String	Script name.
database	No	String	Database name. Database in the MRS Spark SQL. The default value is <b>default</b> .
connectionName	No	String	Name of a connection.
scriptArgs	No	String	Script parameter in format of key and value. Multiple parameters are separated by newlines (\n), for example, <b>key1=value1\nkey2=value2</b> .

**Table 6-62** Parameters of the DWS SQL node

Parameter	Mandatory	Type	Description
scriptName	Yes	String	Script name.
database	No	String	Database name. Database in DWS. The default value is <b>postgres</b> .
connectionName	No	String	Name of a connection.



Parameter	Mandatory	Type	Description
scriptArgs	No	String	Script parameter in format of key and value. Multiple parameters are separated by newlines (\n), for example, <b>key1=value1\nkey2=value2</b> .

**Table 6-63** Parameters of the DLI SQL node

Parameter	Mandatory	Type	Description
scriptName	Yes	String	Script name.
database	No	String	Database name. Database in DLI.
connectionName	No	String	Name of a connection.
scriptArgs	No	String	Script parameter in format of key and value. Multiple parameters are separated by newlines (\n), for example, <b>key1=value1\nkey2=value2</b> .

**Table 6-64** Parameters of the shell node

Parameter	Mandatory	Type	Description
scriptName	Yes	String	Script name.
connectionName	Yes	String	Name of a connection.
arguments	No	String	Shell script parameter.

**Table 6-65** Parameters of the CDM Job node

Parameter	Mandatory	Type	Description
clusterName	Yes	String	Cluster name. You can obtain the cluster name from the CDM cluster list on the <b>DataArts Migration</b> page of the DataArts Studio console.

Parameter	Mandatory	Type	Description
jobName	Yes	String	Job name. To obtain the job name, access the DataArts Studio console, choose <b>DataArts Migration</b> , click a cluster name on the <b>Cluster Management</b> page, and click <b>Job Management</b> on the displayed page.

**Table 6-66** Parameters of the CloudTableManager node

Parameter	Mandatory	Type	Description
namespace	No	String	Namespace. Default value: default
action	Yes	String	Action type. <ul style="list-style-type: none"> <li>• <b>CREATE_TABLE</b>: Create a table.</li> <li>• <b>DELETE_TABLE</b>: Delete a table.</li> </ul>
table	No	String	Table name.
columnFamily	No	String	Column family.

**Table 6-67** Parameters of the OBSManager node

Parameter	Mandatory	Type	Description
action	Yes	String	Action type. <ul style="list-style-type: none"> <li>• <b>CREATE_PATH</b>: Create an OBS path.</li> <li>• <b>DELETE_PATH</b>: Delete an OBS path.</li> </ul>
path	Yes	String	OBS path.

**Table 6-68** Parameters of the RESTAPI node

Parameter	Mandatory	Type	Description
url	Yes	String	URL address. URL of the cloud service.

Parameter	Mandatory	Type	Description
method	Yes	String	HTTP method. <ul style="list-style-type: none"><li>• GET</li><li>• POST</li><li>• PUT</li><li>• DELETE</li></ul>
headers	No	String	HTTP message header in the format of <message header name>=<value>. Multiple message headers are separated by newlines.
body	No	String	Message body.

**Table 6-69** Parameters of the SMN node

Parameter	Mandatory	Type	Description
topic	Yes	String	SMN topic URN. Perform the following operations to obtain an SMN topic URN: <ol style="list-style-type: none"><li>1. Log in to the management console.</li><li>2. Click <b>Simple Message Notification</b> and choose <b>Topic Management &gt; Topics</b> from the list on the left.</li></ol> You can obtain the SMN topic URN in the topic list.
subject	Yes	String	Message title, which is used as the subject of an email sent to a subscriber.
messageType	Yes	String	Message type. <ul style="list-style-type: none"><li>• NORMAL</li><li>• STRUCTURE</li><li>• TEMPLATE</li></ul>
message	Yes	String	Message to be sent.

**Table 6-70** Parameters of the MRS Spark node

Parameter	Mandatory	Type	Description
clusterName	Yes	String	MRS cluster name. Perform the following operations to obtain the MRS cluster name: 1. Log in to the management console. 2. Click <b>MapReduce Service</b> and choose <b>Clusters &gt; Active Clusters</b> from the left navigation pane. You can obtain the cluster name from the active clusters.
jobName	Yes	String	MRS job name. The job name is user-defined.
resourcePath	Yes	String	OBS resource path of the custom Spark JAR package
parameters	Yes	String	Custom parameters of the Spark JAR package You can specify parameters for a custom JAR package.
input	No	String	Input path. Input data path of the MRS Spark job. The path can be an HDFS or OBS path.
output	No	String	Output path. Output data path of the MRS Spark job. The path can be an HDFS or OBS path.
programParameter	No	String	Program parameter Multiple key-value pairs are allowed and separated by vertical bars ( ).

**Table 6-71** Parameters of the MapReduce node

Parameter	Mandatory	Type	Description
clusterName	Yes	String	MRS cluster name. Perform the following operations to obtain the MRS cluster name: <ol style="list-style-type: none"><li>1. Log in to the management console.</li><li>2. Click <b>MapReduce Service</b> and choose <b>Clusters &gt; Active Clusters</b> from the left navigation pane.</li></ol> You can obtain the cluster name from the active clusters.
jobName	Yes	String	MRS job name. The job name is user-defined.
resourcePath	Yes	String	Resource path.
parameters	Yes	String	Job parameter.
input	Yes	String	Input path. Input data path of the MapReduce job. The path can be an HDFS or OBS path.
output	Yes	String	Output path. Output data path of the MapReduce job. The path can be an HDFS or OBS path.

**Table 6-72** Parameters of the DLI Spark node

Parameter	Mandatory	Type	Description
clusterName	Yes	String	DLI queue name Perform the following operations to obtain the DLI queue name: <ol style="list-style-type: none"><li>1. Log in to the management console.</li><li>2. Click <b>Data Lake Insight</b> and then <b>Queue Management</b>.</li></ol> You can obtain the queue name from the queue management list.

Parameter	Mandatory	Type	Description
jobName	Yes	String	DLI job name. Perform the following operations to obtain the job name: <ol style="list-style-type: none"><li>1. Log in to the management console.</li><li>2. Click <b>Data Lake Insight</b> and then <b>Spark Jobs</b>.</li><li>3. Choose <b>Job Management</b>.</li></ol> You can obtain the job name from the job management list.
resourceType	No	String	Resource type of the DLI job. <b>CUSTOMIZED</b> is returned when the parameter is customized.
jobClass	No	String	Main class name. When the application type is <b>.jar</b> , the main class name cannot be empty.
resourcePath	Yes	String	JAR package resource path.
jarArgs	No	String	Main-class entry parameter.
sparkConfig	No	String	Running parameter of the Spark job.

**Table 6-73** BasicConfig job information

Parameter	Mandatory	Type	Description
owner	No	String	Job owner. The length cannot exceed 128 characters.
priority	No	int	Job priority. The value ranges from 0 to 2. The default value is <b>0</b> . <b>0</b> indicates a top priority, <b>1</b> indicates a medium priority, and <b>2</b> indicates a low priority.
executeUser	No	String	Job execution user. The value must be an existing username.
instanceTimeout	No	int	Instance timeout interval. The unit is minute. The value ranges from 5 to 1440. The default value is <b>60</b> .
customFields	No	Map<String,String>	User-defined field. The length cannot exceed 2048 characters.

## Response

None.

## 6.5.2 Editing a Job

### Function

This API is used to edit a job.

### URI

- URI format  
PUT /v1/{project\_id}/jobs/{job\_name}
- Parameter description

**Table 6-74** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
job_name	Yes	String	Job name.

### Request

See [Request](#).

### Example

Modify the properties of job **dliJob1**.

- Request  

```
PUT /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/dliJob1
{
  "logPath":"obs://dlf-log-b384b9e9ab9b4ee8994c8633aabc9505",
  "name":"dliJob1",
  "nodes":[
    {
      "failPolicy":"FAIL",
      "location":{
        "x":"385.0",
        "y":"150.0"
      },
      "maxExecutionTime":60,
      "name":"DIS_INPUT",
      "pollingInterval":1,
      "preNodeName":[],
      "properties":[
        {
          "name":"streamName",
          "value":"csinput"
        }
      ]
    }
  ],
}
```

```
"resources":[],
"retryInterval":120,
"retryTimes":0,
"type":"DISStream"
},
{
  "failPolicy":"FAIL",
  "location":{
    "x":572.0,
    "y":151.0
  },
  "maxExecutionTime":60,
  "name":"CS_PROCESS",
  "pollingInterval":10,
  "preNodeName":[
    "DIS_INPUT"
  ],
  "properties":[
    {
      "name":"scriptName",
      "value":"CS_PROCESS_TRIP"
    },
    {
      "name":"jobName",
      "value":"CS_PROCESS"
    },
    {
      "name":"jobType",
      "value":"flink_sql_job"
    },
    {
      "name":"spuNumber",
      "value":2
    },
    {
      "name":"parallelNumber",
      "value":1
    }
  ],
  "resources":[],
  "retryInterval":120,
  "retryTimes":0,
  "type":"CSJob"
},
{
  "failPolicy":"FAIL",
  "location":{
    "x":718.0,
    "y":121.0
  },
  "maxExecutionTime":60,
  "name":"DIS_EVENT",
  "pollingInterval":1,
  "preNodeName":[
    "CS_PROCESS"
  ],
  "properties":[
    {
      "name":"streamName",
      "value":"dis-event"
    }
  ],
  "resources":[],
  "retryInterval":120,
  "retryTimes":0,
  "type":"DISStream"
},
{
  "eventTrigger":{
```



```
    "channel":"dis-event",
    "concurrent":1,
    "eventType":"DIS",
    "readPolicy":"LAST"
  },
  "failPolicy":"FAIL",
  "location":{
    "x":"848.0",
    "y":"167.0"
  },
  "maxExecutionTime":60,
  "name":"TRIP_RAW_STANDARD",
  "pollingInterval":10,
  "preNodeName":[
    "DIS_EVENT"
  ],
  "properties":[
    {
      "name":"scriptName",
      "value":"TRIP_RAW_STANDARD"
    },
    {
      "name":"database",
      "value":"lixinlong"
    },
    {
      "name":"queueName",
      "value":"default"
    }
  ],
  "resources":[],
  "retryInterval":120,
  "retryTimes":0,
  "type":"DLISQL"
}
],
"params":[
  {
    "name":"dis_channel",
    "value":"dis_input"
  }
],
"processType":"REAL_TIME",
"resources":[],
"schedule":{
  "type":"EXECUTE_ONCE"
},
"version":"1.0"
}
```

- Success response  
HTTP status code 204
- Failure response  
HTTP status code 400

```
{
  "error_code":"DLF.0100",
  "error_msg":"The job does not exists."
}
```

## 6.5.3 Viewing a Job List

### Function

This API is used to query a list of batch or real-time jobs. A maximum of 1000 jobs can be returned for each query.

## URI

- URI format  
GET /v1/{project\_id}/jobs?  
jobType={jobType}&offset={offset}&limit={limit}&jobName={jobName}
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
jobType	No	String	Job type. <ul style="list-style-type: none"> <li>• <b>REAL_TIME</b>: real-time processing</li> <li>• <b>BATCH</b>: batch processing</li> </ul> Default value: <b>BATCH</b>
offset	No	Integer	Start page of the paging list. Default value: <b>0</b> The value must be greater than or equal to <b>0</b> .
limit	No	Integer	The maximum number of records on each page. Value range: 1 to 100 Default value: <b>10</b>
jobName	No	String	Job name.

## Request

**Table 6-75** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"> <li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>• To query data in other workspaces, this header must be carried.</li> </ul>

## Response

**Table 6-76** Response parameters

Parameter	Mandatory	Type	Description
total	Yes	Integer	Number of jobs.
jobs	Yes	List<Job>	Job list. For details, see <a href="#">Table 6-77</a> .

**Table 6-77** Job data structure description

Parameter	Mandatory	Type	Description
name	Yes	String	Job name.
jobType	Yes	String	Job type. <ul style="list-style-type: none"> <li>● <b>REAL_TIME</b>: real-time processing</li> <li>● <b>BATCH</b>: batch processing</li> </ul>
status	Yes	String	Job status. When <b>jobType</b> is set to <b>REAL_TIME</b> , the status is as follows: <ul style="list-style-type: none"> <li>● STARTING</li> <li>● NORMAL</li> <li>● EXCEPTION</li> <li>● STOPPING</li> <li>● STOPPED</li> </ul> When <b>jobType</b> is set to <b>BATCH</b> , the status is as follows: <ul style="list-style-type: none"> <li>● <b>SCHEDULING</b></li> <li>● <b>STOPPED</b></li> <li>● <b>PAUSED</b></li> </ul>
createUser	Yes	String	Job creator.
createTime	Yes	Long	Time when the job is created.
startTime	No	Long	Time when the job starts to run.
endTime	No	Long	Time when the job stops to run.
lastInstanceStatus	No	String	Most recent running status of the job instance. This parameter is available only when <b>jobType</b> is set to <b>BATCH</b> .

Parameter	Mandatory	Type	Description
lastInstanceEndTime	No	Long	Time when the most recent job instance stops to run. This parameter is available only when <b>jobType</b> is set to <b>BATCH</b> .

## Example

View a batch or real-time job list.

- Request

```
GET /v1/ff6b627b9d7b45b48f773be511c1a2b8/jobs?jobType=REAL_TIME
```

- Response

```
{
  "jobs": [
    {
      "createTime": 1551668561000,
      "createUser": "dlf_100341563",
      "jobType": "REAL_TIME",
      "lastInstanceEndTime": 1551692047000,
      "lastInstanceStatus": "success",
      "name": "wangwei_stream",
      "startTime": 1551692037000
    },
    {
      "createTime": 1551109987000,
      "createUser": "dlf_100341563",
      "jobType": "REAL_TIME",
      "lastInstanceEndTime": 1551112382000,
      "lastInstanceStatus": "success",
      "name": "job_1795",
      "startTime": 1551112367000
    }
  ],
  "total": 55
}
```

- Failure response

HTTP status code 400

```
{
  "error_code": "DLF.3051",
  "error_msg": "The request parameter is invalid."
}
```

## 6.5.4 Viewing Job Details

### Function

This API is used to view job details.

### URI

- URI format  
GET /v1/{project\_id}/jobs/{name}
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
name	Yes	String	Job name.

## Request

**Table 6-78** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"> <li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>To query data in other workspaces, this header must be carried.</li> </ul>

## Response

See the request parameters in [Creating a Job](#).

## Example

View details about job **myJob**.

- Request  
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/myJob
- Success response

```
{
  "basicConfig": {
    "instanceTimeout": 0,
    "priority": 0
  },
  "logPath": "obs://dlf-log-b384b9e9ab9b4ee8994c8633aabc9505",
  "name": "myJob",
  "nodes": [{
    "failPolicy": "FAIL",
    "location": {
      "x": "385.0",
      "y": "150.0"
    },
    "maxExecutionTime": 60,
    "name": "DIS_INPUT",
    "pollingInterval": 1,
    "preNodeName": [],
    "properties": [{
      "name": "streamName",
      "value": "csinput"
    }
  ]
}
```

```
    },
    "resources": [],
    "retryInterval": 120,
    "retryTimes": 0,
    "type": "DISStream"
  },
  {
    "failPolicy": "FAIL",
    "location": {
      "x": "572.0",
      "y": "151.0"
    },
    "maxExecutionTime": 60,
    "name": "CS_PROCESS",
    "pollingInterval": 10,
    "preNodeName": ["DIS_INPUT"],
    "properties": [{
      "name": "scriptName",
      "value": "CS_PROCESS_TRIP"
    }],
    {
      "name": "jobName",
      "value": "CS_PROCESS"
    },
    {
      "name": "jobType",
      "value": "flink_sql_job"
    },
    {
      "name": "clusterName",
      "value": "-1"
    },
    {
      "name": "spuNumber",
      "value": "2"
    },
    {
      "name": "parallelNumber",
      "value": "1"
    }
  ]],
  "resources": [],
  "retryInterval": 120,
  "retryTimes": 0,
  "type": "CSJob"
},
{
  "failPolicy": "FAIL",
  "location": {
    "x": "718.0",
    "y": "121.0"
  },
  "maxExecutionTime": 60,
  "name": "DIS_EVENT",
  "pollingInterval": 1,
  "preNodeName": ["CS_PROCESS"],
  "properties": [{
    "name": "streamName",
    "value": "dis-event"
  }],
  "resources": [],
  "retryInterval": 120,
  "retryTimes": 0,
  "type": "DISStream"
},
{
  "eventTrigger": {
    "channel": "dis-event",
    "concurrent": 1,
    "engineType": "DIS",
```

```
    "failPolicy": "CONTINUE",
    "readPolicy": "LAST"
  },
  "failPolicy": "FAIL",
  "location": {
    "x": "848.0",
    "y": "167.0"
  },
  "maxExecutionTime": 60,
  "name": "TRIP_RAW_STANDARD",
  "pollingInterval": 10,
  "preNodeName": ["DIS_EVENT"],
  "properties": [{
    "name": "scriptName",
    "value": "TRIP_RAW_STANDARD"
  }],
  {
    "name": "database",
    "value": "lixinlong"
  },
  {
    "name": "queueName",
    "value": "default"
  }],
  "resources": [],
  "retryInterval": 120,
  "retryTimes": 0,
  "type": "DLISQL"
}],
"params": [{
  "name": "dis_channel",
  "value": "dis_input"
}],
"processType": "REAL_TIME",
"resources": [],
"schedule": {
  "type": "EXECUTE_ONCE"
},
"version": "1.0"
}
```

- Failure response

HTTP status code 400

```
{
  "error_code": "DLF.0100",
  "error_msg": "The job does not exists."
}
```

## 6.5.5 Exporting a Job

### Function

This API is used to export a job, including job definitions, job dependency scripts, and CDM job definitions.

### URI

- URI format  
POST /v1/{project\_id}/jobs/{name}/export
- Parameter description

**Table 6-79** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
name	Yes	String	Job name.

## Request

**Table 6-80** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"> <li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>To query data in other workspaces, this header must be carried.</li> </ul>

**Table 6-81** Parameter

Parameter	Mandatory	Type	Description
exportDepend	No	boolean	Specifies whether to export the scripts and resources that the job depends on. Default value: true

## Response

The value of **Content-Type** in the response message is **application/octet-stream** that needs to be converted into a file. For details, see [Parsing a Stream in a Response Message](#). Response messages are compressed as a file. The file name format is **DLF\_job\_name.zip**. The file directory is as follows:

```
jobs
├──{job_name}.job
scripts
├──{script_name}.script
resources
├──{resource_name}.resource
```

**Table 6-82** describes the file directory parameters.



**Table 6-82** Response parameters

Parameter	Mandatory	Type	Description
job_name	Yes	String	Job name.
script_name	No	String	Name of the script that the job depends on.
resource_name	No	String	Name of the resource that the job depends on.

- {job\_name}.job  
The parameters in the file are the same as the request parameters of the API for creating a job. For details, see [Creating a Job](#).
- {script\_name}.script  
The parameters in the file are the same as the request parameters of the API for creating a resource. For details, see [Creating a Script](#).

## Example

Export job **myJob**.

- Request  
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/myJob/export  

```
{
  "exportDepend":true
}
```
- Success response  
The name of the exported file is **DLF\_myJob.zip**. The file structure after decompression is as follows:  

```
jobs
├─myJob.job
scripts
├─CS_PROCESS_TRIP.script
├─TRIP_RAW_STANDARD.script
```
- Failure response  
HTTP status code 400  

```
{
  "error_code":"DLF.0100",
  "error_msg":"The job does not exists."
}
```

## 6.5.6 Batch Exporting Jobs

### Function

This API is used to batch export jobs, including job dependency scripts and CDM job definitions.

## URI

- URI format  
POST /v1/{project\_id}/jobs/batch-export
- Parameter description

**Table 6-83** URI parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .

## Request

**Table 6-84** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

**Table 6-85** Parameters

Parameter	Mandatory	Type	Description
jobList	Yes	List	A list of jobs to be exported. A maximum of 100 jobs can be exported at a time.
exportDepend	No	boolean	Specifies whether to export the scripts and resources that the job depends on. Default value: <b>true</b>

## Response

The response message of batch exporting jobs is the same as that of exporting jobs. For details, see [Response](#).

## Example

Export two jobs named **job\_batch** and **job\_stream**.

- Request

```
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/batch-export
{
  "jobList":["job_batch","job_stream"],
  "exportDepend":true
}
```

- Success response

The name of the exported file is **jobs.zip**. The file structure after decompression is as follows:

```
jobs
+---job_batch
|   dws_sql.script
|   job_batch.job
\---job_stream
    job_stream.job
```

**job\_batch.job** and **job\_stream.job** are job definition files.

**dli\_sql.script** is the DLI SQL script file used by **job\_batch.job**.

- Failure response

HTTP status code 400

```
{
  "error_code":"DLF3051",
  "error_msg":"The request parameter is invalid."
}
```

## 6.5.7 Importing a Job

### Function

This API is used to import one or more job files from OBS to DLF.

 NOTE

Before using this API, store job files in OBS buckets.

### URI

- URI format  
POST /v1/{project\_id}/jobs/import
- Parameter description

**Table 6-86** URI parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .

## Request

**Table 6-87** Request parameters

Parameter	Mandatory	Type	Description
path	Yes	String	If OBS is deployed, it refers to the OBS path for storing the job definition file. For the format of the job definition file, see the response message of the exported job, for example, obs://myBucket/jobs.zip.
params	No	Map<String,String>	Public job parameter.
sameNamePolicy	No	String	Policy for specifying how to handle duplicate names. The options are as follows: <ul style="list-style-type: none"><li>• SKIP</li><li>• OVERWRITE</li></ul> Default value: <b>SKIP</b>
jobsParam	No	List<JobParam>	Job parameter. For details, see <a href="#">Table 6-88</a> .
executeUser	No	String	User that executes the job.

**Table 6-88** JobParam parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Job name.
params	No	Map<String,String>	Job parameter.

## Response

**Table 6-89** Response parameter

Parameter	Mandatory	Type	Description
taskId	Yes	String	ID of the task. Used to call the API for querying system tasks to obtain the import status.

## Example

Import jobs from OBS to DLF. If there are jobs and scripts with the same name, overwrite them.

- **Request**  
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/import  

```
{
  "path": "obs://aaaaa/job_batch.zip",
  "sameNamePolicy": "OVERWRITE",
  "jobsParam": [{
    "name": "job_batch",
    "params": {
      "streamName": "dis-AHTr"
    }
  }]
}
```
- **Success response**  
HTTP status code 200  

```
{
  "taskId":"008aae2e675933c7016759418e870000"
}
```
- **Failure response**  
HTTP status code 400  

```
{
  "error_code":"DLF.0815",
  "error_msg":"Fail to read OBS file."
}
```

## 6.5.8 Executing a Job Immediately

### Function

This API is used to execute a job immediately and check whether the job can be executed successfully.

### URI

- URI format  
POST /v1/{project\_id}/jobs/{job\_name}/run-immediate
- Parameter description

**Table 6-90** URI parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
job_name	Yes	String	Job name.

## Request

**Table 6-91** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>To query data in other workspaces, this header must be carried.</li></ul>

### Parameter

Parameter	Mandatory	Type	Description
jobParams	No	List<JobParam>	Parameter for starting the job.

### JobParam data structure description

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the parameter. It cannot exceed 64 characters.
value	Yes	String	Value of the parameter. It cannot exceed 1024 characters.

## Response

**Table 6-92** Response parameter

Parameter	Mandatory	Type	Description
instanceId	Yes	Long	Job instance ID.

## Example

Execute the **myJob** job once.

- Request**  
 POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/myJob/run-immediate  

```
{
  "jobParams":[
    {
      "name":"aaa",
      "value":"111"
    },
    {
      "name":"bbb",
      "value":"222"
    }
  ]
}
```
- Success response**  

```
{
  "instanceId":132343
}
```
- Failure response**  
 HTTP status code 400  

```
{
  "error_code":"DLF.0100",
  "error_msg":"The job does not exists."
}
```

## 6.5.9 Starting a Job

### Function

This API is used to start a job.

### URI

- URI format  
POST /v1/{project\_id}/jobs/{name}/start
- Parameter description

**Table 6-93** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
name	Yes	String	Job name.

## Request

**Table 6-94** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"> <li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>To query data in other workspaces, this header must be carried.</li> </ul>

### Parameter

Parameter	Mandatory	Type	Description
jobParams	No	List<JobParam>	Parameter for starting the job.

### JobParam data structure description

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the parameter. It cannot exceed 64 characters.
value	Yes	String	Value of the parameter. It cannot exceed 1024 characters.

## Response

None.

## Example

Start job **myJob**.

- Request  
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/myJob/start
- Success response  
HTTP status code 204
- Failure response  
HTTP status code 400



```
{
  "error_code": "DLF.0100",
  "error_msg": "The job does not exists."
}
```

## 6.5.10 Viewing Running Status of a Real-Time Job

### Function

This API is used to view running status of a real-time job.

### URI

- URI format  
GET /v1/{project\_id}/jobs/{job\_name}/status
- Parameter description

**Table 6-95** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
job_name	Yes	String	Job name.

### Request

**Table 6-96** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"> <li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>• To query data in other workspaces, this header must be carried.</li> </ul>

## Response

**Table 6-97** Response parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Name of a solution.
nodes	No	List	Node status list.
status	No	String	Job status. <ul style="list-style-type: none"><li>• STARTING</li><li>• NORMAL</li><li>• EXCEPTION</li><li>• STOPPING</li><li>• STOPPED</li></ul>
startTime	Yes	Date	Start time.
endTime	No	Date	End time.
lastUpdateTime	No	Date	Last update time.

**Table 6-98** Data structure description of **nodes**

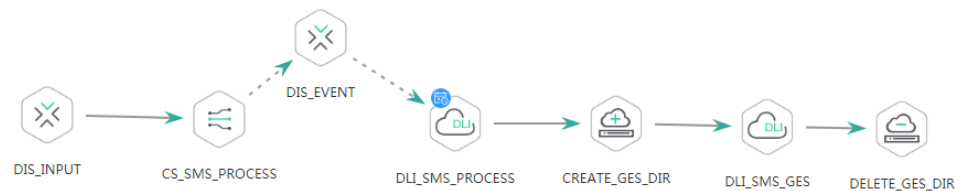
Parameter	Mandatory	Type	Description
name	Yes	String	Node name.
status	No	String	Node status. <ul style="list-style-type: none"><li>• STARTING</li><li>• NORMAL</li><li>• EXCEPTION</li><li>• STOPPING</li><li>• STOPPED</li></ul>
logPath	No	String	Path for storing node run logs.

Parameter	Mandatory	Type	Description
type	Yes	String	<p>Node type.</p> <ul style="list-style-type: none"> <li>• <b>Hive SQL:</b> Runs Hive SQL scripts.</li> <li>• <b>Spark SQL:</b> Runs Spark SQL scripts.</li> <li>• <b>DWS SQL:</b> Runs DWS SQL scripts.</li> <li>• <b>Shell:</b> Runs shell SQL scripts.</li> <li>• <b>CDM Job:</b> Runs CDM jobs.</li> <li>• <b>OBS Manager:</b> Manages OBS paths, including creating and deleting paths.</li> <li>• <b>RESTAPI:</b> Sends REST API requests.</li> <li>• <b>SMN:</b> Sends short messages or emails.</li> <li>• <b>MRS Spark:</b> Runs Spark jobs of MRS.</li> <li>• <b>MapReduce:</b> Runs MapReduce jobs of MRS.</li> </ul>

## Example

View running status of real-time job **job\_sms** and the running status of each node in the job. **job\_sms** has seven nodes, as shown in the following figure:

Figure 6-1 job\_sms



- Request
- Success response (The **DLI\_SMS\_GES** node runs abnormally during job running.)

```

GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/job_sms/status

{
  "lastUpdateTime": 1551409406000,
  "name": "job_sms",
  "nodes": [{
    "name": "CREATE_GES_DIR",
    "status": "NORMAL",
    "totalGetBytes": 0,
    "totalGetRecords": 0,
    "totalPutBytes": 0,
    "totalPutRecords": 0,
    "type": "Create OBS"
  }],
  "logPath": "obs://dlf-log-b384b9e9ab9b4ee8994c8633aabc9505/job_sms/2019-03-01_11_04_24.000/CS_SMS_PROCESS/CS_SMS_PROCESS-IrU8h582_20190301_110433_183.job",
  "name": "CS_SMS_PROCESS",

```

```
    "runningData": "{\"jobName\": \"CS_SMS_PROCESS\", \"jobId\": \"107016\", \"App_dis-input\": \"app_sms_process\"}",
    "status": "NORMAL",
    "totalGetBytes": 0,
    "totalGetRecords": 165,
    "totalPutBytes": 0,
    "totalPutRecords": 165,
    "type": "ExecuteCloudStream"
  },
  {
    "name": "DELETE_GES_DIR",
    "status": "STOPPED",
    "totalGetBytes": 0,
    "totalGetRecords": 0,
    "totalPutBytes": 0,
    "totalPutRecords": 0,
    "type": "Delete OBS"
  },
  {
    "logPath": "obs://dlf-log-b384b9e9ab9b4ee8994c8633aabc9505/job_sms/2019-03-01
11_04_24.000/DIS_EVENT/DIS_EVENT-kefeNV5B_20190301_110439_984.job",
    "name": "DIS_EVENT",
    "runningData": "{\"app\": \"DLF_job_sms_DLI_SMS_PROCESS\", \"streamName\": \"dis-event\"}",
    "status": "NORMAL",
    "totalGetBytes": 0,
    "totalGetRecords": 8602,
    "totalPutBytes": 0,
    "totalPutRecords": 8596,
    "type": "ExecuteDISStream"
  },
  {
    "logPath": "obs://dlf-log-b384b9e9ab9b4ee8994c8633aabc9505/job_sms/2019-03-01
11_04_24.000/DIS_INPUT/DIS_INPUT-T18JOYtc_20190301_110428_754.job",
    "name": "DIS_INPUT",
    "runningData": "{\"streamName\": \"dis-input\"}",
    "status": "NORMAL",
    "totalGetBytes": 0,
    "totalGetRecords": 70341,
    "totalPutBytes": 0,
    "totalPutRecords": 70341,
    "type": "ExecuteDISStream"
  },
  {
    "name": "DLI_SMS_GES",
    "status": "EXCEPTION",
    "totalGetBytes": 0,
    "totalGetRecords": 0,
    "totalPutBytes": 0,
    "totalPutRecords": 0,
    "type": "DLI SQL"
  },
  {
    "name": "DLI_SMS_PROCESS",
    "status": "NORMAL",
    "totalGetBytes": 0,
    "totalGetRecords": 208,
    "totalPutBytes": 0,
    "totalPutRecords": 208,
    "type": "DLI SQL"
  }
},
"startTime": 1551409465000,
"status": "NORMAL"
}
```

- Failure response

HTTP status code 400

```
{
  "error_code": "DLF.0100",
```

```
"error_msg":"The job does not exists."
}
```

## 6.5.11 Viewing a Job Instance List

### Function

This API is used to view a job instance list.

A job instance is generated each time you run a batch job for which periodic scheduling or event-based scheduling is configured. If a real-time job contains a node for which periodic scheduling or event-based scheduling is configured, you can call this API to view the instance list of the subjobs associated with the node. The format of the **jobName** parameter is *real-time job name\_node name*.

### URI

- URI format

GET /v1/{project\_id}/jobs/instances/detail?

jobName={jobName}&minPlanTime={minPlanTime}&maxPlanTime={maxPlanTime}&limit={limit}&offset={offset}&status={status}

- Parameter description

**Table 6-99** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
jobName	No	String	Job name. <ul style="list-style-type: none"><li>• If you want to query the instance list of a specific batch job, jobName is the batch job name.</li><li>• If you want to query sub-jobs associated with a node in a real-time job, the jobName format is <i>real-time job name _ node name</i>.</li></ul>
minPlanTime	No	Long	Minimum planned job execution time in milliseconds. Job instances whose planned execution time is longer than this time are returned.
maxPlanTime	No	Long	Maximum planned job execution time in milliseconds. Job instances whose planned execution time is shorter than this time are returned.

Parameter	Mandatory	Type	Description
limit	No	int	The maximum number of records on each page. The parameter value ranges from 1 to 1000. Default value: <b>10</b>
offset	No	int	Start page of the paging list. The default value is <b>0</b> . The value must be greater than or equal to <b>0</b> .
status	No	String	Job instance status. <ul style="list-style-type: none"> <li>• waiting</li> <li>• running</li> <li>• success</li> <li>• fail</li> <li>• running-exception</li> <li>• pause</li> <li>• manual-stop</li> </ul>

## Request

**Table 6-100** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"> <li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>• To query data in other workspaces, this header must be carried.</li> </ul>

## Response

**Table 6-101** Response parameters

Parameter	Mandatory	Type	Description
total	Yes	int	Total number of records.

Parameter	Mandatory	Type	Description
instances	Yes	List<Instance>	Job instance status. For details, see <a href="#">Table 6-102</a> .

**Table 6-102** instances parameters

Parameter	Mandatory	Type	Description
jobName	Yes	String	Job name. When you view the instance list of a specified batch job, <b>jobName</b> is the name of the batch job. When you view the subjobs associated with a node in a real-time job, <b>jobName</b> is in format of <i>real-time job name_node name</i> .
jobInstanceName	Yes	String	Name of a job instance recorded by the log, rather than the name defined during job creation
status	Yes	String	Job instance status. <ul style="list-style-type: none"><li>• waiting</li><li>• running</li><li>• success</li><li>• fail</li><li>• running-exception</li><li>• pause</li><li>• manual-stop</li></ul>
planTime	Yes	Long	Planned execution time of the job instance.
startTime	Yes	Long	Actual execution start time of the job instance.
endTime	No	Long	Actual execution end time of the job instance.
executeTime	No	Long	Execution duration in milliseconds.
instanceId	Yes	Long	Job instance ID.
submitTime	Yes	Long	Time when a job is submitted.

## Example 1

View the instance list of batch job **job\_batch**.

- Request  
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/instances/detail?jobName=job\_batch

- Success response

```
{
  "total": 2,
  "instances": [{
    "endTime": 1551671598000,
    "executeTime": 0.3,
    "instanceId": 34765,

    "jobName": "job_batch",
    "jobInstanceName": "job_batch",
    "planTime": 1551671580000,
    "startTime": 1551671580000,
    "status": "success",
    "submitTime": 1550910278706
  },
  {
    "endTime": 1551671538000,
    "executeTime": 0.3,
    "instanceId": 34764,

    "jobName": "job_batch",
    "jobInstanceName": "job_batch",
    "planTime": 1551671520000,
    "startTime": 1551671521000,
    "status": "success",
    "submitTime": 1550910278706
  }
]}
```

## 6.5.12 Viewing Job Instance Details

### Function

This API is used to view job instance details, including the execution information about each node in a job instance.

### URI

- URI format  
GET /v1/{project\_id}/jobs/{job\_name}/instances/{instance\_id}
- Parameter description

**Table 6-103** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
job_name	Yes	String	Job name.
instance_id	Yes	Long	Job instance ID.



## Request

**Table 6-104** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

## Response

**Table 6-105** Response parameters

Parameter	Mandatory	Type	Description
jobName	Yes	String	Job name.
instanceId	Yes	Long	Job instance ID.
status	Yes	String	Job instance status. <ul style="list-style-type: none"><li>• waiting</li><li>• running</li><li>• success</li><li>• fail</li><li>• running-exception</li><li>• pause</li><li>• manual-stop</li></ul>
planTime	Yes	Long	Planned execution time of the job instance.
startTime	Yes	Long	Actual execution start time of the job instance.
endTime	No	Long	Actual execution end time of the job instance.
executeTime	No	Long	Execution duration in milliseconds.
total	Yes	int	Total number of node records.
nodes	Yes	List<Node>	Node instance status. For details, see <a href="#">Table 6-106</a> .

**Table 6-106** Node parameters

Parameter	Mandatory	Type	Description
nodeName	Yes	String	Node name.
status	Yes	String	Node status. <ul style="list-style-type: none"> <li>• waiting</li> <li>• running</li> <li>• success</li> <li>• fail</li> <li>• skip</li> <li>• pause</li> <li>• manual-stop</li> </ul>
planTime	Yes	Long	Planned execution time of the job instance.
startTime	Yes	Long	Actual execution start time of the node.
endTime	No	Long	Actual execution end time of the node.
type	Yes	String	Node type.
retryTimes	No	Int	Number of attempts upon a failure.
instanceId	Yes	Long	Job instance ID.
inputRowCount	No	Long	Rows of input data.
speed	No	double	Write speed (row/second)
logPath	No	String	Path for storing node execution logs.

## Example

View details about the instance whose ID is 34765 in job **job\_batch**.

- Request  
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/jobs/job\_batch/instances/34765

- Response

```
{
  "jobName": "job_batch",
  "instanceId": 34765,

  "status": "fail",
  "planTime": 1551425326540,
  "startTime": 1551425327000,
  "endTime": 1551425387000,
  "executeTime": 1,
  "instanceId": 30654,
  "total": 2,
  "nodes": [
    {
      "endTime": 1551671590000,
      "inputRowCount": 0,

```

```

    "instanceId":34765,
    "nodeName":"Dummy_8556",

    "planTime":1551671580000,
    "retryTimes":0,
    "startTime":1551671584000,
    "status":"success",
    "submitTime":1550910278706,
    "type":"Dummy"
  },
  {
    "endTime":1551671598000,
    "inputRowCount":0,
    "instanceId":34765,
    "logPath":"obs://dlf-log-b384b9e9ab9b4ee8994c8633aabc9505/job_batch/2019-03-04
11_53_00.000/error/error.job",
    "nodeName":"error",

    "planTime":1551671580000,
    "retryTimes":0,
    "startTime":1551671594000,
    "status":"success",
    "submitTime":1550910278706,
    "type":"DWS SQL"
  }
]
}

```

- Failure response

HTTP status code 400

```

{
  "error_code":"DLF.0137",
  "error_msg":"Job instance does not exist."
}

```

## 6.5.13 Querying a System Task

### Function

This API is used to query details about asynchronous tasks.

### URI

- URI format  
GET /v1/{project\_id}/system-tasks/{task\_id}
- Parameter description

**Table 6-107** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
task_id	Yes	String	Task ID.

## Request

**Table 6-108** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"> <li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>To query data in other workspaces, this header must be carried.</li> </ul>

## Response

**Table 6-109** Response parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Task ID.
name	Yes	String	Name of the task.
startTime	Yes	Long	Start time.
endTime	No	Long	End time.
lastUpdate	Yes	Long	Time when the task was last updated.
status	Yes	String	Task status. <ul style="list-style-type: none"> <li>RUNNING</li> <li>SUCCESSFUL</li> <li>FAILED</li> </ul>
message	No	String	Task information.
subtasks	No	List<SubTask>	Subtask. For details, see <a href="#">Table 6-110</a> .

**Table 6-110** subtasks parameters

Parameter	Mandatory	Type	Description
id	Yes	String	Subtask ID.
name	Yes	String	Name of the subtask.

Parameter	Mandatory	Type	Description
startTime	Yes	Long	Start time.
endTime	No	Long	End time.
lastUpdate	Yes	Long	Time when the task was last updated.
status	Yes	String	Task status. <ul style="list-style-type: none"> <li>● RUNNING</li> <li>● SUCCESSFUL</li> <li>● FAILED</li> </ul>

## Example 1

After the solution is imported successfully, query the task information.

- Request  
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/system-tasks/008aae2e675d3bcb01675d3c66f20000
- Response

```
{
  {
    "endTime":1543457514000,
    "id":"008aae2e675d3bcb01675d3c66f20000",
    "lastUpdate":1543457514000,
    "name": "Import the solution from OBS path obs://aaaaa/traffic.zip.",
    "projectId":"b384b9e9ab9b4ee8994c8633aabc9505",
    "startTime":1543457499000,
    "status":"SUCCESSFUL",
    "subtasks":[
      {
        "id":"008aae2e675d3bcb01675d3c9f5f0002",
        "lastUpdate":1543457513000,
        "name": "Import the job_batch job.",
        "status":"SUCCESSFUL",
        "taskId":"008aae2e675d3bcb01675d3c66f20000"
      },
      {
        "id":"008aae2e675d3bcb01675d3c9fdc0003",
        "lastUpdate":1543457513000,
        "name": "Import the job_stream job.",
        "status":"SUCCESSFUL",
        "taskId":"008aae2e675d3bcb01675d3c66f20000"
      }
    ]
  }
}
```

## Example 2

After the solution fails to be imported, query the task information.

- Request  
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/systemTasks/008aae2e675d3bcb01675d3e6b960004
- Response

```
{
  "endTime":1543457631000,
  "id":"008aae2e675d3bcb01675d3e6b960004",
  "lastUpdate":1543457631000,
```

```
"message": "Failed to read the OBS file obs://aaaaa/traffic2.zip. "  
"name": "Import the solution from OBS path obs://aaaaa/traffic2.zip.",  
"projectId": "b384b9e9ab9b4ee8994c8633aabc9505",  
"startTime": 1543457631000,  
"status": "FAILED",  
"subtasks": []  
}
```

### Example 3

Query the task for starting a solution.

- Request

```
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/systemTasks/008aae2e675d3bc01675d40ab3f0005
```

- Response

```
{  
  "endTime": 1543457794000,  
  "id": "008aae2e675d3bc01675d40ab3f0005",  
  "lastUpdate": 1543457794000,  
  "name": "Start the traffic solution",  
  "projectId": "b384b9e9ab9b4ee8994c8633aabc9505",  
  "startTime": 1543457778000,  
  "status": "FAILED",  
  "subtasks": [  
    {  
      "id": "008aae2e675d3bc01675d40e8560006",  
      "lastUpdate": 1543457794000,  
      "name": "Start the job_batch job",  
      "status": "FAILED",  
      "taskId": "008aae2e675d3bc01675d40ab3f0005"  
    }  
  ]  
}
```

### Example 4

Query the task for exporting a job.

- Request

```
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/systemTasks/008aae2e675d3bc01675d40ab3f0005
```

- Response

```
{  
  "endTime": 1544777083000,  
  "id": "008aae2e67abe2ff0167abe3a28f0000",  
  "lastUpdate": 1544777083000,  
  "name": "Import the job from obs://aaaaa/job_batch.zip.",  
  "projectId": "b384b9e9ab9b4ee8994c8633aabc9505",  
  "startTime": 1544777081000,  
  "status": "SUCCESSFUL",  
  "subtasks": [{  
    "id": "008aae2e67abe2ff0167abe3a7e70002",  
    "lastUpdate": 1544777083000,  
    "name": "Import the job_batch job.",  
    "status": "SUCCESSFUL",  
    "taskId": "008aae2e67abe2ff0167abe3a28f0000"  
  }]  
}
```

- Failure response

HTTP status code 400

```
{  
  "error_code": "DLF.0810",  
  "error_msg": "Task does not exist"  
}
```

## 6.5.14 Creating a Script

### Function

This API is used to create a script. Currently, the following script types are supported: DLI SQL, Flink SQL, RDS SQL, Spark SQL, Hive SQL, DWS SQL, Shell, and Presto.

### URI

- URI format  
POST /v1/{project\_id}/scripts
- Parameter description

**Table 6-111** URI parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .

### Request

**Table 6-112** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

**Table 6-113** Script parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Script name. The name contains a maximum of 128 characters, including only letters, numbers, hyphens (-), and periods (.). The script name must be unique.
type	Yes	String	Script type. <ul style="list-style-type: none"><li>• FlinkSQL</li><li>• DLISQL</li><li>• SparkSQL</li><li>• HiveSQL</li><li>• DWSSQL</li><li>• RDSSQL</li><li>• Shell</li><li>• PRESTO</li></ul>
content	Yes	String	Script content. A maximum of 4 MB is supported.
directory	No	String	Directory for storing the script. Access the DataArts Studio console and choose <b>Data Development</b> . In the left navigation pane, choose <b>Development</b> > <b>Develop Script</b> . In the directory tree of the script, you can view the created directories. The default directory is the <b>root</b> directory.
connectionName	No	String	Name of the connection associated with the script. This parameter is mandatory when <b>type</b> is set to <b>DLISQL</b> , <b>SparkSQL</b> , <b>HiveSQL</b> , <b>DWSSQL</b> , <b>Shell</b> , or <b>PRESTO</b> . To obtain the existing connections, refer to the instructions in <a href="#">Querying a Connection List</a> . By default, this parameter is left blank.



Parameter	Mandatory	Type	Description
database	No	String	Database associated with an SQL statement. This parameter is available only when <b>type</b> is set to <b>DLISQL</b> , <b>SparkSQL</b> , <b>HiveSQL</b> , <b>DWSSQL</b> , or <b>PRESTO</b> . <ul style="list-style-type: none"> <li>If <b>type</b> is set to <b>DLI SQL</b>, obtain database information by calling the API for .</li> <li>Connect to the cluster in JDBC mode to query database information if <b>type</b> is not set to <b>DLISQL</b>. By default, this parameter is left blank.</li> </ul>
queueName	No	String	Queue name of the DLI resource. This parameter is available only when <b>type</b> is set to <b>DLISQL</b> . You can obtain the queue information by calling the API for . By default, this parameter is left blank.
configuration	No	map <String, Object>	Configuration defined by a user for the job. This parameter is available only when <b>type</b> is set to <b>DLISQL</b> . For details about the supported configuration items, see . By default, this parameter is left blank.
description	No	String	The description contains a maximum of 255 characters.

## Response

None.

## Example

Create a script.

- Request

```
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/scripts
{
  "name":"echoTimeShell",
  "type":"Shell",
  "content":"echo a",
  "connectionName":"con"
}
```
- Success response

HTTP status code 204
- Failure response

HTTP status code 400

```
{
  "error_code": "DLF.6247",
  "error_msg": "The script type is not specified."
}
```

## Status Code

See [Status Codes](#).

## 6.5.15 Modifying a Script

### Function

This API is used to modify the configuration items or script contents of a script.

- When modifying a script, specify the name of the script to be modified.
- The script name and type cannot be modified.

### URI

- URI format  
PUT /v1/{project\_id}/scripts/{script\_name}
- Parameter description

**Table 6-114** URI parameters

Parameter	Mandatory	Type	Description
projectId	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
script_name	Yes	String	Script name.

### Request

**Table 6-115** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

**Table 6-116** Script parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Script name. The name contains a maximum of 128 characters, including only letters, numbers, hyphens (-), and periods (.). The script name must be unique.
type	Yes	String	Script type. <ul style="list-style-type: none"> <li>• FlinkSQL</li> <li>• DLISQL</li> <li>• SparkSQL</li> <li>• HiveSQL</li> <li>• DWSSQL</li> <li>• RDSSQL</li> <li>• Shell</li> <li>• PRESTO</li> </ul>
content	Yes	String	Script content. A maximum of 4 MB is supported.
directory	No	String	Directory for storing the script. Access the DataArts Studio console and choose <b>Data Development</b> . In the left navigation pane, choose <b>Development &gt; Develop Script</b> . In the directory tree of the script, you can view the created directories. The default directory is the <b>root</b> directory.
connectionName	No	String	Name of the connection associated with the script. This parameter is mandatory when <b>type</b> is set to <b>DLISQL</b> , <b>SparkSQL</b> , <b>HiveSQL</b> , <b>DWSSQL</b> , <b>Shell</b> , or <b>PRESTO</b> . To obtain the existing connections, refer to the instructions in <a href="#">Querying a Connection List</a> . By default, this parameter is left blank.

Parameter	Mandatory	Type	Description
database	No	String	Database associated with an SQL statement. This parameter is available only when <b>type</b> is set to <b>DLISQL</b> , <b>SparkSQL</b> , <b>HiveSQL</b> , <b>DWSSQL</b> , or <b>PRESTO</b> . <ul style="list-style-type: none"><li>If <b>type</b> is set to <b>DLI SQL</b>, obtain database information by calling the API for .</li><li>Connect to the cluster in JDBC mode to query database information if <b>type</b> is not set to <b>DLISQL</b>. By default, this parameter is left blank.</li></ul>
queueName	No	String	Queue name of the DLI resource. This parameter is available only when <b>type</b> is set to <b>DLISQL</b> . You can obtain the queue information by calling the API for . By default, this parameter is left blank.
configuration	No	map <String, Object>	Configuration defined by a user for the job. This parameter is available only when <b>type</b> is set to <b>DLISQL</b> . For details about the supported configuration items, see . By default, this parameter is left blank.
description	No	String	Description of the script. The description contains a maximum of 255 characters.

## Response

None.

## Example

Modify the script content.

- Request

```
PUT /v1/b384b9e9ab9b4ee8994c8633aabc9505/scripts/echoTimeShell
{
  "content":"echo time",
  "connectionName":"con"
}
```
- Success response  
HTTP status code 204
- Failure response  
HTTP status code 400

```
{
  "error_code": "DLF.6201",
  "error_msg": "The script does not exist."
}
```

## 6.5.16 Querying a Script

### Function

This API is used to query a script, including the script type and script content.

### URI

- URI format  
GET /v1/{project\_id}/scripts/{script\_name}
- Parameter description

**Table 6-117** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
script_name	Yes	String	Script name.

### Request

**Table 6-118** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

## Response

**Table 6-119** Script parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Script name. The name contains a maximum of 128 characters, including only letters, numbers, hyphens (-), and periods (.). The script name must be unique.
type	Yes	String	Script type. <ul style="list-style-type: none"><li>• FlinkSQL</li><li>• DLISQL</li><li>• SparkSQL</li><li>• HiveSQL</li><li>• DWSSQL</li><li>• RDSSQL</li><li>• Shell</li><li>• PRESTO</li></ul>
content	Yes	String	Script content. A maximum of 64 KB is supported.
directory	No	String	Directory for storing the script. Access the DataArts Studio console and choose <b>DataArts Factory</b> . In the left navigation pane, choose <b>Development</b> > <b>Develop Script</b> . In the directory tree of the script, you can view the created directories. The default directory is the <b>root</b> directory.
connectionName	No	String	Name of the connection associated with the script. This parameter is mandatory when <b>type</b> is set to <b>DLISQL</b> , <b>SparkSQL</b> , <b>HiveSQL</b> , <b>DWSSQL</b> , <b>Shell</b> , or <b>PRESTO</b> . To obtain the existing connections, refer to the instructions in <a href="#">Querying a Connection List</a> . By default, this parameter is left blank.

Parameter	Mandatory	Type	Description
database	No	String	Database associated with an SQL statement. This parameter is available only when <b>type</b> is set to <b>DLISQL</b> , <b>SparkSQL</b> , <b>HiveSQL</b> , or <b>DWSSQL</b> . <ul style="list-style-type: none"><li>If <b>type</b> is set to <b>DLISQL</b>, obtain database information by calling the API for .</li><li>Connect to the cluster in JDBC mode to query database information if <b>type</b> is not set to <b>DLISQL</b>. By default, this parameter is left blank.</li></ul>
queueName	No	String	Queue name of the DLI resource. This parameter is available only when <b>type</b> is set to <b>DLISQL</b> . You can obtain the queue information by calling the API for . By default, this parameter is left blank.
configuration	No	map <String, Object>	Configuration defined by a user for the job. This parameter is available only when <b>type</b> is set to <b>DLISQL</b> . For details about the supported configuration items, see . By default, this parameter is left blank.
description	No	String	Description of the script. The description contains a maximum of 255 characters.
autoAcquireLock	No	boolean	Whether to automatically obtain the edit lock parameters. The default value is <b>true</b> .

## Example

- Request  
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/scripts/scriptName

- Success response

HTTP status code 200

```
{
  "autoAcquireLock":true,
  "configuration":{},
  "connectionName":"DLIConn",
  "content":"SELECT 1;",
  "database":"aaa",
  "description":"",
  "directory":"/",
  "name":"S1",
  "queueName":"default",
  "type":"DLISQL"
}
```

- Failure response

HTTP status code 400

```
{
  "error_code": "DLF6201",
  "error_msg": "The script does not exist."
}
```

## Status Codes

See [Status Codes](#).

## 6.5.17 Querying a Script List

### Function

This API is used to query the script list. A maximum of 1000 scripts can be returned for each query.

### URI

- URI format  
GET /v1/{project\_id}/scripts?  
offset={offset}&limit={limit}&scriptName={scriptName}
- Parameter description

**Table 6-120** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
limit	No	Integer	The maximum number of records on each page. The value ranges from 1 to 100. Default value: <b>10</b>
offset	No	Integer	Start page of the paging list. The default value is <b>0</b> . The value must be greater than or equal to <b>0</b> .
scriptName	No	String	Script name.



## Request

**Table 6-121** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	<p>Workspace ID.</p> <ul style="list-style-type: none"> <li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>To query data in other workspaces, this header must be carried.</li> </ul>

## Response

Parameter	Mandatory	Type	Description
total	Yes	Integer	The total number of scripts.
scripts	Yes	List<Script>	A list of scripts.

**Table 6-122** Script parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Script name. The name contains a maximum of 128 characters, including only letters, numbers, hyphens (-), and periods (.). The script name must be unique.
type	Yes	String	<p>Script type.</p> <ul style="list-style-type: none"> <li>FlinkSQL</li> <li>DLISQL</li> <li>SparkSQL</li> <li>HiveSQL</li> <li>DWSSQL</li> <li>RDSSQL</li> <li>Shell</li> <li>PRESTO</li> </ul>

Parameter	Mandatory	Type	Description
content	Yes	String	Script content. A maximum of 64 KB is supported.
directory	No	String	Directory for storing the script. Access the DataArts Studio console and choose <b>DataArts Factory</b> . In the left navigation pane, choose <b>Development &gt; Develop Script</b> . In the directory tree of the script, you can view the created directories. The default directory is the <b>root</b> directory.
connectionName	No	String	Name of the connection associated with the script. This parameter is mandatory when <b>type</b> is set to <b>DLISQL</b> , <b>SparkSQL</b> , <b>HiveSQL</b> , <b>DWSSQL</b> , <b>Shell</b> , or <b>PRESTO</b> . To obtain the existing connections, refer to the instructions in <a href="#">Querying a Connection List</a> . By default, this parameter is left blank.
database	No	String	Database associated with an SQL statement. This parameter is available only when <b>type</b> is set to <b>DLISQL</b> , <b>SparkSQL</b> , <b>HiveSQL</b> , <b>DWSSQL</b> , or <b>PRESTO</b> . <ul style="list-style-type: none"> <li>If <b>type</b> is set to <b>DLISQL</b>, obtain database information by calling the API for .</li> <li>If <b>type</b> is not set to <b>DLISQL</b>, connect to the cluster in JDBC mode to query database information. By default, this parameter is left blank.</li> </ul>
queueName	No	String	Queue name of the DLI resource. This parameter is available only when <b>type</b> is set to <b>DLISQL</b> . You can obtain the queue information by calling the API for . By default, this parameter is left blank.
configuration	No	map <String,Object>	Configuration defined by a user for the job. This parameter is available only when <b>type</b> is set to <b>DLISQL</b> . For details about the supported configuration items, see . By default, this parameter is left blank.
description	No	String	Description of the script. The description contains a maximum of 255 characters.

## Example

Query a script list.

- Request

```
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/scripts
```

- Success response

HTTP status code 200

```
{
  "page":{
    "number":0,
    "numberOfElements":1,
    "size":10,
    "totalElements":1,
    "totalPages":1
  },
  "scripts":[
    {
      "createTime":1652781063759,
      "deleted":false,
      "description":"","
      "dirId":"0",
      "editLockHolderId":"","
      "editLockHolderName":"","
      "id":"ff*****02",
      "keyChain":"0-",
      "locked":true,
      "model":1,
      "modifyTime":1652781066231,
      "owner":"*****",
      "path":"/",
      "projectId":"62*****f9",
      "publishVersion":"ff*****03",
      "relationJobs":[],
      "scriptName":"DLI_Script",
      "scriptSubType":"DLI",
      "status":"PUBLISHED",
      "templateVersion":"1.0",
      "tenantId":"61*****e8",
      "type":"SQL",
      "userId":"7b*****78",
      "userName":"*****"
    }
  ]
}
```

- Failure response

HTTP status code 400

```
{
  "error_code":"DLF.3051",
  "error_msg":"The request parameter is invalid."
}
```

## 6.5.18 Querying the Execution Result of a Script Instance

### Function

This API is used to obtain the execution status and result of a script instance.

During the query, specify the script name and script instance ID.

## URI

- URI format  
GET /v1/{project\_id}/scripts/{script\_name}/instances/{instance\_id}
- Parameter description

**Table 6-123** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
script_name	Yes	String	Script name.
instance_id	Yes	String	ID of the script instance.

## Request

**Table 6-124** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

## Response

**Table 6-125** Response parameters

Parameter	Mandatory	Type	Description
status	Yes	String	Execution status. <b>LAUNCHING:</b> The script instance is being submitted. <b>RUNNING:</b> The script instance is running. <b>FINISHED:</b> The script instance is successfully run. <b>FAILED:</b> The script instance fails to be run.
results	Yes	List<Result>	Execution result of the script instance.

**Table 6-126** Result data structure description

Parameter	Mandatory	Type	Description
message	No	String	Execution failure message.
duration	No	float	Duration of executing the script instance. Unit: second
rowCount	No	Int	Number of the result rows.
rows	No	List<List<Object>>	Result data.
schema	No	List<Map<String, String>>	Format definition of the result data.

## Example

- Request  
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/scripts/dwsscript/instances/a1ad-448a-9d56-4154193d49c5
- Success response  
HTTP status code 200  

```
{
  "results": [{
    "message": "",
    "duration": 0.5,
    "rowCount": 1,
```

```
"rows": [[913460.0,
765.0,
"8/31/2015 23:26",
"Harry Bridges Plaza (Ferry Building)",
50.0,
"8/31/2015 23:39",
"San Francisco Caltrain (Townsend at 4th)",
70.0,
"288",
"Subscriber",
"2139"]],
"schema": [{
  "TripID": "int"
},
{
  "Duration": "int"
},
{
  "StartDate": "string"
},
{
  "StartStation": "string"
},
{
  "StartTerminal": "int"
},
{
  "EndDate": "string"
},
{
  "EndStation": "string"
},
{
  "EndTerminal": "int"
},
{
  "Bike": "string"
},
{
  "SubscriberType": "string"
},
{
  "ZipCode": "string"
}]]
"status": "FINISHED"
}
```

- Failure response  
HTTP status code 400

```
{
  "error_code": "DLF.6201",
  "error_msg": "The script does not exist."
}
```

## Status Codes

See [Status Codes](#).

## 6.5.19 Creating a Resource

### Function

This API is used to create a resource. Types of nodes, including DLI Spark, MRS Spark, and MRS MapReduce, can reference files such as JAR and properties through resources.

## URI

- URI format  
POST /v1/{project\_id}/resources
- Parameter description

**Table 6-127** URI parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .

## Request

**Table 6-128** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

**Table 6-129** Resource parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the resource. The name contains a maximum of 32 characters, including only letters, numbers, underscores (_), and hyphens (-).
type	Yes	String	Resource type. <ul style="list-style-type: none"><li>• archive</li><li>• file</li><li>• jar</li></ul>

Parameter	Mandatory	Type	Description
location	Yes	String	OBS path for storing the resource file. When <b>type</b> is set to <b>jar</b> , <b>location</b> is the path for storing the main JAR package. The path contains a maximum of 1,023 characters. For example, obs://myBucket/test.jar
dependFiles	No	List<String>	JAR package and properties file that the main JAR package depends on. The description contains a maximum of 10,240 characters.
desc	No	String	Description of the resource. The description contains a maximum of 255 characters.
directory	No	String	Directory for storing the resource. Access the DataArts Studio console and choose <b>Data Development</b> . In the left navigation pane, choose <b>Development &gt; Develop Script</b> . In the directory tree of the script, you can view the created directories. The default directory is the <b>root</b> directory.

## Response

**Table 6-130** Response parameter

Parameter	Mandatory	Type	Description
resourceId	Yes	String	Resource ID.

## Example

- Request  
 POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/resources  

```
{
  "name": "test",
  "type": "jar",
  "location": "obs://00000000dlf-test/hadoop-mapreduce-examples-2.4.1.jar",
  "dependFiles": ["obs://00000000dlf-test/depend1.jar","obs://00000000dlf-test/depend2.jar"],
  "desc": "test",
  "directory": "/resource"
}
```
- Success response  

```
{
  "resourceId": "3624d1c3-5df5-4f20-9af9-98eadad6c5f9"
}
```



- Failure response

HTTP status code 400

```
{
  "error_code": "DLF.6259",
  "error_msg": "Files of the same name exist in the directory."
}
```

## Status Codes

See [Status Codes](#).

## 6.5.20 Modifying a Resource

### Function

This API is used to modify a specific resource. When modifying the resource, specify the resource ID.

- The resource type and directory cannot be modified.

### URI

- URI format  
PUT /v1/{project\_id}/resources/{resource\_id}
- Parameter description

**Table 6-131** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
resource_id	Yes	String	Resource ID.

### Request

**Table 6-132** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

**Table 6-133** Resource parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the resource. The name contains a maximum of 32 characters, including only letters, numbers, underscores (_), and hyphens (-).
type	Yes	String	Resource type. <ul style="list-style-type: none"><li>• archive</li><li>• file</li><li>• jar</li></ul>
location	No	String	OBS path for storing the resource file. When <b>type</b> is set to <b>jar</b> , <b>location</b> is the path for storing the main JAR package. The path contains a maximum of 1,023 characters. For example, obs://myBucket/test.jar
dependFiles	No	List<String>	JAR package and properties file that the main JAR package depends on. The description contains a maximum of 10,240 characters.
desc	No	String	Description of the resource. The description contains a maximum of 255 characters.
directory	Yes	String	Directory for storing the resource. Access the DataArts Studio console and choose <b>Data Development</b> . In the left navigation pane, choose <b>Development</b> > <b>Develop Script</b> . In the directory tree of the script, you can view the created directories. The default directory is the <b>root</b> directory.

## Response

None.

## Example

- Request  
PUT /v1/b384b9e9ab9b4ee8994c8633aabc9505/resources/3624d1c3-5df5-4f20-9af9-98eadad6c5f9
- Success response  
HTTP status code 204

- Failure response

HTTP status code 400

```
{
  "error_code": "DLF.6241",
  "error_msg": "The resource information does not exist."
}
```

## 6.5.21 Querying a Resource

### Function

This API is used to query resource details. A resource contains various files such as JAR, ZIP, and properties files. A created resource can be used in job nodes such as DLI Spark and MRS Spark.

### URI

- URI format  
GET /v1/{project\_id}/resources/{resource\_id}
- Parameter description

**Table 6-134** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
resource_id	Yes	String	Resource ID.

### Request

**Table 6-135** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	Workspace ID. <ul style="list-style-type: none"><li>• If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li><li>• To query data in other workspaces, this header must be carried.</li></ul>

## Response

**Table 6-136** Resource parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the resource. The name contains a maximum of 32 characters, including only letters, numbers, underscores (_), and hyphens (-).
type	Yes	String	Resource type. <ul style="list-style-type: none"> <li>• archive</li> <li>• file</li> <li>• jar</li> </ul>
location	Yes	String	OBS path for storing the resource file. When <b>type</b> is set to <b>jar</b> , <b>location</b> is the path for storing the main JAR package. The path contains a maximum of 256 characters. For example, obs://myBucket/test.jar
dependFiles	No	List<String>	JAR package and properties file that the main JAR package depends on. The description contains a maximum of 10,240 characters.
desc	No	String	Description of the resource. The description contains a maximum of 255 characters.
directory	No	String	Directory for storing the resource. Access the DataArts Studio console and choose <b>Data Development</b> . In the left navigation pane, choose <b>Development</b> > <b>Develop Script</b> . In the directory tree of the script, you can view the created directories. The default directory is the <b>root</b> directory.

## Example

View resource details.

- Request  
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/resources/3624d1c3-5df5-4f20-9af9-98eadad6c5f9
- Success response  

```
{
  "name": "test",
  "type": "jar",
  "location": "obs://00000000dlf-test/hadoop-mapreduce-examples-2.4.1.jar",
```

```
"dependFiles": ["obs://00000000dlf-test/depend1.jar","obs://00000000dlf-test/depend2.jar"],
"desc": "test",
"directory":"/resource"
}
```

- Failure response

HTTP status code 400

```
{
"error_code":"DLF.6241",
"error_msg":"The resource information does not exist."
}
```

## Status Codes

See [Status Codes](#).

## 6.5.22 Querying a Resource List

### Function

This API is used to query a resource list. During the query, you can specify the page number and the maximum number of records on each page.

### URI

- URI format  
GET /v1/{project\_id}/resources?  
offset={offset}&limit={limit}&resourceName={resourceName}
- Parameter description

**Table 6-137** URI parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .
offset	No	Integer	Start page of the paging list. Default value: <b>0</b> The value must be greater than or equal to <b>0</b> .
limit	No	Integer	The maximum number of records on each page. The value ranges from 1 to 100. Default value: <b>10</b>
resourceName	No	String	Name of the resource.

## Request

**Table 6-138** Request header parameter

Parameter	Mandatory	Type	Description
workspace	No	String	<p>Workspace ID.</p> <ul style="list-style-type: none"> <li>If this parameter is not set, data in the <b>default</b> workspace is queried by default.</li> <li>To query data in other workspaces, this header must be carried.</li> </ul>

## Response

Parameter	Mandatory	Type	Description
total	Yes	Integer	The total number of resources.
resources	Yes	List<Resource>	A list of resources.

**Table 6-139** Resource parameters

Parameter	Mandatory	Type	Description
id	Yes	String	ID of the resource. The resource ID is used to query the resource.
name	Yes	String	Name of the resource. The name contains a maximum of 32 characters, including only letters, numbers, underscores (_), and hyphens (-).
type	Yes	String	<p>Resource type.</p> <ul style="list-style-type: none"> <li>archive</li> <li>file</li> <li>jar</li> </ul>

Parameter	Mandatory	Type	Description
location	Yes	String	OBS path for storing the resource file. When <b>type</b> is set to <b>jar</b> , <b>location</b> is the path for storing the main JAR package. The path contains a maximum of 256 characters. For example, obs://myBucket/test.jar
dependFiles	No	List<String>	JAR package and properties file that the main JAR package depends on. The description contains a maximum of 10,240 characters.
desc	No	String	The description contains a maximum of 255 characters.
directory	No	String	Directory for storing the resource. Access the DataArts Studio console and choose <b>Data Development</b> . In the left navigation pane, choose <b>Development &gt; Develop Script</b> . In the directory tree of the script, you can view the created directories. The default directory is the <b>root</b> directory.

## Example

Query a list of resources.

- Request  
GET /v1/b384b9e9ab9b4ee8994c8633aabc9505/resources

- Success response  
HTTP status code 200

```
{
  "total":1,
  "resources":[
    {
      "id":"b384b9e9ab9b4ee8994c8633aabc9505"
      "name":"mrResource",
      "type":"jar",
      "location":"obs://00000000dlf-test/hadoop-mapreduce-examples-2.4.1.jar",
      "dependFiles":[
        "obs://00000000dlf-test/depend1.jar",
        "obs://00000000dlf-test/depend2.jar"
      ],
      "desc":"test",
      "directory":"/resource"
    }
  ]
}
```

- Failure response  
HTTP status code 400

```
{
  "error_code": "DLF.3051",
  "error_msg": "The request parameter is invalid."
}
```

## 6.5.23 Importing a Connection

### Function

This API is used to import one or more connection files from OBS to the Data Development module. Before using this API, store connection files in OBS buckets.

### URI

- URI format  
POST /v1/{project\_id}/connections/import
- Parameter description

**Table 6-140** URI parameter

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain a project ID, see <a href="#">Project ID and Account ID</a> .

### Request

Request parameters

Parameter	Mandatory	Type	Description
path	Yes	String	With OBS deployed: OBS path for storing the connection definition file. For details about the format of the job definition file, see the response message of the exported connection. Without OBS deployed: local path for storing the connection definition file.
params	No	List<Params>	Connection parameter. By default, this parameter is left blank.



Parameter	Mandatory	Type	Description
sameNamePolicy	No	String	Policy for specifying how to handle duplicate names. The options are as follows: <ul style="list-style-type: none"> <li>• SKIP</li> <li>• OVERWRITE</li> </ul> Default value: <b>SKIP</b>

Params connection parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Name of a connection.
type	Yes	String	Connection type.
params	No	Map<String,String>	Connection parameter. For details about parameter names, see the description of each type of connection configuration item. By default, this parameter is left blank.

## Response

Parameter	Mandatory	Type	Description
taskId	Yes	String	ID of the task. Used to call the API for querying system tasks to obtain the import status.

## Example

Import a connection.

- Request

```
POST /v1/b384b9e9ab9b4ee8994c8633aabc9505/connections/import
{
  "path": "obs://00zyx/2019-07-02/DLF_All_DataConnections.zip",
  "sameNamePolicy": "OVERWRITE",
  "params": [
    {
      "name": "DWS",
      "type": "DWS",
      "params": {
        "clusterName": "cluster1"
      }
    }
  ],
}
```

```
{
  "name":"hive",
  "type":"HIVE",
  "params":{
    "clusterName":"mrs_ymcc",
    "connectionMethod":"agent",
    "userName":"admin",
    "agentName":"cdm-donotdelete",
    "kmsKey":"KMS-42ab"
  }
}
```

- Success response

HTTP status code 200

```
{
  "taskId":"008aae2e675933c7016759418e870000"
}
```

- Failure response

HTTP status code 400

```
{
  "error_code":"DLF.0815",
  "error_msg":"Fail to read OBS file."
}
```

## Status Codes

See [Status Codes](#).

# 7 DataArts Architecture APIs

## 7.1 Overview

### 7.1.1 Obtaining Statistics

#### Function

This API is used to obtain statistics.

#### URI

GET /v2/{project\_id}/design/definitions/statistic

**Table 7-1** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

#### Request Parameters

None

#### Response Parameters

**Status code: 200**

**Table 7-2** Response body parameters

Parameter	Type	Description
atomic_index	<a href="#">StatisticSchema</a> object	Atomic metric

Parameter	Type	Description
derivative_index	<a href="#">StatisticSchema</a> object	Derivative metric
compound_metric	<a href="#">StatisticSchema</a> object	Compound metric
biz_index	<a href="#">StatisticSchema</a> object	Business metric
dimension	<a href="#">StatisticSchema</a> object	Dimension
condition_group	<a href="#">StatisticSchema</a> object	Filter group
time_condition	<a href="#">StatisticSchema</a> object	Time filter
common_condition	<a href="#">StatisticSchema</a> object	General filter
dimension_logic_table	<a href="#">StatisticSchema</a> object	Dimension table
fact_logic_table	<a href="#">StatisticSchema</a> object	Fact table
aggregation_logic_table	<a href="#">StatisticSchema</a> object	Summary table
data_standard	<a href="#">StatisticSchema</a> object	Data standard
table_model	<a href="#">StatisticSchema</a> object	Business table
lookup_table	<a href="#">StatisticSchema</a> object	Lookup table
pending_review	Integer	Applications pending review
my_applications	Integer	My applications

**Table 7-3** StatisticSchema

Parameter	Type	Description
increase	Integer	New schemas in the current month
total	Integer	Total number of schemas

Parameter	Type	Description
standard_coverage	Double	Standard coverage rate

**Status code: 400**

**Table 7-4** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-5** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-6** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **StatisticInfo** is returned.

```
{
  "atomic_index" : {
    "increase" : 0,
    "total" : 1,
    "standard_coverage" : null
  },
  "derivative_index" : {
    "increase" : 1,
    "total" : 4,
    "standard_coverage" : null
  },
  "compound_metric" : {
    "increase" : 0,
    "total" : 0,
    "standard_coverage" : null
  },
  "biz_index" : {
    "increase" : 0,
    "total" : 2,
    "standard_coverage" : null
  },
  "dimension" : {
    "increase" : 0,
    "total" : 4,
    "standard_coverage" : null
  },
  "condition_group" : null,
  "time_condition" : {
    "increase" : 0,
    "total" : 14,
    "standard_coverage" : null
  },
  "common_condition" : null,
  "dimension_logic_table" : {
    "increase" : 0,
    "total" : 4,
    "standard_coverage" : null
  },
  "fact_logic_table" : {
    "increase" : 0,
    "total" : 1,
    "standard_coverage" : 0.1429
  },
  "aggregation_logic_table" : {
    "increase" : 1,
    "total" : 4,
    "standard_coverage" : null
  },
  "data_standard" : {
    "increase" : 1,
    "total" : 5,
    "standard_coverage" : null
  },
  "table_model" : {
    "increase" : 5,
    "total" : 9,
    "standard_coverage" : 0.027
  },
}
```

```
"lookup_table" : {
  "increase" : 1,
  "total" : 4,
  "standard_coverage" : null
},
"pending_review" : 0,
"my_applications" : 0
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>StatisticInfo</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.1.2 Obtaining Model Statistics

### Function

This API is used to obtain model statistics.

### URI

GET /v2/{project\_id}/design/table-models/statistic

**Table 7-7** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-8** Query Parameters

Parameter	Mandatory	Type	Description
model_id	No	Long	Model ID used to query the workspace

### Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-9** Response body parameters

Parameter	Type	Description
total	<a href="#">StatisticStandardCoverageVO</a> object	Number of logical entities
published	<a href="#">StatisticStandardCoverageVO</a> object	Number of published logical entities
sync_total	<a href="#">SyncStatusStatisticVO</a> object	Overall synchronization status
physical_table	<a href="#">SyncStatusStatisticVO</a> object	Table creation status
technical_asset	<a href="#">SyncStatusStatisticVO</a> object	Technical asset synchronization status
business_asset	<a href="#">SyncStatusStatisticVO</a> object	Logical asset synchronization status
meta_data_link	<a href="#">SyncStatusStatisticVO</a> object	Asset association status
data_quality	<a href="#">SyncStatusStatisticVO</a> object	Quality job status

**Table 7-10** StatisticStandardCoverageVO

Parameter	Type	Description
all_col_num	Long	Total number of fields
col_num	Long	Number of associated standard fields
coverage	Double	Standard coverage rate
details	Array of <a href="#">AllTableVO</a> objects	Overview table



**Table 7-11** AllTableVO

Parameter	Type	Description
id	Long	L1 ID
name	String	L1 name
tb_logic_guid	String	GUID of the logical entity corresponding to the published table
quality_id	String	Quality ID
reversed	Boolean	Whether the table is reversed Default: <b>false</b>
partition_conf	String	Partition expression
dirty_out_switch	Boolean	Whether to export dirty data Default: <b>false</b>
dirty_out_database	String	Database to which dirty data will be exported
dirty_out_prefix	String	Prefix of an abnormal table
dirty_out_suffix	String	Suffix of an abnormal table
tb_guid	String	GUID of the physical table corresponding to the published table
code	String	Code
create_by	String	Creator
tenant_id	String	Tenant ID
description	String	Description Maximum: <b>200</b>
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
db_name	String	Database name
dw_type	String	Data connection type
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.

Parameter	Type	Description
schema	String	Schema, which is required for DWS
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object ID
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management
physical_table	String	Table creation status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
technical_asset	String	Technical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>

Parameter	Type	Description
business_asset	String	Logical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
meta_data_link	String	Asset association status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
data_quality	String	Quality job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>

Parameter	Type	Description
dlf_task	String	Data development job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
materialization	String	Storage status of the lookup table value Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
publish_to_dlm	String	DLM API generation status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>

Parameter	Type	Description
summary_status	String	Overall synchronization status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>
standard_count	Long	Number of standards
alias	String	Alias
api_id	String	Summary table API ID
workspace_id	String	Workspace ID
workspace_name	String	Workspace name

**Table 7-12** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-13** SyncStatusStatisticVO

Parameter	Type	Description
success	Long	Successful
failed	Long	Failed
running	Long	Synchronizing
other	Long	Unsynchronized

**Status code: 400****Table 7-14** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**



**Table 7-15** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-16** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **TableModelStatisticVO** is returned.

```
{
  "total" : {
    "all_col_num" : "2",
    "col_num" : "20",
    "coverage" : 0.15,
    "details" : null
  },
  "published" : {
    "all_col_num" : "2",
    "col_num" : "20",
    "coverage" : 0.15,
    "details" : null
  },
  "sync_total" : {
    "success" : "1",
    "failed" : "1",
    "running" : "0",
    "other" : "0"
  },
  "physical_table" : {
    "success" : "2",
```

```

    "failed" : "0",
    "running" : "0",
    "other" : "0"
  },
  "technical_asset" : {
    "success" : "1",
    "failed" : "1",
    "running" : "0",
    "other" : "0"
  },
  "business_asset" : {
    "success" : "2",
    "failed" : "0",
    "running" : "0",
    "other" : "0"
  },
  "meta_data_link" : {
    "success" : "1",
    "failed" : "1",
    "running" : "0",
    "other" : "0"
  },
  "data_quality" : {
    "success" : "2",
    "failed" : "0",
    "running" : "0",
    "other" : "0"
  }
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>TableModelStatisticVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.1.3 Obtaining ER Model Statistics

### Function

This API is used to obtain ER model statistics.

### URI

GET /v2/{project\_id}/design/models/statistic

**Table 7-17** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

None

## Response Parameters

Status code: 200

Table 7-18 Response body parameters

Parameter	Type	Description
frequent	Array of <b>ModelStatisticVO</b> objects	Whether frequently used
top	Array of <b>ModelStatisticVO</b> objects	Top-layer model
logic	Array of <b>ModelStatisticVO</b> objects	Logical model
physical	Array of <b>ModelStatisticVO</b> objects	Physical model
dwr	<b>ModelStatisticVO</b> object	DWR data report layer
dm	<b>ModelStatisticVO</b> object	DM data integration layer

**Table 7-19** ModelStatisticVO

Parameter	Type	Description
biz_type	String	Business type Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
level	String	Model level Enumeration values: <ul style="list-style-type: none"> <li>• <b>SDI</b></li> <li>• <b>DWI</b></li> <li>• <b>DWR</b></li> <li>• <b>DM</b></li> </ul>
db	Integer	Database

Parameter	Type	Description
tb	Integer	Data table
tb_published	Integer	Published data table
fd	Integer	Field
fd_published	Integer	Published field
st	Double	Standard coverage rate
st_published	Double	Coverage rate of a published standard
model	<a href="#">WorkspaceV O</a> object	Model

**Table 7-20** WorkspaceVO

Parameter	Type	Description
id	Long	ID
name	String	Workspace name Maximum: <b>250</b>
description	String	Maximum: <b>600</b>
is_physical	Boolean	Whether the table is a physical table Default: <b>true</b>
frequent	Boolean	Whether the workspace is frequently used Default: <b>true</b>
top	Boolean	Hierarchical governance Default: <b>true</b>
level	String	Data governance level Enumeration values: <ul style="list-style-type: none"> <li>• <b>SDI</b></li> <li>• <b>DWI</b></li> <li>• <b>DWR</b></li> <li>• <b>DM</b></li> </ul>
dw_type	String	Data connection type
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the workspace

Parameter	Type	Description
type	String	Workspace types Enumeration values: <ul style="list-style-type: none"><li>• <b>THIRD_NF</b></li><li>• <b>DIMENSION</b></li></ul>
biz_catalog_ids	String	IDs of business catalogs, including <b>l1ids</b> , <b>l2ids</b> , and <b>l3ids</b>
databases	Array of strings	Array of database names

**Status code: 400****Table 7-21** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-22** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-23** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **AllModelStatisticVO** is returned.

```
{
  "frequent" : [ {
    "biz_type" : "TABLE_MODEL",
    "level" : "DWI",
    "db" : 2,
    "tb" : 2,
    "tb_published" : 2,
    "fd" : 20,
    "fd_published" : 20,
    "st" : 0.15,
    "st_published" : 0.15,
    "model" : {
      "id" : "873242752312385536",
      "name" : "DWI",
      "description" : null,
      "is_physical" : true,
      "frequent" : true,
      "top" : true,
      "level" : "DWI",
      "dw_type" : "DLI",
      "create_time" : "2021-08-06T16:34:56+08:00",
      "update_time" : "2021-08-06T16:34:56+08:00",
      "create_by" : "abc",
      "update_by" : "abc",
      "type" : "THIRD_NF",
      "biz_catalog_ids" : null,
      "databases" : null
    }
  }
  ],
  "top" : [ {
    "biz_type" : "TABLE_MODEL",
    "level" : "DWI",
    "db" : 2,
    "tb" : 2,
    "tb_published" : 2,
    "fd" : 20,
    "fd_published" : 20,
    "st" : 0.15,
    "st_published" : 0.15,
    "model" : {
      "id" : "873242752312385536",
```

```
"name" : "DWI",
"description" : null,
"is_physical" : true,
"frequent" : true,
"top" : true,
"level" : "DWI",
"dw_type" : "DLI",
"create_time" : "2021-08-06T16:34:56+08:00",
"update_time" : "2021-08-06T16:34:56+08:00",
"create_by" : "abc",
"update_by" : "abc",
"type" : "THIRD_NF",
"biz_catalog_ids" : null,
"databases" : null
}
}, {
"biz_type" : "TABLE_MODEL",
"level" : "SDI",
"db" : 3,
"tb" : 4,
"tb_published" : 1,
"fd" : 75,
"fd_published" : 17,
"st" : 0,
"st_published" : 0,
"model" : {
"id" : "873242752274636800",
"name" : "Source",
"description" : "",
"is_physical" : true,
"frequent" : false,
"top" : true,
"level" : "SDI",
"dw_type" : "DLI",
"create_time" : "2021-08-06T16:34:56+08:00",
"update_time" : "2022-04-25T11:06:48+08:00",
"create_by" : "abc",
"update_by" : "abc",
"type" : "THIRD_NF",
"biz_catalog_ids" : null,
"databases" : null
}
}, {
"biz_type" : "TABLE_MODEL",
"level" : null,
"db" : 0,
"tb" : 0,
"tb_published" : 0,
"fd" : 0,
"fd_published" : 0,
"st" : 0,
"st_published" : 0,
"model" : {
"id" : "964203592183619584",
"name" : "test",
"description" : "",
"is_physical" : false,
"frequent" : false,
"top" : true,
"level" : null,
"dw_type" : "UNSPECIFIED",
"create_time" : "2022-04-14T16:40:50+08:00",
"update_time" : "2022-04-14T16:40:50+08:00",
"create_by" : "0d2c5fe35a80f2b61f71c01bbdfa1c4a",
"update_by" : "0d2c5fe35a80f2b61f71c01bbdfa1c4a",
"type" : "THIRD_NF",
"biz_catalog_ids" : null,
"databases" : null
}
}
```



```
    }],  
    "logic": [ {  
      "biz_type": "TABLE_MODEL",  
      "level": null,  
      "db": 0,  
      "tb": 0,  
      "tb_published": 0,  
      "fd": 0,  
      "fd_published": 0,  
      "st": 0,  
      "st_published": 0,  
      "model": {  
        "id": "964203592183619584",  
        "name": "test",  
        "description": "",  
        "is_physical": false,  
        "frequent": false,  
        "top": true,  
        "level": null,  
        "dw_type": "UNSPECIFIED",  
        "create_time": "2022-04-14T16:40:50+08:00",  
        "update_time": "2022-04-14T16:40:50+08:00",  
        "create_by": "0d2c5fe35a80f2b61f71c01bbdfa1c4a",  
        "update_by": "0d2c5fe35a80f2b61f71c01bbdfa1c4a",  
        "type": "THIRD_NF",  
        "biz_catalog_ids": null,  
        "databases": null  
      }  
    }, {  
      "biz_type": "TABLE_MODEL",  
      "level": null,  
      "db": 1,  
      "tb": 3,  
      "tb_published": 3,  
      "fd": 53,  
      "fd_published": 53,  
      "st": 0,  
      "st_published": 0,  
      "model": {  
        "id": "888079766606028800",  
        "name": "DWI",  
        "description": "",  
        "is_physical": false,  
        "frequent": false,  
        "top": false,  
        "level": null,  
        "dw_type": "UNSPECIFIED",  
        "create_time": "2021-09-16T15:11:56+08:00",  
        "update_time": "2021-10-13T18:10:01+08:00",  
        "create_by": "wangqianfeng",  
        "update_by": "0d2c5eb4820010291fcfc01b4b3e67d9",  
        "type": "THIRD_NF",  
        "biz_catalog_ids": null,  
        "databases": null  
      }  
    }  
  ]],  
  "physical": [ {  
    "biz_type": "TABLE_MODEL",  
    "level": "DWI",  
    "db": 2,  
    "tb": 2,  
    "tb_published": 2,  
    "fd": 20,  
    "fd_published": 20,  
    "st": 0.15,  
    "st_published": 0.15,  
    "model": {  
      "id": "873242752312385536",  
      "name": "DWI",
```

```
"description" : null,
"is_physical" : true,
"frequent" : true,
"top" : true,
"level" : "DWI",
"dw_type" : "DLI",
"create_time" : "2021-08-06T16:34:56+08:00",
"update_time" : "2021-08-06T16:34:56+08:00",
"create_by" : "abc",
"update_by" : "abc",
"type" : "THIRD_NF",
"biz_catalog_ids" : null,
"databases" : null
}
}, {
  "biz_type" : "TABLE_MODEL",
  "level" : "SDI",
  "db" : 3,
  "tb" : 4,
  "tb_published" : 1,
  "fd" : 75,
  "fd_published" : 17,
  "st" : 0,
  "st_published" : 0,
  "model" : {
    "id" : "873242752274636800",
    "name" : "Source",
    "description" : "",
    "is_physical" : true,
    "frequent" : false,
    "top" : true,
    "level" : "SDI",
    "dw_type" : "DLI",
    "create_time" : "2021-08-06T16:34:56+08:00",
    "update_time" : "2022-04-25T11:06:48+08:00",
    "create_by" : "abc",
    "update_by" : "abc",
    "type" : "THIRD_NF",
    "biz_catalog_ids" : null,
    "databases" : null
  }
}
], {
  "dwr" : {
    "biz_type" : "DIMENSION",
    "level" : null,
    "db" : 2,
    "tb" : 5,
    "tb_published" : 5,
    "fd" : 32,
    "fd_published" : 32,
    "st" : 0.0625,
    "st_published" : 0.0625,
    "model" : null
  },
  "dm" : {
    "biz_type" : "AGGREGATION_LOGIC_TABLE",
    "level" : null,
    "db" : 2,
    "tb" : 4,
    "tb_published" : 3,
    "fd" : 16,
    "fd_published" : 12,
    "st" : 0,
    "st_published" : 0,
    "model" : null
  }
}
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>AllModelStatisticVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.1.4 Obtaining Standard Coverage Statistics

### Function

This API is used to obtain standard coverage statistics.

### URI

GET /v2/{project\_id}/design/definitions/statistic/{id}

**Table 7-24** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

**Table 7-25** Query Parameters

Parameter	Mandatory	Type	Description
biz_type	No	String	Business types

### Request Parameters

None

### Response Parameters

Status code: 200

**Table 7-26** Response body parameters

Parameter	Type	Description
all_col_num	Long	Total number of fields
col_num	Long	Number of associated standard fields
coverage	Double	Standard coverage rate
details	Array of <a href="#">AllTableVO</a> objects	Overview table

**Table 7-27** AllTableVO

Parameter	Type	Description
id	Long	L1 ID
name	String	L1 name
tb_logic_guid	String	GUID of the logical entity corresponding to the published table
quality_id	String	Quality ID
reversed	Boolean	Whether the table is reversed Default: <b>false</b>
partition_conf	String	Partition expression
dirty_out_switch	Boolean	Whether to export dirty data Default: <b>false</b>
dirty_out_database	String	Database to which dirty data will be exported
dirty_out_prefix	String	Prefix of an abnormal table
dirty_out_suffix	String	Suffix of an abnormal table
tb_guid	String	GUID of the physical table corresponding to the published table
code	String	Code
create_by	String	Creator
tenant_id	String	Tenant ID
description	String	Description Maximum: <b>200</b>

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• DRAFT</li> <li>• PUBLISH_DEVELOPING</li> <li>• PUBLISHED</li> <li>• OFFLINE_DEVELOPING</li> <li>• OFFLINE</li> <li>• REJECT</li> </ul>
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• ATOMIC_INDEX</li> <li>• DERIVATIVE_INDEX</li> <li>• DIMENSION</li> <li>• DIMENSION_ATTRIBUTE</li> <li>• DIMENSION_HIERARCHIES</li> <li>• CONDITION_GROUP</li> <li>• TIME_CONDITION</li> <li>• COMMON_CONDITION</li> <li>• FACT_LOGIC_TABLE</li> <li>• TABLE_MODEL</li> <li>• DIMENSION_LOGIC_TABLE</li> <li>• STANDARD_ELEMENT</li> <li>• AGGREGATION_LOGIC_TABLE</li> <li>• TAG</li> <li>• CODE_TABLE</li> <li>• TABLE_MODEL_ATTRIBUTE</li> <li>• FACT_DIMENSION</li> <li>• FACT_ATTRIBUTE</li> <li>• FACT_MEASURE</li> <li>• SUMMARY_DIMENSION_ATTRIBUTE</li> <li>• SUMMARY_TIME</li> <li>• DIMENSION_TABLE_ATTRIBUTE</li> <li>• QUALITY_RULE</li> <li>• BIZ_METRIC</li> <li>• COMPOUND_METRIC</li> <li>• INFO_ARCH</li> <li>• DEGENERATE_DIMENSION</li> <li>• TABLE_MODEL_LOGIC</li> </ul>

Parameter	Type	Description
create_time	String	Creation time
update_time	String	Update time
db_name	String	Database name
dw_type	String	Data connection type
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.
schema	String	Schema, which is required for DWS
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object ID
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management
physical_table	String	Table creation status Enumeration values: <ul style="list-style-type: none"> <li>● NO_NEED</li> <li>● CREATE_SUCCESS</li> <li>● CREATE_FAILED</li> <li>● UPDATE_SUCCESS</li> <li>● UPDATE_FAILED</li> <li>● SUMMARY_SUCCESS</li> <li>● SUMMARY_FAILED</li> <li>● RUNNING</li> <li>● OFFLINE</li> </ul>

Parameter	Type	Description
technical_asset	String	Technical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
business_asset	String	Logical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
meta_data_link	String	Asset association status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>

Parameter	Type	Description
data_quality	String	Quality job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
dlf_task	String	Data development job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
materialization	String	Storage status of the lookup table value Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>



Parameter	Type	Description
publish_to_dlm	String	DLM API generation status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>
summary_status	String	Overall synchronization status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>
standard_count	Long	Number of standards
alias	String	Alias
api_id	String	Summary table API ID
workspace_id	String	Workspace ID
workspace_name	String	Workspace name

**Table 7-28** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● DRAFT</li><li>● PUBLISH_DEVELOPING</li><li>● PUBLISHED</li><li>● OFFLINE_DEVELOPING</li><li>● OFFLINE</li><li>● REJECT</li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Status code: 400****Table 7-29** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-30** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-31** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **StatisticStandardCoverageVO** is returned.

```
{
  "all_col_num": "182",
  "col_num": "1",
  "coverage": 0.005494505494505495,
  "details": [ {
    "id": "873249129940361216",
    "name": "Standard trip data",
    "tb_logic_guid": "3aaca75c-8399-423d-aedb-2e09db2b7f79",
    "quality_id": "873249649983729665",
    "reversed": null,
    "partition_conf": null,
    "dirty_out_switch": false,
    "dirty_out_database": "",
    "dirty_out_prefix": "",
    "dirty_out_suffix": "",
    "tb_guid": "51e5cfbe-3f6f-4caf-a216-b35eeffb0f56",
    "code": "dwi_taxi_trip_data",
    "create_by": "abc",
    "tenant_id": "0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-f7eee36e67e541a59679f9b1b7f4eab0",
    "description": "None",
    "status": "PUBLISHED",
    "biz_type": "TABLE_MODEL",
    "create_time": "2021-08-06T17:00:17+08:00",
    "update_time": "2022-08-23T19:25:54+08:00",
    "db_name": "demo_dwi_db",
    "dw_type": "DLI",
    "queue_name": null,
    "schema": "",
    "l1": null,
    "l2": null,
    "l3": null,
    "l1_id": null,
    "l2_id": null,
    "l3_id": "873233352591908864",
    "new_biz": null,
    "physical_table": "CREATE_SUCCESS",
    "technical_asset": "UPDATE_SUCCESS",
    "business_asset": "UPDATE_SUCCESS",
    "meta_data_link": "UPDATE_SUCCESS",
    "data_quality": "UPDATE_SUCCESS",
    "dlf_task": "NO_NEED",
  } ]
}
```

```
"materialization" : null,  
"publish_to_dlm" : null,  
"summary_status" : "SUMMARY_SUCCESS",  
"standard_count" : "1",  
"alias" : null,  
"api_id" : "0",  
"workspace_id" : "f7eee36e67e541a59679f9b1b7f4eab0",  
"workspace_name" : "taxi-demo"  
}]  
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>StatisticStandardCoverageVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.2 Data Standard APIs

### 7.2.1 Querying the Data Standard List

#### Function

This API is used to query the data standard list.

#### URI

GET /v2/{project\_id}/design/standards

**Table 7-32** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-33** Query Parameters

Parameter	Mandatory	Type	Description
directory_id	No	String	Catalog ID. This API obtains the data in the catalog and the data in all subcatalogs (if there are any).

Parameter	Mandatory	Type	Description
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

## Request Parameters

None

## Response Parameters

Status code: 200

Table 7-34 Response body parameters

Parameter	Type	Description
values	Array of <b>StandElementValueVO</b> objects	Values
id	Long	ID
directory_id	Long	ID of the directory where the standard is located
directory_path	String	Catalog tree

Parameter	Type	Description
row_id	Long	ID of the row where the standard is located
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionManagementVO</b> object	Business version management
create_by	String	Creator
update_by	String	User who updated the standard
create_time	String	Creation time
update_time	String	Update time

**Table 7-35** StandElementValueVO

Parameter	Type	Description
fd_name	String	Field name
fd_value	String	Field value
fd_id	Long	Field ID
directory_id	Long	ID of the directory where the standard is located
row_id	Long	ID of the row where the standard is located
id	Long	ID

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● DRAFT</li><li>● PUBLISH_DEVELOPING</li><li>● PUBLISHED</li><li>● OFFLINE_DEVELOPING</li><li>● OFFLINE</li><li>● REJECT</li></ul>
create_by	String	Creator
update_by	String	User who updated the standard
create_time	String	Creation time
update_time	String	Update time

**Table 7-36** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID



Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-37** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Status code: 400****Table 7-38** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-39** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-40** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-41** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. Catalogs with subcatalogs are returned.

```
{
  "id" : 0,
  "directory_id" : "793889791589650432",
  "values" : [ {
    "fd_name" : "nameEn",
    "fd_value" : "demo"
  }, {
    "fd_name" : "dataType",
    "fd_value" : "STRING"
  }, {
    "fd_name" : "dataLength",
    "fd_value" : "128"
  }, {
    "fd_name" : "hasAllowValueList",
    "fd_value" : false
  }, {
    "fd_name" : "allowList",
    "fd_value" : ""
  }, {
    "fd_name" : "referCodeTable",
    "fd_value" : "885123958788317184"
  }
]
```

```

}, {
  "fd_name": "codeStandColumn",
  "fd_value": "52470"
}, {
  "fd_name": "dqRule",
  "fd_value": "{}"
}, {
  "fd_name": "ruleOwner",
  "fd_value": "liuxu"
}, {
  "fd_name": "dataMonitorOwner",
  "fd_value": "liuxu"
}, {
  "fd_name": "standardLevel",
  "fd_value": "domain"
}, {
  "fd_name": "description",
  "fd_value": "This is a demo."
}]
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. Catalogs with subcatalogs are returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.2.2 Creating a Data Standard

### Function

This API is used to create a data standard.

### URI

POST /v2/{project\_id}/design/standards

**Table 7-42** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 7-43** Request body parameters

Parameter	Mandatory	Type	Description
values	Yes	Array of <b>StandElementValueVO</b> objects	Values
id	No	Long	ID
directory_id	Yes	Long	ID of the directory where the standard is located
directory_path	No	String	Catalog tree
row_id	No	Long	ID of the row where the standard is located
status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
approval_info	No	<b>ApprovalVO</b> object	Approval information
new_biz	No	<b>BizVersionManagementVO</b> object	Business version management
create_by	No	String	Creator
update_by	No	String	User who updated the standard
create_time	No	String	Creation time
update_time	No	String	Update time

**Table 7-44** StandElementValueVO

Parameter	Mandatory	Type	Description
fd_name	Yes	String	Field name

Parameter	Mandatory	Type	Description
fd_value	No	String	Field value
fd_id	No	Long	Field ID
directory_id	No	Long	ID of the directory where the standard is located
row_id	No	Long	ID of the row where the standard is located
id	No	Long	ID
status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>
create_by	No	String	Creator
update_by	No	String	User who updated the standard
create_time	No	String	Creation time
update_time	No	String	Update time

**Table 7-45** ApprovalVO

Parameter	Mandatory	Type	Description
id	No	Long	ID
tenant_id	No	String	tenant id
name_ch	No	String	Approval name in Chinese
name_en	No	String	Approval name in English
biz_id	No	Long	Business ID



Parameter	Mandatory	Type	Description
biz_type	No	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	No	String	Business information
biz_info_obj	No	Object	Business information object
biz_version	No	Integer	Business version

Parameter	Mandatory	Type	Description
biz_status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
approval_status	No	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DEVELOPING</b></li> <li>• <b>APPROVED</b></li> <li>• <b>REJECT</b></li> <li>• <b>WITHDREW</b></li> </ul>
approval_type	No	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>• <b>PUBLISH</b></li> <li>• <b>OFFLINE</b></li> </ul>
submit_time	No	String	Submission time
create_by	No	String	Creator
l1	No	String	Subject area group
l2	No	String	Subject area
l3	No	String	Business object
approval_time	No	String	Approval time
approver	No	String	Approver
email	No	String	Approver email address
msg	No	String	Approval message
directory_path	No	String	Directory tree

**Table 7-46** BizVersionManageVO

Parameter	Mandatory	Type	Description
id	No	Long	ID information

Parameter	Mandatory	Type	Description
biz_type	No	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• ATOMIC_INDEX</li> <li>• DERIVATIVE_INDEX</li> <li>• DIMENSION</li> <li>• DIMENSION_ATTRIBUTE</li> <li>• DIMENSION_HIERARCHIES</li> <li>• CONDITION_GROUP</li> <li>• TIME_CONDITION</li> <li>• COMMON_CONDITION</li> <li>• FACT_LOGIC_TABLE</li> <li>• TABLE_MODEL</li> <li>• DIMENSION_LOGIC_TABLE</li> <li>• STANDARD_ELEMENT</li> <li>• AGGREGATION_LOGIC_TABLE</li> <li>• TAG</li> <li>• CODE_TABLE</li> <li>• TABLE_MODEL_ATTRIBUTE</li> <li>• FACT_DIMENSION</li> <li>• FACT_ATTRIBUTE</li> <li>• FACT_MEASURE</li> <li>• SUMMARY_DIMENSION_ATTRIBUTE</li> <li>• SUMMARY_TIME</li> <li>• DIMENSION_TABLE_ATTRIBUTE</li> <li>• QUALITY_RULE</li> <li>• BIZ_METRIC</li> <li>• COMPOUND_METRIC</li> <li>• INFO_ARCH</li> <li>• DEGENERATE_DIMENSION</li> <li>• TABLE_MODEL_LOGIC</li> </ul>
biz_id	No	Long	Business ID
biz_info	No	String	Business object information

Parameter	Mandatory	Type	Description
status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• DRAFT</li> <li>• PUBLISH_DEVELOPING</li> <li>• PUBLISHED</li> <li>• OFFLINE_DEVELOPING</li> <li>• OFFLINE</li> <li>• REJECT</li> </ul>
biz_version	No	Integer	Business version
create_time	No	String	Creation time
update_time	No	String	Update time

## Response Parameters

Status code: 200

Table 7-47 Response body parameters

Parameter	Type	Description
values	Array of <a href="#">StandElementValueVO</a> objects	Values
id	Long	ID
directory_id	Long	ID of the directory where the standard is located
directory_path	String	Catalog tree
row_id	Long	ID of the row where the standard is located
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• DRAFT</li> <li>• PUBLISH_DEVELOPING</li> <li>• PUBLISHED</li> <li>• OFFLINE_DEVELOPING</li> <li>• OFFLINE</li> <li>• REJECT</li> </ul>

Parameter	Type	Description
approval_info	<a href="#">ApprovalVO</a> object	Approval information
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management
create_by	String	Creator
update_by	String	User who updated the standard
create_time	String	Creation time
update_time	String	Update time

**Table 7-48** StandElementValueVO

Parameter	Type	Description
fd_name	String	Field name
fd_value	String	Field value
fd_id	Long	Field ID
directory_id	Long	ID of the directory where the standard is located
row_id	Long	ID of the row where the standard is located
id	Long	ID
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
create_by	String	Creator
update_by	String	User who updated the standard
create_time	String	Creation time
update_time	String	Update time

**Table 7-49** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information

Parameter	Type	Description
biz_info_obj	Object	Business information object
biz_version	Integer	Business version
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-50** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• ATOMIC_INDEX</li> <li>• DERIVATIVE_INDEX</li> <li>• DIMENSION</li> <li>• DIMENSION_ATTRIBUTE</li> <li>• DIMENSION_HIERARCHIES</li> <li>• CONDITION_GROUP</li> <li>• TIME_CONDITION</li> <li>• COMMON_CONDITION</li> <li>• FACT_LOGIC_TABLE</li> <li>• TABLE_MODEL</li> <li>• DIMENSION_LOGIC_TABLE</li> <li>• STANDARD_ELEMENT</li> <li>• AGGREGATION_LOGIC_TABLE</li> <li>• TAG</li> <li>• CODE_TABLE</li> <li>• TABLE_MODEL_ATTRIBUTE</li> <li>• FACT_DIMENSION</li> <li>• FACT_ATTRIBUTE</li> <li>• FACT_MEASURE</li> <li>• SUMMARY_DIMENSION_ATTRIBUTE</li> <li>• SUMMARY_TIME</li> <li>• DIMENSION_TABLE_ATTRIBUTE</li> <li>• QUALITY_RULE</li> <li>• BIZ_METRIC</li> <li>• COMPOUND_METRIC</li> <li>• INFO_ARCH</li> <li>• DEGENERATE_DIMENSION</li> <li>• TABLE_MODEL_LOGIC</li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information



Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Status code: 400**

**Table 7-51** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-52** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-53** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-54** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "id" : 0,
  "directory_id" : "793889791589650432",
  "values" : [ {
    "fd_name" : "nameEn",
    "fd_value" : "demo"
  }, {
    "fd_name" : "dataType",
    "fd_value" : "STRING"
  }, {
    "fd_name" : "dataLength",
    "fd_value" : "128"
  }, {
    "fd_name" : "hasAllowValueList",
    "fd_value" : false
  }, {
    "fd_name" : "allowList",
    "fd_value" : ""
  }, {
    "fd_name" : "referCodeTable",
    "fd_value" : "885123958788317184"
  }, {
    "fd_name" : "codeStandColumn",
    "fd_value" : "52470"
  }, {
    "fd_name" : "dqRule",
    "fd_value" : ""
  }, {
    "fd_name" : "ruleOwner",
    "fd_value" : "liuxu"
  }, {
  }
}
```

```

    "fd_name": "dataMonitorOwner",
    "fd_value": "liuxu"
  }, {
    "fd_name": "standardLevel",
    "fd_value": "domain"
  }, {
    "fd_name": "description",
    "fd_value": "This is a demo."
  }
]
}

```

## Example Responses

**Status code: 200**

Success

```

{
  "data": {
    "value": [ {
      "xxx": "See the get request."
    } ]
  }
}

```

## Status Codes

Status Code	Description
200	Success
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.2.3 Deleting Data Standards

### Function

This API is used to delete data standards.

### URI

DELETE /v2/{project\_id}/design/standards

**Table 7-55** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 7-56** Request body parameters

Parameter	Mandatory	Type	Description
ids	Yes	Array of integers	ID list
del_types	No	String	Deletion types Enumeration values: <ul style="list-style-type: none"><li>• <b>PHYSICAL_TABLE</b></li></ul>

## Response Parameters

**Status code: 200**

**Table 7-57** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400**

**Table 7-58** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-59** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

Parameter	Type	Description
data	Object	Returned data

**Status code: 403**

**Table 7-60** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-61** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

None

## Status Codes

Status Code	Description
200	The operation succeeds. The number of deleted data standards is returned. Note that the list of row IDs is passed, and that data standards rather than certain attributes are deleted.

Status Code	Description
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.2.4 Modifying a Data Standard

### Function

This API is used to modify a data standard.

### URI

PUT /v2/{project\_id}/design/standards/{id}

**Table 7-62** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

### Request Parameters

**Table 7-63** Request body parameters

Parameter	Mandatory	Type	Description
values	Yes	Array of <b>StandElementValueVO</b> objects	Values
id	No	Long	ID
directory_id	Yes	Long	ID of the directory where the standard is located
directory_path	No	String	Catalog tree
row_id	No	Long	ID of the row where the standard is located

Parameter	Mandatory	Type	Description
status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• DRAFT</li> <li>• PUBLISH_DEVELOPING</li> <li>• PUBLISHED</li> <li>• OFFLINE_DEVELOPING</li> <li>• OFFLINE</li> <li>• REJECT</li> </ul>
approval_info	No	ApprovalVO object	Approval information
new_biz	No	BizVersionManageVO object	Business version management
create_by	No	String	Creator
update_by	No	String	User who updated the standard
create_time	No	String	Creation time
update_time	No	String	Update time

**Table 7-64** StandElementValueVO

Parameter	Mandatory	Type	Description
fd_name	Yes	String	Field name
fd_value	No	String	Field value
fd_id	No	Long	Field ID
directory_id	No	Long	ID of the directory where the standard is located
row_id	No	Long	ID of the row where the standard is located
id	No	Long	ID

Parameter	Mandatory	Type	Description
status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>
create_by	No	String	Creator
update_by	No	String	User who updated the standard
create_time	No	String	Creation time
update_time	No	String	Update time

**Table 7-65** ApprovalVO

Parameter	Mandatory	Type	Description
id	No	Long	ID
tenant_id	No	String	tenant id
name_ch	No	String	Approval name in Chinese
name_en	No	String	Approval name in English
biz_id	No	Long	Business ID



Parameter	Mandatory	Type	Description
biz_type	No	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	No	String	Business information
biz_info_obj	No	Object	Business information object
biz_version	No	Integer	Business version

Parameter	Mandatory	Type	Description
biz_status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
approval_status	No	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DEVELOPING</b></li> <li>• <b>APPROVED</b></li> <li>• <b>REJECT</b></li> <li>• <b>WITHDREW</b></li> </ul>
approval_type	No	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>• <b>PUBLISH</b></li> <li>• <b>OFFLINE</b></li> </ul>
submit_time	No	String	Submission time
create_by	No	String	Creator
l1	No	String	Subject area group
l2	No	String	Subject area
l3	No	String	Business object
approval_time	No	String	Approval time
approver	No	String	Approver
email	No	String	Approver email address
msg	No	String	Approval message
directory_path	No	String	Directory tree

**Table 7-66** BizVersionManageVO

Parameter	Mandatory	Type	Description
id	No	Long	ID information

Parameter	Mandatory	Type	Description
biz_type	No	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• ATOMIC_INDEX</li> <li>• DERIVATIVE_INDEX</li> <li>• DIMENSION</li> <li>• DIMENSION_ATTRIBUTE</li> <li>• DIMENSION_HIERARCHIES</li> <li>• CONDITION_GROUP</li> <li>• TIME_CONDITION</li> <li>• COMMON_CONDITION</li> <li>• FACT_LOGIC_TABLE</li> <li>• TABLE_MODEL</li> <li>• DIMENSION_LOGIC_TABLE</li> <li>• STANDARD_ELEMENT</li> <li>• AGGREGATION_LOGIC_TABLE</li> <li>• TAG</li> <li>• CODE_TABLE</li> <li>• TABLE_MODEL_ATTRIBUTE</li> <li>• FACT_DIMENSION</li> <li>• FACT_ATTRIBUTE</li> <li>• FACT_MEASURE</li> <li>• SUMMARY_DIMENSION_ATTRIBUTE</li> <li>• SUMMARY_TIME</li> <li>• DIMENSION_TABLE_ATTRIBUTE</li> <li>• QUALITY_RULE</li> <li>• BIZ_METRIC</li> <li>• COMPOUND_METRIC</li> <li>• INFO_ARCH</li> <li>• DEGENERATE_DIMENSION</li> <li>• TABLE_MODEL_LOGIC</li> </ul>
biz_id	No	Long	Business ID
biz_info	No	String	Business object information

Parameter	Mandatory	Type	Description
status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• DRAFT</li> <li>• PUBLISH_DEVELOPING</li> <li>• PUBLISHED</li> <li>• OFFLINE_DEVELOPING</li> <li>• OFFLINE</li> <li>• REJECT</li> </ul>
biz_version	No	Integer	Business version
create_time	No	String	Creation time
update_time	No	String	Update time

## Response Parameters

Status code: 200

Table 7-67 Response body parameters

Parameter	Type	Description
values	Array of <a href="#">StandElementValueVO</a> objects	Values
id	Long	ID
directory_id	Long	ID of the directory where the standard is located
directory_path	String	Catalog tree
row_id	Long	ID of the row where the standard is located
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• DRAFT</li> <li>• PUBLISH_DEVELOPING</li> <li>• PUBLISHED</li> <li>• OFFLINE_DEVELOPING</li> <li>• OFFLINE</li> <li>• REJECT</li> </ul>

Parameter	Type	Description
approval_info	<a href="#">ApprovalVO</a> object	Approval information
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management
create_by	String	Creator
update_by	String	User who updated the standard
create_time	String	Creation time
update_time	String	Update time

**Table 7-68** StandElementValueVO

Parameter	Type	Description
fd_name	String	Field name
fd_value	String	Field value
fd_id	Long	Field ID
directory_id	Long	ID of the directory where the standard is located
row_id	Long	ID of the row where the standard is located
id	Long	ID
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
create_by	String	Creator
update_by	String	User who updated the standard
create_time	String	Creation time
update_time	String	Update time

**Table 7-69** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information

Parameter	Type	Description
biz_info_obj	Object	Business information object
biz_version	Integer	Business version
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-70** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• ATOMIC_INDEX</li> <li>• DERIVATIVE_INDEX</li> <li>• DIMENSION</li> <li>• DIMENSION_ATTRIBUTE</li> <li>• DIMENSION_HIERARCHIES</li> <li>• CONDITION_GROUP</li> <li>• TIME_CONDITION</li> <li>• COMMON_CONDITION</li> <li>• FACT_LOGIC_TABLE</li> <li>• TABLE_MODEL</li> <li>• DIMENSION_LOGIC_TABLE</li> <li>• STANDARD_ELEMENT</li> <li>• AGGREGATION_LOGIC_TABLE</li> <li>• TAG</li> <li>• CODE_TABLE</li> <li>• TABLE_MODEL_ATTRIBUTE</li> <li>• FACT_DIMENSION</li> <li>• FACT_ATTRIBUTE</li> <li>• FACT_MEASURE</li> <li>• SUMMARY_DIMENSION_ATTRIBUTE</li> <li>• SUMMARY_TIME</li> <li>• DIMENSION_TABLE_ATTRIBUTE</li> <li>• QUALITY_RULE</li> <li>• BIZ_METRIC</li> <li>• COMPOUND_METRIC</li> <li>• INFO_ARCH</li> <li>• DEGENERATE_DIMENSION</li> <li>• TABLE_MODEL_LOGIC</li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information



Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Status code: 400****Table 7-71** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-72** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-73** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-74** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "id" : 0,
  "directory_id" : "793889791589650432",
  "values" : [ {
    "fd_name" : "nameEn",
    "fd_value" : "demo"
  }, {
    "fd_name" : "dataType",
    "fd_value" : "STRING"
  }, {
    "fd_name" : "dataLength",
    "fd_value" : "128"
  }, {
    "fd_name" : "hasAllowValueList",
    "fd_value" : false
  }, {
    "fd_name" : "allowList",
    "fd_value" : ""
  }, {
    "fd_name" : "referCodeTable",
    "fd_value" : "885123958788317184"
  }, {
    "fd_name" : "codeStandColumn",
    "fd_value" : "52470"
  }, {
    "fd_name" : "dqRule",
    "fd_value" : ""
  }, {
    "fd_name" : "ruleOwner",
    "fd_value" : "liuxu"
  }, {
  }
}
```

```

    "fd_name" : "dataMonitorOwner",
    "fd_value" : "liuxu"
  }, {
    "fd_name" : "standardLevel",
    "fd_value" : "domain"
  }, {
    "fd_name" : "description",
    "fd_value" : "This is a demo."
  }
]
}

```

## Example Responses

**Status code: 200**

Success

```

{
  "data" : {
    "value" : [ {
      "xxx" : "See the get request."
    } ]
  }
}

```

## Status Codes

Status Code	Description
200	Success
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.2.5 Obtaining Data Standard Details

### Function

This API is used to obtain the details of a data standard based on the ID.

### URI

GET /v2/{project\_id}/design/standards/{id}

**Table 7-75** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

Parameter	Mandatory	Type	Description
id	Yes	String	Entity ID

## Request Parameters

None

## Response Parameters

Status code: 200

Table 7-76 Response body parameters

Parameter	Type	Description
values	Array of <a href="#">StandElementValueVO</a> objects	Values
id	Long	ID
directory_id	Long	ID of the directory where the standard is located
directory_path	String	Catalog tree
row_id	Long	ID of the row where the standard is located
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● DRAFT</li><li>● PUBLISH_DEVELOPING</li><li>● PUBLISHED</li><li>● OFFLINE_DEVELOPING</li><li>● OFFLINE</li><li>● REJECT</li></ul>
approval_info	<a href="#">ApprovalVO</a> object	Approval information
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management
create_by	String	Creator
update_by	String	User who updated the standard
create_time	String	Creation time

Parameter	Type	Description
update_time	String	Update time

**Table 7-77** StandElementValueVO

Parameter	Type	Description
fd_name	String	Field name
fd_value	String	Field value
fd_id	Long	Field ID
directory_id	Long	ID of the directory where the standard is located
row_id	Long	ID of the row where the standard is located
id	Long	ID
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>
create_by	String	Creator
update_by	String	User who updated the standard
create_time	String	Creation time
update_time	String	Update time

**Table 7-78** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-79** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information



Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Status code: 400**

**Table 7-80** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-81** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-82** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-83** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds, and the data standard details are returned.

```
{
  "id" : 0,
  "directory_id" : "793889791589650432",
  "values" : [ {
    "fd_name" : "nameEn",
    "fd_value" : "demo"
  }, {
    "fd_name" : "dataType",
    "fd_value" : "STRING"
  }, {
    "fd_name" : "dataLength",
    "fd_value" : "128"
  }, {
    "fd_name" : "hasAllowValueList",
    "fd_value" : false
  }, {
    "fd_name" : "allowList",
    "fd_value" : ""
  }, {
    "fd_name" : "referCodeTable",
    "fd_value" : "885123958788317184"
  }
]
```

```

}, {
  "fd_name": "codeStandColumn",
  "fd_value": "52470"
}, {
  "fd_name": "dqcRule",
  "fd_value": "{}"
}, {
  "fd_name": "ruleOwner",
  "fd_value": "liuxu"
}, {
  "fd_name": "dataMonitorOwner",
  "fd_value": "liuxu"
}, {
  "fd_name": "standardLevel",
  "fd_value": "domain"
}, {
  "fd_name": "description",
  "fd_value": "This is a demo."
}]
}

```

## Status Codes

Status Code	Description
200	The operation succeeds, and the data standard details are returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.2.6 Associating Attributes with a Data Standard

### Function

This API is used to associate attributes with a data standard

### URI

PUT /v2/{project\_id}/design/standards/attribute

**Table 7-84** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 7-85** Request body parameters

Parameter	Mandatory	Type	Description
ids	Yes	Array of integers	Attribute ID list
stand_row_id	Yes	Long	ID of the associated data standard
table_id	Yes	Long	Table ID
biz_type	Yes	String	Table type. Four types are available: dimension table, fact table, summary table, and business table (default). Default: <b>TABLE_MODEL</b> Enumeration values: <ul style="list-style-type: none"><li>• <b>TABLE_MODEL</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li></ul>

## Response Parameters

**Status code: 200**

**Table 7-86** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400**

**Table 7-87** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

Parameter	Type	Description
data	Object	Returned data

**Status code: 401****Table 7-88** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-89** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-90** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{  
  "ids" : [ "873243083737899009" ],  
  "stand_row_id" : "873241295328616449",  
  "table_id" : "873243083737899008",  
  "biz_type" : "TABLE_MODEL"  
}
```

## Example Responses

**Status code: 200**

Success

```
{  
  "data" : {  
    "value" : {  
      "ids" : [ "873243083737899009" ],  
      "stand_row_id" : "873241295328616449",  
      "table_id" : "873243083737899008",  
      "biz_type" : "TABLE_MODEL"  
    }  
  }  
}
```

## Status Codes

Status Code	Description
200	Success
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.3 Lookup Table Management APIs

### 7.3.1 Querying the Lookup Table List

#### Function

This API is used to query the lookup table list.

#### URI

GET /v2/{project\_id}/design/code-tables

**Table 7-91** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-92** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
directory_id	No	Long	Catalog ID
status	No	String	Business status Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-93** Response body parameters

Parameter	Type	Description
id	Long	ID
name_en	String	Table name in English Maximum: <b>200</b>
name_ch	String	Table name in Chinese Maximum: <b>200</b>
tb_version	Integer	Table version
directory_id	Long	Catalog ID
directory_path	String	Catalog tree
description	String	Description Maximum: <b>600</b>
create_by	String	Creator
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionMa nageVO</b> object	Business version management
code_table_fie lds	Array of <b>CodeTableFie ldVO</b> objects	Lookup table attribute information



**Table 7-94** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-95** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-96** CodeTableFieldVO

Parameter	Type	Description
id	Long	ID
code_table_id	Long	Lookup table ID
ordinal	Integer	Ordinal
name_en	String	Field name in English Maximum: <b>600</b>
name_ch	String	Field name in Chinese Maximum: <b>200</b>
description	String	Description Maximum: <b>600</b>
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>● <b>NUMBER</b></li><li>● <b>STRING</b></li><li>● <b>DATETIME</b></li><li>● <b>BLOB</b></li><li>● <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>

Parameter	Type	Description
is_unique_key	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	Integer	Number of lookup table attribute values

**Table 7-97** CodeTableFieldValueVO

Parameter	Type	Description
id	Long	ID
fd_id	Long	Lookup table attribute ID
fd_value	String	Lookup table attribute value
ordinal	Integer	Ordinal
description	String	Description Maximum: <b>600</b>

**Status code: 400**

**Table 7-98** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-99** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-100** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-101** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. The **CodeTableVO** array and the total number of lookup tables are returned.

```
{
  "id" : "1014131824240230400",
  "name_en" : "test",
  "name_ch" : "test",
  "tb_version" : 0,
  "directory_id" : "1012307270173851648",
  "directory_path" : null,
  "description" : "",
  "create_by" : "abc",
  "status" : "DRAFT",
  "create_time" : "2022-08-30T11:17:48.557+08:00",
  "update_time" : "2022-08-30T11:17:48.557+08:00",
  "approval_info" : null,
  "new_biz" : null,
  "code_table_fields" : [ {
    "id" : null,
    "code_table_id" : null,
    "ordinal" : 1,
    "name_en" : "code",
    "name_ch" : "Code",
    "description" : "",
    "data_type" : "STRING",
    "domain_type" : null,
    "data_type_extend" : null,
    "is_unique_key" : false,
    "code_table_field_values" : [ ],
    "count_field_values" : null
  }, {
    "id" : null,
    "code_table_id" : null,
    "ordinal" : 2,
    "name_en" : "value",
    "name_ch" : "Value",
    "description" : "",
    "data_type" : "STRING",
    "domain_type" : null,
    "data_type_extend" : null,
    "is_unique_key" : false,
    "code_table_field_values" : [ ],
    "count_field_values" : null
  } ]
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>CodeTableVO</b> array and the total number of lookup tables are returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found



## 7.3.2 Creating a Lookup Table

### Function

This API is used to create a lookup table.

### URI

POST /v2/{project\_id}/design/code-tables

**Table 7-102** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

### Request Parameters

**Table 7-103** Request body parameters

Parameter	Mandatory	Type	Description
id	No	Long	ID
name_en	Yes	String	Table name in English Maximum: <b>200</b>
name_ch	Yes	String	Table name in Chinese Maximum: <b>200</b>
tb_version	No	Integer	Table version
directory_id	Yes	Long	Catalog ID
directory_path	No	String	Catalog tree
description	No	String	Description Maximum: <b>600</b>
create_by	No	String	Creator
status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>

Parameter	Mandatory	Type	Description
create_time	No	String	Creation time
update_time	No	String	Update time
approval_info	No	<a href="#">ApprovalVO</a> object	Approval information
new_biz	No	<a href="#">BizVersionManagementVO</a> object	Business version management
code_table_fields	Yes	Array of <a href="#">CodeTableFieldVO</a> objects	Lookup table attribute information

**Table 7-104** ApprovalVO

Parameter	Mandatory	Type	Description
id	No	Long	ID
tenant_id	No	String	tenant id
name_ch	No	String	Approval name in Chinese
name_en	No	String	Approval name in English
biz_id	No	Long	Business ID

Parameter	Mandatory	Type	Description
biz_type	No	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_info	No	String	Business information
biz_info_obj	No	Object	Business information object
biz_version	No	Integer	Business version

Parameter	Mandatory	Type	Description
biz_status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
approval_status	No	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DEVELOPING</b></li> <li>• <b>APPROVED</b></li> <li>• <b>REJECT</b></li> <li>• <b>WITHDREW</b></li> </ul>
approval_type	No	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>• <b>PUBLISH</b></li> <li>• <b>OFFLINE</b></li> </ul>
submit_time	No	String	Submission time
create_by	No	String	Creator
l1	No	String	Subject area group
l2	No	String	Subject area
l3	No	String	Business object
approval_time	No	String	Approval time
approver	No	String	Approver
email	No	String	Approver email address
msg	No	String	Approval message
directory_path	No	String	Directory tree

**Table 7-105** BizVersionManageVO

Parameter	Mandatory	Type	Description
id	No	Long	ID information

Parameter	Mandatory	Type	Description
biz_type	No	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• ATOMIC_INDEX</li> <li>• DERIVATIVE_INDEX</li> <li>• DIMENSION</li> <li>• DIMENSION_ATTRIBUTE</li> <li>• DIMENSION_HIERARCHIES</li> <li>• CONDITION_GROUP</li> <li>• TIME_CONDITION</li> <li>• COMMON_CONDITION</li> <li>• FACT_LOGIC_TABLE</li> <li>• TABLE_MODEL</li> <li>• DIMENSION_LOGIC_TABLE</li> <li>• STANDARD_ELEMENT</li> <li>• AGGREGATION_LOGIC_TABLE</li> <li>• TAG</li> <li>• CODE_TABLE</li> <li>• TABLE_MODEL_ATTRIBUTE</li> <li>• FACT_DIMENSION</li> <li>• FACT_ATTRIBUTE</li> <li>• FACT_MEASURE</li> <li>• SUMMARY_DIMENSION_ATTRIBUTE</li> <li>• SUMMARY_TIME</li> <li>• DIMENSION_TABLE_ATTRIBUTE</li> <li>• QUALITY_RULE</li> <li>• BIZ_METRIC</li> <li>• COMPOUND_METRIC</li> <li>• INFO_ARCH</li> <li>• DEGENERATE_DIMENSION</li> <li>• TABLE_MODEL_LOGIC</li> </ul>
biz_id	No	Long	Business ID
biz_info	No	String	Business object information

Parameter	Mandatory	Type	Description
status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>
biz_version	No	Integer	Business version
create_time	No	String	Creation time
update_time	No	String	Update time

**Table 7-106** CodeTableFieldVO

Parameter	Mandatory	Type	Description
id	No	Long	ID
code_table_id	No	Long	Lookup table ID
ordinal	Yes	Integer	Ordinal
name_en	Yes	String	Field name in English Maximum: <b>600</b>
name_ch	Yes	String	Field name in Chinese Maximum: <b>200</b>
description	No	String	Description Maximum: <b>600</b>
data_type	Yes	String	Data type
domain_type	No	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>• <b>NUMBER</b></li><li>• <b>STRING</b></li><li>• <b>DATETIME</b></li><li>• <b>BLOB</b></li><li>• <b>OTHER</b></li></ul>
data_type_ext_end	No	String	Data type extended field Maximum: <b>50</b>

Parameter	Mandatory	Type	Description
is_unique_key	No	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	No	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	No	Integer	Number of lookup table attribute values

**Table 7-107** CodeTableFieldValueVO

Parameter	Mandatory	Type	Description
id	No	Long	ID
fd_id	No	Long	Lookup table attribute ID
fd_value	No	String	Lookup table attribute value
ordinal	No	Integer	Ordinal
description	No	String	Description Maximum: <b>600</b>

## Response Parameters

Status code: 200

**Table 7-108** Response body parameters

Parameter	Type	Description
id	Long	ID
name_en	String	Table name in English Maximum: <b>200</b>
name_ch	String	Table name in Chinese Maximum: <b>200</b>
tb_version	Integer	Table version
directory_id	Long	Catalog ID
directory_path	String	Catalog tree

Parameter	Type	Description
description	String	Description Maximum: <b>600</b>
create_by	String	Creator
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionMa nageVO</b> object	Business version management
code_table_fie lds	Array of <b>CodeTableFie ldVO</b> objects	Lookup table attribute information

**Table 7-109** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID



Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-110** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-111** CodeTableFieldVO

Parameter	Type	Description
id	Long	ID
code_table_id	Long	Lookup table ID
ordinal	Integer	Ordinal
name_en	String	Field name in English Maximum: <b>600</b>
name_ch	String	Field name in Chinese Maximum: <b>200</b>
description	String	Description Maximum: <b>600</b>
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>● <b>NUMBER</b></li><li>● <b>STRING</b></li><li>● <b>DATETIME</b></li><li>● <b>BLOB</b></li><li>● <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>

Parameter	Type	Description
is_unique_key	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	Integer	Number of lookup table attribute values

**Table 7-112** CodeTableFieldValueVO

Parameter	Type	Description
id	Long	ID
fd_id	Long	Lookup table attribute ID
fd_value	String	Lookup table attribute value
ordinal	Integer	Ordinal
description	String	Description Maximum: <b>600</b>

**Status code: 400**

**Table 7-113** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-114** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-115** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-116** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "name_en": "demo",
  "name_ch": "demo",
  "description": "",
  "code_table_fields": [ {
    "ordinal": 1,
    "name_ch": "Code",
    "name_en": "code",
    "data_type": "STRING",
    "description": "",
    "code_table_field_values": [ ]
  } ]
}
```

```
}, {
  "ordinal" : 2,
  "name_ch" : "Value",
  "name_en" : "value",
  "data_type" : "STRING",
  "description" : "",
  "code_table_field_values" : [ ]
}],
"tb_version" : 0,
"directory_id" : "793889572823142400"
}
```

## Example Responses

### Status code: 200

The operation succeeds. **CodeTableVO** is returned.

```
{
  "id" : "1014131824240230400",
  "name_en" : "test",
  "name_ch" : "test",
  "tb_version" : 0,
  "directory_id" : "1012307270173851648",
  "directory_path" : null,
  "description" : "",
  "create_by" : "abc",
  "status" : "DRAFT",
  "create_time" : "2022-08-30T11:17:48.557+08:00",
  "update_time" : "2022-08-30T11:17:48.557+08:00",
  "approval_info" : null,
  "new_biz" : null,
  "code_table_fields" : [ {
    "id" : null,
    "code_table_id" : null,
    "ordinal" : 1,
    "name_en" : "code",
    "name_ch" : "Code",
    "description" : "",
    "data_type" : "STRING",
    "domain_type" : null,
    "data_type_extend" : null,
    "is_unique_key" : false,
    "code_table_field_values" : [ ],
    "count_field_values" : null
  }, {
    "id" : null,
    "code_table_id" : null,
    "ordinal" : 2,
    "name_en" : "value",
    "name_ch" : "Value",
    "description" : "",
    "data_type" : "STRING",
    "domain_type" : null,
    "data_type_extend" : null,
    "is_unique_key" : false,
    "code_table_field_values" : [ ],
    "count_field_values" : null
  } ]
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>CodeTableVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.3.3 Deleting Lookup Tables

### Function

This API is used to delete lookup tables.

### URI

DELETE /v2/{project\_id}/design/code-tables

**Table 7-117** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

### Request Parameters

**Table 7-118** Request body parameters

Parameter	Mandatory	Type	Description
ids	Yes	Array of integers	ID list
del_types	No	String	Deletion types Enumeration values: <ul style="list-style-type: none"> <li><b>PHYSICAL_TABLE</b></li> </ul>

### Response Parameters

**Status code: 200**



**Table 7-119** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400**

**Table 7-120** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-121** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-122** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-123** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Example Requests**

None

**Example Responses**

None

**Status Codes**

Status Code	Description
200	The operation succeeds, and the number of deleted lookup tables is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.3.4 Modifying a Lookup Table

**Function**

This API is used to modify a lookup table.

**URI**

PUT /v2/{project\_id}/design/code-tables/{id}

**Table 7-124** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

## Request Parameters

**Table 7-125** Request body parameters

Parameter	Mandatory	Type	Description
id	No	Long	ID
name_en	Yes	String	Table name in English Maximum: <b>200</b>
name_ch	Yes	String	Table name in Chinese Maximum: <b>200</b>
tb_version	No	Integer	Table version
directory_id	Yes	Long	Catalog ID
directory_path	No	String	Catalog tree
description	No	String	Description Maximum: <b>600</b>
create_by	No	String	Creator
status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>
create_time	No	String	Creation time
update_time	No	String	Update time
approval_info	No	<b>ApprovalVO</b> object	Approval information
new_biz	No	<b>BizVersionMa nageVO</b> object	Business version management

Parameter	Mandatory	Type	Description
code_table_fie lds	Yes	Array of <a href="#">CodeTableFie ldVO</a> objects	Lookup table attribute information

**Table 7-126** ApprovalVO

Parameter	Mandatory	Type	Description
id	No	Long	ID
tenant_id	No	String	tenant id
name_ch	No	String	Approval name in Chinese
name_en	No	String	Approval name in English
biz_id	No	Long	Business ID

Parameter	Mandatory	Type	Description
biz_type	No	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	No	String	Business information
biz_info_obj	No	Object	Business information object
biz_version	No	Integer	Business version

Parameter	Mandatory	Type	Description
biz_status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
approval_status	No	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DEVELOPING</b></li> <li>• <b>APPROVED</b></li> <li>• <b>REJECT</b></li> <li>• <b>WITHDREW</b></li> </ul>
approval_type	No	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>• <b>PUBLISH</b></li> <li>• <b>OFFLINE</b></li> </ul>
submit_time	No	String	Submission time
create_by	No	String	Creator
l1	No	String	Subject area group
l2	No	String	Subject area
l3	No	String	Business object
approval_time	No	String	Approval time
approver	No	String	Approver
email	No	String	Approver email address
msg	No	String	Approval message
directory_path	No	String	Directory tree

**Table 7-127** BizVersionManageVO

Parameter	Mandatory	Type	Description
id	No	Long	ID information

Parameter	Mandatory	Type	Description
biz_type	No	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• ATOMIC_INDEX</li> <li>• DERIVATIVE_INDEX</li> <li>• DIMENSION</li> <li>• DIMENSION_ATTRIBUTE</li> <li>• DIMENSION_HIERARCHIES</li> <li>• CONDITION_GROUP</li> <li>• TIME_CONDITION</li> <li>• COMMON_CONDITION</li> <li>• FACT_LOGIC_TABLE</li> <li>• TABLE_MODEL</li> <li>• DIMENSION_LOGIC_TABLE</li> <li>• STANDARD_ELEMENT</li> <li>• AGGREGATION_LOGIC_TABLE</li> <li>• TAG</li> <li>• CODE_TABLE</li> <li>• TABLE_MODEL_ATTRIBUTE</li> <li>• FACT_DIMENSION</li> <li>• FACT_ATTRIBUTE</li> <li>• FACT_MEASURE</li> <li>• SUMMARY_DIMENSION_ATTRIBUTE</li> <li>• SUMMARY_TIME</li> <li>• DIMENSION_TABLE_ATTRIBUTE</li> <li>• QUALITY_RULE</li> <li>• BIZ_METRIC</li> <li>• COMPOUND_METRIC</li> <li>• INFO_ARCH</li> <li>• DEGENERATE_DIMENSION</li> <li>• TABLE_MODEL_LOGIC</li> </ul>
biz_id	No	Long	Business ID
biz_info	No	String	Business object information

Parameter	Mandatory	Type	Description
status	No	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
biz_version	No	Integer	Business version
create_time	No	String	Creation time
update_time	No	String	Update time

**Table 7-128** CodeTableFieldVO

Parameter	Mandatory	Type	Description
id	No	Long	ID
code_table_id	No	Long	Lookup table ID
ordinal	Yes	Integer	Ordinal
name_en	Yes	String	Field name in English Maximum: <b>600</b>
name_ch	Yes	String	Field name in Chinese Maximum: <b>200</b>
description	No	String	Description Maximum: <b>600</b>
data_type	Yes	String	Data type
domain_type	No	String	Data type domains Enumeration values: <ul style="list-style-type: none"> <li>• <b>NUMBER</b></li> <li>• <b>STRING</b></li> <li>• <b>DATETIME</b></li> <li>• <b>BLOB</b></li> <li>• <b>OTHER</b></li> </ul>
data_type_ext_end	No	String	Data type extended field Maximum: <b>50</b>



Parameter	Mandatory	Type	Description
is_unique_key	No	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	No	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	No	Integer	Number of lookup table attribute values

**Table 7-129** CodeTableFieldValueVO

Parameter	Mandatory	Type	Description
id	No	Long	ID
fd_id	No	Long	Lookup table attribute ID
fd_value	No	String	Lookup table attribute value
ordinal	No	Integer	Ordinal
description	No	String	Description Maximum: <b>600</b>

## Response Parameters

Status code: 200

**Table 7-130** Response body parameters

Parameter	Type	Description
id	Long	ID
name_en	String	Table name in English Maximum: <b>200</b>
name_ch	String	Table name in Chinese Maximum: <b>200</b>
tb_version	Integer	Table version
directory_id	Long	Catalog ID
directory_path	String	Catalog tree

Parameter	Type	Description
description	String	Description Maximum: <b>600</b>
create_by	String	Creator
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionMa nageVO</b> object	Business version management
code_table_fie lds	Array of <b>CodeTableFie ldVO</b> objects	Lookup table attribute information

**Table 7-131** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-132** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-133** CodeTableFieldVO

Parameter	Type	Description
id	Long	ID
code_table_id	Long	Lookup table ID
ordinal	Integer	Ordinal
name_en	String	Field name in English Maximum: <b>600</b>
name_ch	String	Field name in Chinese Maximum: <b>200</b>
description	String	Description Maximum: <b>600</b>
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>● <b>NUMBER</b></li><li>● <b>STRING</b></li><li>● <b>DATETIME</b></li><li>● <b>BLOB</b></li><li>● <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>

Parameter	Type	Description
is_unique_key	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	Integer	Number of lookup table attribute values

**Table 7-134** CodeTableFieldValueVO

Parameter	Type	Description
id	Long	ID
fd_id	Long	Lookup table attribute ID
fd_value	String	Lookup table attribute value
ordinal	Integer	Ordinal
description	String	Description Maximum: <b>600</b>

**Status code: 400****Table 7-135** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-136** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-137** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-138** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "name_en": "demo",
  "name_ch": "demo",
  "description": "",
  "code_table_fields": [ {
    "ordinal": 1,
    "name_ch": "Code",
    "name_en": "code",
    "data_type": "STRING",
    "description": "",
    "code_table_field_values": [ ]
  } ]
}
```



```
}, {
  "ordinal" : 2,
  "name_ch" : "Value",
  "name_en" : "value",
  "data_type" : "STRING",
  "description" : "",
  "code_table_field_values" : [ ]
}],
"tb_version" : 0,
"directory_id" : "793889572823142400"
}
```

## Example Responses

### Status code: 200

The operation succeeds. **CodeTableVO** is returned.

```
{
  "data" : {
    "value" : {
      "id" : "1012307352952635392",
      "name_en" : "RY_000001",
      "name_ch" : "Gender",
      "tb_version" : 0,
      "directory_id" : "1012307270173851648",
      "directory_path" : null,
      "description" : "",
      "create_by" : "abc",
      "status" : "PUBLISHED",
      "create_time" : "2022-08-25T10:28:01+08:00",
      "update_time" : "2022-08-25T10:31:08+08:00",
      "approval_info" : null,
      "new_biz" : null,
      "code_table_fields" : [ {
        "id" : "66929",
        "code_table_id" : "1012307352952635392",
        "ordinal" : 1,
        "name_en" : "code",
        "name_ch" : "Code",
        "description" : "",
        "data_type" : "STRING",
        "domain_type" : null,
        "data_type_extend" : null,
        "is_unique_key" : false,
        "code_table_field_values" : [ ],
        "count_field_values" : null
      }, {
        "id" : "66930",
        "code_table_id" : "1012307352952635392",
        "ordinal" : 2,
        "name_en" : "value",
        "name_ch" : "Value",
        "description" : "",
        "data_type" : "STRING",
        "domain_type" : null,
        "data_type_extend" : null,
        "is_unique_key" : false,
        "code_table_field_values" : [ ],
        "count_field_values" : null
      }
    ]
  }
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>CodeTableVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.3.5 Querying Lookup Table Details

### Function

This API is used to query the details of a lookup table based on the ID.

### URI

GET /v2/{project\_id}/design/code-tables/{id}

**Table 7-139** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

### Request Parameters

None

### Response Parameters

**Status code: 200**

**Table 7-140** Response body parameters

Parameter	Type	Description
id	Long	ID
name_en	String	Table name in English Maximum: <b>200</b>

Parameter	Type	Description
name_ch	String	Table name in Chinese Maximum: <b>200</b>
tb_version	Integer	Table version
directory_id	Long	Catalog ID
directory_path	String	Catalog tree
description	String	Description Maximum: <b>600</b>
create_by	String	Creator
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionMa nageVO</b> object	Business version management
code_table_fie lds	Array of <b>CodeTableFie ldVO</b> objects	Lookup table attribute information

**Table 7-141** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-142** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-143** CodeTableFieldVO

Parameter	Type	Description
id	Long	ID
code_table_id	Long	Lookup table ID
ordinal	Integer	Ordinal
name_en	String	Field name in English Maximum: <b>600</b>
name_ch	String	Field name in Chinese Maximum: <b>200</b>
description	String	Description Maximum: <b>600</b>
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>● <b>NUMBER</b></li><li>● <b>STRING</b></li><li>● <b>DATETIME</b></li><li>● <b>BLOB</b></li><li>● <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>

Parameter	Type	Description
is_unique_key	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	Integer	Number of lookup table attribute values

**Table 7-144** CodeTableFieldValueVO

Parameter	Type	Description
id	Long	ID
fd_id	Long	Lookup table attribute ID
fd_value	String	Lookup table attribute value
ordinal	Integer	Ordinal
description	String	Description Maximum: <b>600</b>

**Status code: 400**

**Table 7-145** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**



**Table 7-146** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-147** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-148** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **CodeTableVO** is returned.

```
{
  "id" : "1012307352952635392",
```

```

"name_en" : "RY_000001",
"name_ch" : "Gender",
"tb_version" : 0,
"directory_id" : "1012307270173851648",
"directory_path" : null,
"description" : "",
"create_by" : "abc",
"status" : "PUBLISHED",
"create_time" : "2022-08-25T10:28:01+08:00",
"update_time" : "2022-08-25T10:31:08+08:00",
"approval_info" : null,
"new_biz" : null,
"code_table_fields" : [ {
  "id" : "66929",
  "code_table_id" : "1012307352952635392",
  "ordinal" : 1,
  "name_en" : "code",
  "name_ch" : "Code",
  "description" : "",
  "data_type" : "STRING",
  "domain_type" : null,
  "data_type_extend" : null,
  "is_unique_key" : false,
  "code_table_field_values" : [ ],
  "count_field_values" : null
}, {
  "id" : "66930",
  "code_table_id" : "1012307352952635392",
  "ordinal" : 2,
  "name_en" : "value",
  "name_ch" : "Value",
  "description" : "",
  "data_type" : "STRING",
  "domain_type" : null,
  "data_type_extend" : null,
  "is_unique_key" : false,
  "code_table_field_values" : [ ],
  "count_field_values" : null
} ]
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>CodeTableVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.3.6 Obtaining Field Values in a Lookup Table

### Function

This API is used to obtain the field values in a lookup table.

## URI

GET /v2/{project\_id}/design/code-tables/{id}/values

**Table 7-149** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

**Table 7-150** Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 7-151** Response body parameters

Parameter	Type	Description
max_ordinal	Integer	Maximum ordinal
total	Integer	Total number of records

Parameter	Type	Description
records	Array of <a href="#">CodeTableFieldVO</a> objects	Lookup table attribute information

**Table 7-152** CodeTableFieldVO

Parameter	Type	Description
id	Long	ID
code_table_id	Long	Lookup table ID
ordinal	Integer	Ordinal
name_en	String	Field name in English Maximum: <b>600</b>
name_ch	String	Field name in Chinese Maximum: <b>200</b>
description	String	Description Maximum: <b>600</b>
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"> <li>• <b>NUMBER</b></li> <li>• <b>STRING</b></li> <li>• <b>DATETIME</b></li> <li>• <b>BLOB</b></li> <li>• <b>OTHER</b></li> </ul>
data_type_extended	String	Data type extended field Maximum: <b>50</b>
is_unique_key	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	Integer	Number of lookup table attribute values

**Table 7-153** CodeTableFieldValueVO

Parameter	Type	Description
id	Long	ID
fd_id	Long	Lookup table attribute ID
fd_value	String	Lookup table attribute value
ordinal	Integer	Ordinal
description	String	Description Maximum: <b>600</b>

**Status code: 400**

**Table 7-154** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-155** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-156** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-157** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. The **CodeTableFieldInfoVO** array and the total number of field values are returned.

```
{
  "max_ordinal" : 2,
  "total" : 2,
  "records" : [ {
    "id" : "66929",
    "code_table_id" : "1012307352952635392",
    "ordinal" : 1,
    "name_en" : "code",
    "name_ch" : "Code",
    "description" : "",
    "data_type" : "STRING",
    "domain_type" : null,
    "data_type_extend" : null,
    "is_unique_key" : false,
    "code_table_field_values" : [ {
      "id" : "2733087",
      "fd_id" : "66929",
      "fd_value" : "Femal",
      "ordinal" : 1,
      "description" : null
    }
  ]
}
```

```

    }, {
      "id": "2733089",
      "fd_id": "66929",
      "fd_value": "Ma",
      "ordinal": 2,
      "description": null
    } ],
    "count_field_values": 2
  }, {
    "id": "66930",
    "code_table_id": "1012307352952635392",
    "ordinal": 2,
    "name_en": "value",
    "name_ch": "Value",
    "description": "",
    "data_type": "STRING",
    "domain_type": null,
    "data_type_extend": null,
    "is_unique_key": false,
    "code_table_field_values": [ {
      "id": "2733088",
      "fd_id": "66930",
      "fd_value": "0",
      "ordinal": 1,
      "description": null
    }, {
      "id": "2733090",
      "fd_id": "66930",
      "fd_value": "1",
      "ordinal": 2,
      "description": null
    } ],
    "count_field_values": 2
  } ]
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>CodeTableFieldInfoVO</b> array and the total number of field values are returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.3.7 Editing Field Values in a Lookup Table

### Function

This API is used to edit field values in a lookup table.

### URI

PUT /v2/{project\_id}/design/code-tables/{id}/values

**Table 7-158** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

## Request Parameters

**Table 7-159** Request body parameters

Parameter	Mandatory	Type	Description
to_add	No	Array of <a href="#">CodeTableFieldVO</a> objects	Adds attributes and an attribute value list to a lookup table.
to_modify	No	Array of <a href="#">CodeTableFieldVO</a> objects	Edits the attribute value list of a lookup table.
to_remove	No	Array of <a href="#">CodeTableFieldVO</a> objects	Deletes the IDs of the attributes of a lookup table

**Table 7-160** CodeTableFieldVO

Parameter	Mandatory	Type	Description
id	No	Long	ID
code_table_id	No	Long	Lookup table ID
ordinal	Yes	Integer	Ordinal
name_en	Yes	String	Field name in English Maximum: <b>600</b>
name_ch	Yes	String	Field name in Chinese Maximum: <b>200</b>
description	No	String	Description Maximum: <b>600</b>
data_type	Yes	String	Data type



Parameter	Mandatory	Type	Description
domain_type	No	String	Data type domains Enumeration values: <ul style="list-style-type: none"> <li>• <b>NUMBER</b></li> <li>• <b>STRING</b></li> <li>• <b>DATETIME</b></li> <li>• <b>BLOB</b></li> <li>• <b>OTHER</b></li> </ul>
data_type_ext_end	No	String	Data type extended field Maximum: <b>50</b>
is_unique_key	No	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	No	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	No	Integer	Number of lookup table attribute values

**Table 7-161** CodeTableFieldValueVO

Parameter	Mandatory	Type	Description
id	No	Long	ID
fd_id	No	Long	Lookup table attribute ID
fd_value	No	String	Lookup table attribute value
ordinal	No	Integer	Ordinal
description	No	String	Description Maximum: <b>600</b>

## Response Parameters

**Status code: 200**

**Table 7-162** Response body parameters

Parameter	Type	Description
[items]	Array of <a href="#">CodeTableFieldVO</a> objects	Lookup table attribute information

**Table 7-163** CodeTableFieldVO

Parameter	Type	Description
id	Long	ID
code_table_id	Long	Lookup table ID
ordinal	Integer	Ordinal
name_en	String	Field name in English Maximum: <b>600</b>
name_ch	String	Field name in Chinese Maximum: <b>200</b>
description	String	Description Maximum: <b>600</b>
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"> <li>• <b>NUMBER</b></li> <li>• <b>STRING</b></li> <li>• <b>DATETIME</b></li> <li>• <b>BLOB</b></li> <li>• <b>OTHER</b></li> </ul>
data_type_extended	String	Data type extended field Maximum: <b>50</b>
is_unique_key	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	Integer	Number of lookup table attribute values

**Table 7-164** CodeTableFieldValueVO

Parameter	Type	Description
id	Long	ID
fd_id	Long	Lookup table attribute ID
fd_value	String	Lookup table attribute value
ordinal	Integer	Ordinal
description	String	Description Maximum: <b>600</b>

**Status code: 400****Table 7-165** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-166** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-167** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-168** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "to_add": [ {
    "id": "66980",
    "code_table_id": "1014919549067366403",
    "ordinal": 1,
    "name_en": "code",
    "name_ch": "Code",
    "description": null,
    "data_type": "STRING",
    "domain_type": null,
    "data_type_extend": null,
    "is_unique_key": false,
    "code_table_field_values": [ {
      "fd_id": "66980",
      "fd_value": "aaa",
      "ordinal": 1
    } ],
    "count_field_values": null
  } ]
}
```

## Example Responses

**Status code: 200**

The operation succeeds, and the **CodeTableFieldVO** array is returned.

```
[ {
  "id": "86936",
  "code_table_id": "1006972427986792448",
```

```
"ordinal" : 1,
"name_en" : "id",
"name_ch" : "id",
"description" : "",
"data_type" : "STRING",
"domain_type" : null,
"data_type_extend" : null,
"is_unique_key" : false,
"code_table_field_values" : [ {
  "id" : "18823421",
  "fd_id" : "86936",
  "fd_value" : "aaa",
  "ordinal" : 1,
  "description" : null
} ],
"count_field_values" : 1
}]
```

## Status Codes

Status Code	Description
200	The operation succeeds, and the <b>CodeTableFieldVO</b> array is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.4 Catalog APIs

### 7.4.1 Obtaining a Tree of All Catalogs

#### Function

This API is used to obtain a tree of all catalogs.

#### URI

GET /v2/{project\_id}/design/biz/catalogs/tree

**Table 7-169** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

None

## Response Parameters

Status code: 200

Table 7-170 Response body parameters

Parameter	Type	Description
name	String	Workflow name Maximum: <b>600</b>
description	String	Description Maximum: <b>2000</b>
guid	String	Asset ID
owner	String	Owner Maximum: <b>4000</b>
parent_id	Long	Parent catalog ID. If there is no parent catalog, the current catalog is the root catalog.
prev_id	Long	ID of the previous node. If there is no previous node, the current node is the first node.
next_id	Long	ID of the next node. If there is no next node, the current node is the last node.
id	Long	This parameter is left empty during creation and is mandatory during update.
qualified_id	String	Authentication ID, which is automatically generated
create_by	String	Creator
update_by	String	User who updated the business catalog
create_time	String	Creation time
update_time	String	Update time
bizmetric_num	Integer	Number of business metrics, which is not transferred to the front end
children_num	Integer	Number of sub-processes, excluding those of sub-processes
children	Array of <a href="#">BizCatalogVO</a> objects	Sub-catalog

**Status code: 400****Table 7-171** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-172** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-173** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-174** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. Catalogs with subcatalogs are returned.

```
{
  "id" : "887366192090767360",
  "description" : "demo",
  "name" : "demo",
  "owner" : "ei_dlg",
  "parent_id" : "776737281791897600",
  "prev_id" : "885913975320207360"
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. Catalogs with subcatalogs are returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.4.2 Querying the Catalog List

### Function

This API is used to query the catalog list.



## URI

GET /v2/{project\_id}/design/biz/catalogs

**Table 7-175** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-176** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
owner	No	String	Query by owner
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

## Request Parameters

None

## Response Parameters

Status code: 200

Table 7-177 Response body parameters

Parameter	Type	Description
name	String	Workflow name Maximum: <b>600</b>
description	String	Description Maximum: <b>2000</b>
guid	String	Asset ID
owner	String	Owner Maximum: <b>4000</b>
parent_id	Long	Parent catalog ID. If there is no parent catalog, the current catalog is the root catalog.
prev_id	Long	ID of the previous node. If there is no previous node, the current node is the first node.
next_id	Long	ID of the next node. If there is no next node, the current node is the last node.
id	Long	This parameter is left empty during creation and is mandatory during update.
qualified_id	String	Authentication ID, which is automatically generated
create_by	String	Creator
update_by	String	User who updated the business catalog
create_time	String	Creation time
update_time	String	Update time
bizmetric_num	Integer	Number of business metrics, which is not transferred to the front end
children_num	Integer	Number of sub-processes, excluding those of sub-processes
children	Array of <a href="#">BizCatalogVO</a> objects	Sub-catalog

Status code: 400

**Table 7-178** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-179** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-180** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-181** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.

Parameter	Type	Description
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

### Status code: 200

The operation succeeds. The **BizCatalogVO** array and the total number of catalogs are returned.

```
{
  "id" : "887366192090767360",
  "description" : "demo",
  "name" : "demo",
  "owner" : "ei_dlg",
  "parent_id" : "776737281791897600",
  "prev_id" : "885913975320207360"
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>BizCatalogVO</b> array and the total number of catalogs are returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.4.3 Creating a Catalog

### Function

This API is used to create a catalog.

### URI

POST /v2/{project\_id}/design/biz/catalogs

**Table 7-182** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 7-183** Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Workflow name Maximum: <b>600</b>
description	No	String	Description Maximum: <b>2000</b>
guid	No	String	Asset ID
owner	Yes	String	Owner Maximum: <b>4000</b>
parent_id	No	Long	Parent catalog ID. If there is no parent catalog, the current catalog is the root catalog.
prev_id	No	Long	ID of the previous node. If there is no previous node, the current node is the first node.
next_id	No	Long	ID of the next node. If there is no next node, the current node is the last node.
id	Yes	Long	This parameter is left empty during creation and is mandatory during update.
qualified_id	No	String	Authentication ID, which is automatically generated
create_by	No	String	Creator
update_by	No	String	User who updated the business catalog
create_time	No	String	Creation time
update_time	No	String	Update time
bizmetric_number	No	Integer	Number of business metrics, which is not transferred to the front end

Parameter	Mandatory	Type	Description
children_num	No	Integer	Number of sub-processes, excluding those of sub-processes
children	No	Array of <a href="#">BizCatalogV O</a> objects	Sub-catalog

## Response Parameters

Status code: 200

**Table 7-184** Response body parameters

Parameter	Type	Description
name	String	Workflow name Maximum: <b>600</b>
description	String	Description Maximum: <b>2000</b>
guid	String	Asset ID
owner	String	Owner Maximum: <b>4000</b>
parent_id	Long	Parent catalog ID. If there is no parent catalog, the current catalog is the root catalog.
prev_id	Long	ID of the previous node. If there is no previous node, the current node is the first node.
next_id	Long	ID of the next node. If there is no next node, the current node is the last node.
id	Long	This parameter is left empty during creation and is mandatory during update.
qualified_id	String	Authentication ID, which is automatically generated
create_by	String	Creator
update_by	String	User who updated the business catalog
create_time	String	Creation time
update_time	String	Update time
bizmetric_num	Integer	Number of business metrics, which is not transferred to the front end

Parameter	Type	Description
children_num	Integer	Number of sub-processes, excluding those of sub-processes
children	Array of <a href="#">BizCatalogV O</a> objects	Sub-catalog

**Status code: 400****Table 7-185** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-186** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-187** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

Parameter	Type	Description
data	Object	Returned data

**Status code: 404**

**Table 7-188** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "id" : "887366192090767360",
  "description" : "demo",
  "name" : "demo",
  "owner" : "ei_dlg",
  "parent_id" : "776737281791897600",
  "prev_id" : "885913975320207360"
}
```

## Example Responses

**Status code: 200**

The operation succeeds. **BizCatalogVO** is returned.

```
{
  "data" : {
    "value" : [ {
      "name" : "db",
      "description" : "db",
      "id" : "db",
      "parent_id" : "db",
      "prev_id" : "db",
      "tenant_id" : "tid",
      "create_time" : 1111,
      "update_time" : 2222,
      "create_by" : "test",
      "update_by" : "test"
    } ]
  }
}
```



## Status Codes

Status Code	Description
200	The operation succeeds. <b>BizCatalogVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.4.4 Modifying a Catalog

### Function

This API is used to modify a catalog.

### URI

PUT /v2/{project\_id}/design/biz/catalogs

**Table 7-189** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

### Request Parameters

**Table 7-190** Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Workflow name Maximum: <b>600</b>
description	No	String	Description Maximum: <b>2000</b>
guid	No	String	Asset ID
owner	Yes	String	Owner Maximum: <b>4000</b>

Parameter	Mandatory	Type	Description
parent_id	No	Long	Parent catalog ID. If there is no parent catalog, the current catalog is the root catalog.
prev_id	No	Long	ID of the previous node. If there is no previous node, the current node is the first node.
next_id	No	Long	ID of the next node. If there is no next node, the current node is the last node.
id	Yes	Long	This parameter is left empty during creation and is mandatory during update.
qualified_id	No	String	Authentication ID, which is automatically generated
create_by	No	String	Creator
update_by	No	String	User who updated the business catalog
create_time	No	String	Creation time
update_time	No	String	Update time
bizmetric_num	No	Integer	Number of business metrics, which is not transferred to the front end
children_num	No	Integer	Number of sub-processes, excluding those of sub-processes
children	No	Array of <a href="#">BizCatalogV O</a> objects	Sub-catalog

## Response Parameters

Status code: 200

Table 7-191 Response body parameters

Parameter	Type	Description
name	String	Workflow name Maximum: <b>600</b>

Parameter	Type	Description
description	String	Description Maximum: <b>2000</b>
guid	String	Asset ID
owner	String	Owner Maximum: <b>4000</b>
parent_id	Long	Parent catalog ID. If there is no parent catalog, the current catalog is the root catalog.
prev_id	Long	ID of the previous node. If there is no previous node, the current node is the first node.
next_id	Long	ID of the next node. If there is no next node, the current node is the last node.
id	Long	This parameter is left empty during creation and is mandatory during update.
qualified_id	String	Authentication ID, which is automatically generated
create_by	String	Creator
update_by	String	User who updated the business catalog
create_time	String	Creation time
update_time	String	Update time
bizmetric_num	Integer	Number of business metrics, which is not transferred to the front end
children_num	Integer	Number of sub-processes, excluding those of sub-processes
children	Array of <a href="#">BizCatalogVO</a> objects	Sub-catalog

**Status code: 400**

**Table 7-192** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

Parameter	Type	Description
data	Object	Returned data

**Status code: 401****Table 7-193** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-194** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-195** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "id": "887366192090767360",
  "description": "demo",
  "name": "demo",
  "owner": "ei_dlg",
  "parent_id": "776737281791897600",
  "prev_id": "885913975320207360"
}
```

## Example Responses

**Status code: 200**

The operation succeeds. **BizCatalogVO** is returned.

```
{
  "data": {
    "value": [ {
      "name": "db",
      "description": "db",
      "id": "db",
      "parent_id": "db",
      "prev_id": "db",
      "root_id": "db",
      "tenant_id": "tid",
      "create_time": 1111,
      "update_time": 2222,
      "create_by": "test",
      "update_by": "test"
    } ]
  }
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>BizCatalogVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.4.5 Deleting Catalogs

### Function

This API is used to delete catalogs.

### URI

DELETE /v2/{project\_id}/design/biz/catalogs

**Table 7-196** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 7-197** Request body parameters

Parameter	Mandatory	Type	Description
ids	Yes	Array of integers	ID list
del_types	No	String	Deletion types Enumeration values: • <b>PHYSICAL_TABLE</b>

## Response Parameters

**Status code: 200**

**Table 7-198** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400**

**Table 7-199** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-200** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-201** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-202** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Example Requests**

None

**Example Responses**

None

## Status Codes

Status Code	Description
200	The operation succeeds, and the number of deleted catalogs is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.4.6 Obtaining Catalog Details

### Function

This API is used to obtain catalog details.

### URI

GET /v2/{project\_id}/design/biz/catalogs/{id}

**Table 7-203** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

### Request Parameters

None

### Response Parameters

**Status code: 200**

**Table 7-204** Response body parameters

Parameter	Type	Description
name	String	Workflow name Maximum: <b>600</b>



Parameter	Type	Description
description	String	Description Maximum: <b>2000</b>
guid	String	Asset ID
owner	String	Owner Maximum: <b>4000</b>
parent_id	Long	Parent catalog ID. If there is no parent catalog, the current catalog is the root catalog.
prev_id	Long	ID of the previous node. If there is no previous node, the current node is the first node.
next_id	Long	ID of the next node. If there is no next node, the current node is the last node.
id	Long	This parameter is left empty during creation and is mandatory during update.
qualified_id	String	Authentication ID, which is automatically generated
create_by	String	Creator
update_by	String	User who updated the business catalog
create_time	String	Creation time
update_time	String	Update time
bizmetric_num	Integer	Number of business metrics, which is not transferred to the front end
children_num	Integer	Number of sub-processes, excluding those of sub-processes
children	Array of <a href="#">BizCatalogVO</a> objects	Sub-catalog

**Status code: 400**

**Table 7-205** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

Parameter	Type	Description
data	Object	Returned data

**Status code: 401****Table 7-206** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-207** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-208** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **BizCatalogVO** is returned.

```
{
  "name" : "xx",
  "description" : "",
  "guid" : "4c9c3574-5cc7-46af-8f67-34782d5a6b32",
  "owner" : "{\"owners\":{\"abc\"}}",
  "parent_id" : "887366192090767360",
  "prev_id" : null,
  "next_id" : null,
  "id" : "904051952785162240",
  "qualified_id" : "887366192090767360.904051952785162240",
  "create_by" : "abc",
  "update_by" : "abc",
  "create_time" : "2021-10-30T16:59:42+08:00",
  "update_time" : "2021-10-30T16:59:42+08:00",
  "bizmetric_num" : null,
  "children_num" : null,
  "children" : null
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>BizCatalogVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.5 Data Standard Template APIs

### 7.5.1 Querying Data Standard Templates

#### Function

This API is used to query data standard templates.

#### URI

GET /v2/{project\_id}/design/standards/templates

**Table 7-209** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 7-210** Response body parameters

Parameter	Type	Description
fd_name	String	Field name
description	String	Field description
id	Long	ID
actived	Boolean	Whether to display the field. The default value cannot be changed.
required	Boolean	Whether the field is mandatory
searchable	Boolean	Whether the field is searchable
displayed_name	String	Field name displayed at the frontend
displayed_name_en	String	Field name (English) displayed at the frontend
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the field

**Status code: 400**

**Table 7-211** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-212** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-213** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-214** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.

Parameter	Type	Description
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

### Status code: 200

The operation succeeds. **StandElementFieldVO** is returned.

```
{
  "fd_name" : "nameEn",
  "description" : "Standard code",
  "id" : "793889740666605568",
  "activated" : true,
  "required" : true,
  "searchable" : true,
  "displayed_name" : "Standard code",
  "displayed_name_en" : "Standard code"
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>StandElementFieldVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.5.2 Creating a Data Standard Template

### Function

This API is used to create a data standard template.

### URI

POST /v2/{project\_id}/design/standards/templates

**Table 7-215** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 7-216** Request body parameters

Parameter	Mandatory	Type	Description
fd_name	Yes	String	Field name
description	No	String	Field description
id	No	Long	ID
actived	No	Boolean	Whether to display the field. The default value cannot be changed.
required	No	Boolean	Whether the field is mandatory
searchable	No	Boolean	Whether the field is searchable
displayed_name	No	String	Field name displayed at the frontend
displayed_name_en	No	String	Field name (English) displayed at the frontend
create_time	No	String	Creation time
update_time	No	String	Update time
create_by	No	String	Creator
update_by	No	String	User who updated the field

## Response Parameters

**Status code: 200**

**Table 7-217** Response body parameters

Parameter	Type	Description
fd_name	String	Field name
description	String	Field description

Parameter	Type	Description
id	Long	ID
activated	Boolean	Whether to display the field. The default value cannot be changed.
required	Boolean	Whether the field is mandatory
searchable	Boolean	Whether the field is searchable
displayed_name	String	Field name displayed at the frontend
displayed_name_en	String	Field name (English) displayed at the frontend
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the field

**Status code: 400**

**Table 7-218** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-219** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data



**Status code: 403**

**Table 7-220** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-221** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "fd_name": "dataType",
  "description": "Data type",
  "id": "793889740775657472",
  "activated": true,
  "required": true,
  "searchable": true,
  "displayed_name": "Data type",
  "displayed_name_en": "Data type"
}
```

## Example Responses

**Status code: 200**

Success

```
{
  "data": {
    "value": [ {
      "xxx": "StandElementFieldVO"
    } ]
  }
}
```

## Status Codes

Status Code	Description
200	Success
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.5.3 Modifying a Data Standard Template

### Function

This API is used to modify a data standard template.

### URI

PUT /v2/{project\_id}/design/standards/templates

**Table 7-222** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

### Request Parameters

**Table 7-223** Request body parameters

Parameter	Mandatory	Type	Description
fd_name	Yes	String	Field name
description	No	String	Field description
id	No	Long	ID
acted	No	Boolean	Whether to display the field. The default value cannot be changed.
required	No	Boolean	Whether the field is mandatory

Parameter	Mandatory	Type	Description
searchable	No	Boolean	Whether the field is searchable
displayed_name	No	String	Field name displayed at the frontend
displayed_name_en	No	String	Field name (English) displayed at the frontend
create_time	No	String	Creation time
update_time	No	String	Update time
create_by	No	String	Creator
update_by	No	String	User who updated the field

## Response Parameters

**Status code: 200**

**Table 7-224** Response body parameters

Parameter	Type	Description
fd_name	String	Field name
description	String	Field description
id	Long	ID
actived	Boolean	Whether to display the field. The default value cannot be changed.
required	Boolean	Whether the field is mandatory
searchable	Boolean	Whether the field is searchable
displayed_name	String	Field name displayed at the frontend
displayed_name_en	String	Field name (English) displayed at the frontend
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the field

**Status code: 400**

**Table 7-225** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-226** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-227** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-228** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.

Parameter	Type	Description
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "fd_name": "dataType",
  "description": "Data type",
  "id": "793889740775657472",
  "activated": true,
  "required": true,
  "searchable": true,
  "displayed_name": "Data type",
  "displayed_name_en": "Data type"
}
```

## Example Responses

**Status code: 200**

Success

```
{
  "data": {
    "value": [ {
      "xxx": "StandElementFieldVO"
    } ]
  }
}
```

## Status Codes

Status Code	Description
200	Success
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.5.4 Deleting Data Standard Templates

### Function

This API is used to delete data standard templates.

## URI

DELETE /v2/{project\_id}/design/standards/templates

**Table 7-229** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-230** Query Parameters

Parameter	Mandatory	Type	Description
ids	Yes	String	Entity IDs

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 7-231** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400**

**Table 7-232** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-233** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-234** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-235** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Example Requests**

None

**Example Responses**

None

## Status Codes

Status Code	Description
200	The operation succeeds, and the number of deleted data standard templates is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.5.5 Initializing a Data Standard Template

### Function

This API is used to initialize a data standard template.

### URI

POST /v2/{project\_id}/design/standards/templates/action

**Table 7-236** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-237** Query Parameters

Parameter	Mandatory	Type	Description
action-id	Yes	String	action-id=init

### Request Parameters

**Table 7-238** Request body parameters

Parameter	Mandatory	Type	Description
fields	No	Array of <b>StandElementFieldVO</b> objects	Fields



**Table 7-239** StandElementFieldVO

Parameter	Mandatory	Type	Description
fd_name	Yes	String	Field name
description	No	String	Field description
id	No	Long	ID
activated	No	Boolean	Whether to display the field. The default value cannot be changed.
required	No	Boolean	Whether the field is mandatory
searchable	No	Boolean	Whether the field is searchable
displayed_name	No	String	Field name displayed at the frontend
displayed_name_en	No	String	Field name (English) displayed at the frontend
create_time	No	String	Creation time
update_time	No	String	Update time
create_by	No	String	Creator
update_by	No	String	User who updated the field

## Response Parameters

Status code: 200

**Table 7-240** Response body parameters

Parameter	Type	Description
fd_name	String	Field name
description	String	Field description
id	Long	ID
activated	Boolean	Whether to display the field. The default value cannot be changed.
required	Boolean	Whether the field is mandatory
searchable	Boolean	Whether the field is searchable
displayed_name	String	Field name displayed at the frontend

Parameter	Type	Description
displayed_name_en	String	Field name (English) displayed at the frontend
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the field

**Status code: 400****Table 7-241** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-242** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-243** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-244** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "fields": [ {
    "fd_name": "nameEn",
    "description": "Standard code",
    "id": "793889740666605568",
    "activated": true,
    "required": true,
    "searchable": true,
    "displayed_name": "Standard code",
    "displayed_name_en": "Standard code"
  }, {
    "fd_name": "dataType",
    "description": "Data type",
    "id": "793889740775657472",
    "activated": true,
    "required": true,
    "searchable": true,
    "displayed_name": "Data type",
    "displayed_name_en": "Data type"
  } ]
}
```

## Example Responses

**Status code: 200**

Success

```
{
  "data": {
```

```
"value": [{
  "xxx": "StandElementFieldVO"
}]
}
```

## Status Codes

Status Code	Description
200	Success
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.5.6 Performing a Batch Publish Operation

### Function

This API is used to perform a batch publish operation.

### URI

POST /v2/{project\_id}/design/approvals/batch-publish

**Table 7-245** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

### Request Parameters

**Table 7-246** Request body parameters

Parameter	Mandatory	Type	Description
biz_infos	Yes	Array of <b>BizInfoVO</b> objects	List of business information
approver_user_id	Yes	String	Approver ID

Parameter	Mandatory	Type	Description
approver_user_name	Yes	String	Approver username
email	No	String	Approver email address
fast_approval	No	Boolean	Fast approval for quick experience in informal scenario. This function is available only when you have the approval permission. Default: <b>false</b>
schedule_time	No	String	Job scheduling time

**Table 7-247** BizInfoVO

Parameter	Mandatory	Type	Description
biz_id	Yes	Long	Business ID

Parameter	Mandatory	Type	Description
biz_type	Yes	String	<p>Business types</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> <li>• ATOMIC_INDEX</li> <li>• DERIVATIVE_INDEX</li> <li>• DIMENSION</li> <li>• DIMENSION_ATTRIBUTE</li> <li>• DIMENSION_HIERARCHIES</li> <li>• CONDITION_GROUP</li> <li>• TIME_CONDITION</li> <li>• COMMON_CONDITION</li> <li>• FACT_LOGIC_TABLE</li> <li>• TABLE_MODEL</li> <li>• DIMENSION_LOGIC_TABLE</li> <li>• STANDARD_ELEMENT</li> <li>• AGGREGATION_LOGIC_TABLE</li> <li>• TAG</li> <li>• CODE_TABLE</li> <li>• TABLE_MODEL_ATTRIBUTE</li> <li>• FACT_DIMENSION</li> <li>• FACT_ATTRIBUTE</li> <li>• FACT_MEASURE</li> <li>• SUMMARY_DIMENSION_ATTRIBUTE</li> <li>• SUMMARY_TIME</li> <li>• DIMENSION_TABLE_ATTRIBUTE</li> <li>• QUALITY_RULE</li> <li>• BIZ_METRIC</li> <li>• COMPOUND_METRIC</li> <li>• INFO_ARCH</li> <li>• DEGENERATE_DIMENSION</li> <li>• TABLE_MODEL_LOGIC</li> </ul>

## Response Parameters

Status code: 200

**Table 7-248** Response body parameters

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
group_id	Long	group id
biz_name	String	Business name
biz_id	Long	Business ID
operation_status	String	Enumeration values: <ul style="list-style-type: none"><li>● <b>RUNNING</b></li><li>● <b>SUCCESS</b></li><li>● <b>FAILED</b></li></ul>
operation_type	String	Operation type
biz_info	String	Business information
create_by	String	Creator
remark	String	Remarks
total	Integer	Total number of operations Default: <b>0</b>
success	Integer	Number of successful operations Default: <b>0</b>
failed	Integer	Number of failed operations Default: <b>0</b>
rate	String	Progress Default: <b>0</b>
logs	String	Logs
groups	Array of <b>BatchOperationVO</b> objects	Groups

**Status code: 400**

**Table 7-249** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-250** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-251** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-252** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.



Parameter	Type	Description
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "approver_user_id" : "7b71e498e75d44048c9a22dd3c54f978",
  "approver_user_name" : "ei_dlg",
  "biz_infos" : [ {
    "biz_id" : "885123875376193536",
    "biz_type" : "CODE_TABLE"
  }, {
    "biz_id" : "885123958788317184",
    "biz_type" : "CODE_TABLE"
  } ],
  "email" : null,
  "fast_approval" : true
}
```

## Example Responses

### Status code: 200

The operation succeeds. The **BatchOperationVO** object in the **BatchOperationVO.group** attribute is returned.

```
{
  "data" : {
    "value" : {
      "SUCCESS" : [ "name1-id", "name2-id" ],
      "errors" : "[{id: 111, reason: exceptions}]"
    }
  }
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>BatchOperationVO</b> object in the <b>BatchOperationVO.group</b> attribute is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.6 Approval Management APIs

## 7.6.1 Querying Approvals

### Function

Querying Approvals

### URI

GET /v2/{project\_id}/design/approvals

**Table 7-253** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-254** Query Parameters

Parameter	Mandatory	Type	Description
biz_id	No	Long	Business ID
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
approver	No	String	Approver
approval_status	No	String	Approval status Enumeration values: <ul style="list-style-type: none"><li>● <b>DEVELOPING</b></li><li>● <b>FINISHED</b></li></ul>
approval_status_detail	No	String	Approval status details Enumeration values: <ul style="list-style-type: none"><li>● <b>DEVELOPING</b></li><li>● <b>APPROVED</b></li><li>● <b>REJECT</b></li></ul>
approval_type	No	String	Approval type Enumeration values: <ul style="list-style-type: none"><li>● <b>PUBLISH</b></li><li>● <b>OFFLINE</b></li></ul>
biz_type	No	String	Business types
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .

Parameter	Mandatory	Type	Description
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

## Request Parameters

None

## Response Parameters

Status code: 200

Table 7-255 Response body parameters

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DEVELOPING</b></li><li>● <b>APPROVED</b></li><li>● <b>REJECT</b></li><li>● <b>WITHDREW</b></li></ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"><li>● <b>PUBLISH</b></li><li>● <b>OFFLINE</b></li></ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Status code: 400**

**Table 7-256** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-257** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-258** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-259** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.

Parameter	Type	Description
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. The **ApprovalVO** array and the total number of approvals are returned.

```
{
  "id": "1014218490837635072",
  "tenant_id": "0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-f7eee36e67e541a59679f9b1b7f4eab0",
  "name_ch": "Gender",
  "name_en": "RY_000001",
  "biz_id": "1012307352952635392",
  "biz_type": "CODE_TABLE",
  "biz_info": "",
  "biz_info_obj": {
    "id": "1012307352952635392",
    "name_en": "RY_000001",
    "name_ch": "Gender",
    "tb_version": 0,
    "directory_id": "1012307270173851648",
    "directory_path": null,
    "description": "",
    "create_by": "abc",
    "status": "DRAFT",
    "create_time": "2022-08-25T10:28:01+08:00",
    "update_time": "2022-08-25T10:31:08+08:00",
    "approval_info": null,
    "new_biz": null,
    "code_table_fields": [ {
      "id": "66929",
      "code_table_id": "1012307352952635392",
      "ordinal": 1,
      "name_en": "code",
      "name_ch": "Code",
      "description": "",
      "data_type": "STRING",
      "domain_type": null,
      "data_type_extend": null,
      "is_unique_key": false,
      "code_table_field_values": [ ],
      "count_field_values": null
    }, {
      "id": "66930",
      "code_table_id": "1012307352952635392",
      "ordinal": 2,
      "name_en": "value",
      "name_ch": "Value",
      "description": "",
      "data_type": "STRING",
      "domain_type": null,
      "data_type_extend": null,
      "is_unique_key": false,
```

```

"code_table_field_values" : [ ],
"count_field_values" : null
} ]
},
"biz_version" : 0,
"biz_status" : "PUBLISHED",
"approval_status" : "WITHDREW",
"approval_type" : "OFFLINE",
"submit_time" : "2022-08-30T17:02:11+08:00",
"create_by" : "abc",
"l1" : null,
"l2" : null,
"l3" : null,
"approval_time" : "2022-08-30T17:02:23+08:00",
"approver" : "abc",
"email" : null,
"msg" : null,
"directory_path" : null
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>ApprovalVO</b> array and the total number of approvals are returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.6.2 Withdrawing Approvals

### Function

This API is used to withdraw approvals.

### URI

PUT /v2/{project\_id}/design/approvals

**Table 7-260** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID



**Table 7-261** Query Parameters

Parameter	Mandatory	Type	Description
ids	Yes	String	IDs of approvals

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 7-262** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400**

**Table 7-263** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-264** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-265** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-266** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. The number of withdrawn approvals is returned.

```
{
  "data": {
    "value": 1
  }
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. The number of withdrawn approvals is returned.

Status Code	Description
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.6.3 Processing Approvals

### Function

This API is used to process an approval, including accepting and rejecting it.

### URI

PUT /v2/{project\_id}/design/approvals/action

**Table 7-267** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-268** Query Parameters

Parameter	Mandatory	Type	Description
action-id	Yes	String	Approval processing result type Enumeration values: <ul style="list-style-type: none"><li>• <b>reject</b></li><li>• <b>resolve</b></li></ul>

### Request Parameters

**Table 7-269** Request body parameters

Parameter	Mandatory	Type	Description
ids	Yes	Array of integers	List of approval IDs

Parameter	Mandatory	Type	Description
msg	Yes	String	Approval information Maximum: <b>500</b>

## Response Parameters

**Status code: 200**

**Table 7-270** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400**

**Table 7-271** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-272** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-273** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-274** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

### Example Requests

```
{
  "ids" : [ "885830700668964864" ],
  "msg" : "ok"
}
```

### Example Responses

**Status code: 200**

The operation succeeds. The execution result is returned.

```
{
  "data" : {
    "value" : {
      "SUCCESS" : 1,
      "FAILURE" : 0
    }
  }
}
```

### Status Codes

Status Code	Description
200	The operation succeeds. The execution result is returned.

Status Code	Description
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.6.4 Performing a Batch Offline Operation

### Function

This API is used to perform a batch offline operation.

### URI

POST /v2/{project\_id}/design/approvals/batch-offline

**Table 7-275** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

### Request Parameters

**Table 7-276** Request body parameters

Parameter	Mandatory	Type	Description
biz_infos	Yes	Array of <b>BizInfoVO</b> objects	List of business information
approver_user_id	Yes	String	Approver ID
approver_user_name	Yes	String	Approver username
email	No	String	Approver email address

Parameter	Mandatory	Type	Description
fast_approval	No	Boolean	Fast approval for quick experience in informal scenario. This function is available only when you have the approval permission. Default: <b>false</b>
schedule_time	No	String	Job scheduling time

**Table 7-277** BizInfoVO

Parameter	Mandatory	Type	Description
biz_id	Yes	Long	Business ID

Parameter	Mandatory	Type	Description
biz_type	Yes	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• ATOMIC_INDEX</li> <li>• DERIVATIVE_INDEX</li> <li>• DIMENSION</li> <li>• DIMENSION_ATTRIBUTE</li> <li>• DIMENSION_HIERARCHIES</li> <li>• CONDITION_GROUP</li> <li>• TIME_CONDITION</li> <li>• COMMON_CONDITION</li> <li>• FACT_LOGIC_TABLE</li> <li>• TABLE_MODEL</li> <li>• DIMENSION_LOGIC_TABLE</li> <li>• STANDARD_ELEMENT</li> <li>• AGGREGATION_LOGIC_TABLE</li> <li>• TAG</li> <li>• CODE_TABLE</li> <li>• TABLE_MODEL_ATTRIBUTE</li> <li>• FACT_DIMENSION</li> <li>• FACT_ATTRIBUTE</li> <li>• FACT_MEASURE</li> <li>• SUMMARY_DIMENSION_ATTRIBUTE</li> <li>• SUMMARY_TIME</li> <li>• DIMENSION_TABLE_ATTRIBUTE</li> <li>• QUALITY_RULE</li> <li>• BIZ_METRIC</li> <li>• COMPOUND_METRIC</li> <li>• INFO_ARCH</li> <li>• DEGENERATE_DIMENSION</li> <li>• TABLE_MODEL_LOGIC</li> </ul>

## Response Parameters

Status code: 200



**Table 7-278** Response body parameters

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
group_id	Long	group id
biz_name	String	Business name
biz_id	Long	Business ID
operation_status	String	Enumeration values: <ul style="list-style-type: none"><li>● <b>RUNNING</b></li><li>● <b>SUCCESS</b></li><li>● <b>FAILED</b></li></ul>
operation_type	String	Operation type
biz_info	String	Business information
create_by	String	Creator
remark	String	Remarks
total	Integer	Total number of operations Default: <b>0</b>
success	Integer	Number of successful operations Default: <b>0</b>
failed	Integer	Number of failed operations Default: <b>0</b>
rate	String	Progress Default: <b>0</b>
logs	String	Logs
groups	Array of <b>BatchOperationVO</b> objects	Groups

**Status code: 400**

**Table 7-279** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-280** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-281** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-282** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.

Parameter	Type	Description
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "approver_user_id" : "7b71e498e75d44048c9a22dd3c54f978",
  "approver_user_name" : "ei_dlg",
  "biz_infos" : [ {
    "biz_id" : "885123875376193536",
    "biz_type" : "CODE_TABLE"
  }, {
    "biz_id" : "885123958788317184",
    "biz_type" : "CODE_TABLE"
  } ],
  "email" : null,
  "fast_approval" : true
}
```

## Example Responses

### Status code: 200

The operation succeeds. The **BatchOperationVO** object in the **BatchOperationVO.group** attribute is returned.

```
{
  "data" : {
    "value" : {
      "SUCCESS" : [ "name1-id", "name2-id" ],
      "errors" : "[{id: 111, reason: exceptions}]"
    }
  }
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>BatchOperationVO</b> object in the <b>BatchOperationVO.group</b> attribute is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.6.5 Creating an Approver

### Function

This API is used to create an approver.

### URI

POST /v2/{project\_id}/design/approvals/users

**Table 7-283** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	tenant id

### Request Parameters

**Table 7-284** Request body parameters

Parameter	Mandatory	Type	Description
approver_name	Yes	String	Approver name Maximum: <b>100</b>
user_id	Yes	String	Approver user ID
email	No	String	Maximum: <b>500</b>
phone_number	No	String	Phone number
email_notify	No	Boolean	Email notification Default: <b>true</b>
sms_notify	No	Boolean	SMS notification Default: <b>true</b>

### Response Parameters

**Status code: 200**

**Table 7-285** Response body parameters

Parameter	Type	Description
id	Long	Approver ID

Parameter	Type	Description
approver_name	String	Approver name Maximum: <b>20</b>
user_id	String	Approver user ID
user_name	String	Approver username
email	String	Email information
user_type	String	Enumeration values: <ul style="list-style-type: none"><li>• <b>BIZ_METRIC_OWNER</b></li><li>• <b>APPROVER</b></li><li>• <b>BIZ_METRIC_OWNER_AND_APPROVER</b></li></ul>
phone_number	String	Phone number
create_by	String	Creator username
create_time	String	Creation time
app_name	String	App name
topic_urn	String	SMN topic URN
project_id	String	tenant id

**Status code: 400****Table 7-286** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-287** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-288** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-289** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "approver_name" : "test02",
  "user_id" : "bff6a1286d26402197ca5a70136fb326",
  "email" : "abdf@huawei.com",
  "phone_number" : "18700645123",
  "email_notify" : true,
  "sms_notify" : true
}
```

## Example Responses

**Status code: 200**

The operation succeeds. **ApproverVO** is returned.

```
{
  "id": "1586",
  "approver_name": "test02",
  "user_id": "bff6a1286d26402197ca5a70136fb326",
  "user_name": "test02",
  "email": "abdf@huawei.com",
  "user_type": null,
  "phone_number": "18700645123",
  "create_by": "6273052b7ea44765a51304972c2dbaa3",
  "create_time": "2022-08-30T02:50:57.000Z",
  "app_name": "dlg_ds",
  "topic_urn": "topic123",
  "project_id": "0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-f7eee36e67e541a59679f9b1b7f4eab0"
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>ApproverVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.6.6 Querying the Approver List

### Function

This API is used to query the approver list.

### URI

GET /v2/{project\_id}/design/approvals/users

**Table 7-290** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	tenant id

**Table 7-291** Query Parameters

Parameter	Mandatory	Type	Description
approver_name	No	String	Approver name
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 7-292** Response body parameters

Parameter	Type	Description
id	Long	Approver ID
approver_name	String	Approver name Maximum: <b>20</b>
user_id	String	Approver user ID
user_name	String	Approver username
email	String	Email information
user_type	String	Enumeration values: <ul style="list-style-type: none"> <li>• <b>BIZ_METRIC_OWNER</b></li> <li>• <b>APPROVER</b></li> <li>• <b>BIZ_METRIC_OWNER_AND_APPROVER</b></li> </ul>



Parameter	Type	Description
phone_number	String	Phone number
create_by	String	Creator username
create_time	String	Creation time
app_name	String	App name
topic_urn	String	SMN topic URN
project_id	String	tenant id

**Status code: 400****Table 7-293** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-294** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-295** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-296** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds, and **ApproverVO** and the number of approvers are returned.

```
{
  "id": "1586",
  "approver_name": "test02",
  "user_id": "bff6a1286d26402197ca5a70136fb326",
  "user_name": "test02",
  "email": "abdf@huawei.com",
  "user_type": null,
  "phone_number": "18700645123",
  "create_by": "6273052b7ea44765a51304972c2dbaa3",
  "create_time": "2022-08-30T02:50:57.000Z",
  "app_name": "dlg_ds",
  "topic_urn": "topic123",
  "project_id": "0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-f7eee36e67e541a59679f9b1b7f4eab0"
}
```

## Status Codes

Status Code	Description
200	The operation succeeds, and <b>ApproverVO</b> and the number of approvers are returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.6.7 Deleting Approvers

### Function

This API is used to delete approvers.

### URI

DELETE /v2/{project\_id}/design/approvals/users

**Table 7-297** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	tenant id

**Table 7-298** Query Parameters

Parameter	Mandatory	Type	Description
approver_ids	Yes	String	IDs of approvers

### Request Parameters

None

### Response Parameters

Status code: 200

**Table 7-299** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400****Table 7-300** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-301** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-302** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-303** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Example Requests**

None

**Example Responses**

None

**Status Codes**

Status Code	Description
200	The operation succeeds, and the number of deleted approvers is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.7 Subject Management APIs

### 7.7.1 Querying the Subject List

**Function**

This API is used to query subjects by name, creator, owner, status, or modification time.

**URI**

GET /v2/{project\_id}/design/subjects

**Table 7-304** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-305** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
owner	No	String	Query by owner
status	No	String	Business status Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

Parameter	Mandatory	Type	Description
parent_id	No	Long	Parent directory ID. The root directory does not have this ID. If this parameter is left empty, all parent directories will be queried. Value <b>-1</b> indicates the ID of a directory under the root directory.

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-306** Response body parameters

Parameter	Type	Description
name_ch	String	Chinese name Maximum: <b>600</b>
name_en	String	English name Maximum: <b>600</b>
description	String	Description Maximum: <b>2000</b>
qualified_name	String	Extension name
guid	String	GUID, which is automatically generated
code	String	Code
alias	String	Alias
data_owner	String	Data owner
data_owner_list	String	Data owner list
data_department	String	Data domain
path	String	Path information
level	Integer	Level information
ordinal	Integer	Ordinal

Parameter	Type	Description
owner	String	Owner Maximum: <b>4000</b>
parent_id	Long	Parent catalog ID. If there is no parent catalog, the current catalog is the root catalog.
swap_order_id	Long	ID of the target node at the same level
id	Long	ID
qualified_id	String	Authentication ID, which is automatically generated
create_by	String	Creator
update_by	String	User who updated the catalog
create_time	String	Creation time
update_time	String	Update time
children_num	Integer	Number of sub-processes, excluding those of sub-processes. This parameter is not required for the front end.
children	Array of <a href="#">CatalogVO</a> objects	Sub-catalog
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-307** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400**



**Table 7-308** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-309** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-310** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-311** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.

Parameter	Type	Description
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

### Status code: 200

The operation succeeds. The **CatalogVO** array and the total number of subjects are returned.

```
{
  "name_ch": "City traffic",
  "name_en": "city_traffic",
  "description": "",
  "qualified_name": "city_traffic@Business.0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-f7eee36e67e541a59679f9b1b7f4eab0",
  "guid": "f6e674d6-f657-4734-b417-837536c12eee",
  "code": null,
  "alias": "",
  "data_owner": "",
  "data_owner_list": ["abc"],
  "data_department": null,
  "path": "City traffic",
  "level": 1,
  "ordinal": 1,
  "owner": "abc",
  "parent_id": null,
  "swap_order_id": null,
  "id": "873232498044411904",
  "qualified_id": null,
  "create_by": "abc",
  "update_by": "abc",
  "create_time": "2021-08-06T15:54:11+08:00",
  "update_time": "2022-08-30T10:59:38+08:00",
  "self_defined_fields": [ {
    "fd_name_ch": "Remarks",
    "fd_name_en": "ez",
    "not_null": false,
    "fd_value": ""
  } ],
  "children_num": null,
  "children": null
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>CatalogVO</b> array and the total number of subjects are returned.
400	BadRequest

Status Code	Description
401	Unauthorized
403	Forbidden
404	Not Found

## 7.7.2 Deleting Topics

### Function

This API is used to delete subjects.

### URI

DELETE /v2/{project\_id}/design/subjects

**Table 7-312** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

### Request Parameters

**Table 7-313** Request body parameters

Parameter	Mandatory	Type	Description
ids	Yes	Array of integers	ID list
del_types	No	String	Deletion types Enumeration values: <ul style="list-style-type: none"><li>• <b>PHYSICAL_TABLE</b></li></ul>

### Response Parameters

Status code: 200

**Table 7-314** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400****Table 7-315** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-316** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-317** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404****Table 7-318** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Example Requests**

None

**Example Responses**

None

**Status Codes**

Status Code	Description
200	The operation succeeds, and the number of deleted subjects is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.7.3 Creating or Modifying a Subject

**Function**

This API is used to create or modify a subject.

**URI**

POST /v2/{project\_id}/design/subjects

**Table 7-319** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 7-320** Request body parameters

Parameter	Mandatory	Type	Description
entity	Yes	<a href="#">CatalogEntityVO</a> object	Catalog entity

**Table 7-321** CatalogEntityVO

Parameter	Mandatory	Type	Description
typeName	No	String	Type name. Enter <b>BusinessCatalog</b> . Default: <b>BusinessCatalog</b>
attributes	Yes	<a href="#">CatalogAttributeVO</a> object	Attribute list

**Table 7-322** CatalogAttributeVO

Parameter	Mandatory	Type	Description
path	Yes	String	Path
qualifiedName	Yes	String	Name
level	Yes	String	Subject level
name	Yes	String	Name
nameEng	Yes	String	English Name
alias	No	String	Alias
description	Yes	String	Description
dataOwner	Yes	String	Data owner
owner	No	String	Owner
dataOwnerList	Yes	Array of strings	Data owner list

Parameter	Mandatory	Type	Description
createTime	No	String	Creation time (timestamp)
createBy	No	String	Creator
updateTime	No	String	Update time, which is a timestamp
updateBy	No	String	Updated by
parent	No	<b>parent</b> object	Parent node
parentId	No	String	ID of the parent node
l1	No	Boolean	Whether the level is L1
l2	No	Boolean	Whether the level is L2
l3	No	Boolean	Whether the level is L3
ordinal	No	Integer	Ordinal
tenantId	No	String	Tenant ID
self_defined_fields	No	Array of <b>SelfDefinedFieldVO</b> objects	Custom fields

**Table 7-323** parent

Parameter	Mandatory	Type	Description
id	No	String	ID of the parent node

**Table 7-324** SelfDefinedFieldVO

Parameter	Mandatory	Type	Description
fd_name_ch	No	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	No	String	Custom field name in English Maximum: <b>200</b>
not_null	No	Boolean	Whether the field is mandatory
fd_value	No	String	Field value

## Response Parameters

Status code: 200

**Table 7-325** Response body parameters

Parameter	Type	Description
id	String	ID
nameCh	String	Name
nameEn	String	English name
alias	String	Alias
path	String	Path
qualifiedName	String	Unified name
ordinal	Integer	Ordinal
owner	String	Owner
dataOwner	String	Data subject
tenantId	String	Tenant ID
level	Integer	Level
levelStr	String	Level
l1	Boolean	Whether the level is L1
l2	Boolean	Whether the level is L2
l3	Boolean	Whether the level is L3
description	String	Description
createTime	String	Creation time (timestamp)
createBy	String	Creator
updateTime	String	Update time (timestamp)
updateBy	String	Updated by
selfDefinedFields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields



**Table 7-326** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400****Table 7-327** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-328** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-329** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-330** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "entity": {
    "attributes": {
      "path": "we",
      "qualifiedName": "wewe@Business",
      "level": "L3",
      "name": "wewe",
      "nameEng": "wewe",
      "alias": "demo",
      "description": "",
      "dataOwner": "",
      "dataOwnerList": [ "ei_dlg" ],
      "parent": {
        "id": "864523016602812416"
      }
    }
  },
  "typeName": "BusinessCatalog"
}
```

## Example Responses

**Status code: 200**

The operation succeeds. The entity details are returned.

```
{
  "alias": "",
  "createBy": "6273052b7ea44765a51304972c2dbaa3",
  "createTime": 1661828377965,
}
```

```

"dataOwner" : "",
"description" : "",
"id" : 873232498044411900,
"l1" : true,
"l2" : false,
"l3" : false,
"level" : 1,
"levelStr" : "1",
"nameCh" : "City traffic",
"nameEn" : "city_traffic",
"ordinal" : "3,",
"owner" : "6273052b7ea44765a51304972c2dbaa3",
"path" : "City traffic",
"qualifiedName" : "city_traffic@Business.0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-
f7eee36e67e541a59679f9b1b7f4eab0",
"selfDefinedFields" : null,
"tenantId" : "0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-f7eee36e67e541a59679f9b1b7f4eab0",
"updateBy" : "6273052b7ea44765a51304972c2dbaa3",
"updateTime" : 1661828378452
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. The entity details are returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.7.4 Obtaining a Subject Tree

### Function

This API is used to obtain the data asset subject tree of l1, l2, and l3.

### URI

GET /v2/{project\_id}/design/subjects/business

**Table 7-331** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

### Request Parameters

None

## Response Parameters

Status code: 200

Table 7-332 Response body parameters

Parameter	Type	Description
name_ch	String	Chinese name Maximum: <b>600</b>
name_en	String	English name Maximum: <b>600</b>
description	String	Description Maximum: <b>2000</b>
qualified_name	String	Extension name
guid	String	GUID, which is automatically generated
code	String	Code
alias	String	Alias
data_owner	String	Data owner
data_owner_list	String	Data owner list
data_department	String	Data domain
path	String	Path information
level	Integer	Level information
ordinal	Integer	Ordinal
owner	String	Owner Maximum: <b>4000</b>
parent_id	Long	Parent catalog ID. If there is no parent catalog, the current catalog is the root catalog.
swap_order_id	Long	ID of the target node at the same level
id	Long	ID
qualified_id	String	Authentication ID, which is automatically generated
create_by	String	Creator
update_by	String	User who updated the catalog
create_time	String	Creation time

Parameter	Type	Description
update_time	String	Update time
children_num	Integer	Number of sub-processes, excluding those of sub-processes. This parameter is not required for the front end.
children	Array of <a href="#">CatalogVO</a> objects	Sub-catalog
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-333** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400****Table 7-334** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-335** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-336** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeed. The l1, l2, and l3 entities are returned.

```
{
  "name_ch": "City traffic",
  "name_en": "city_traffic",
  "description": "",
  "qualified_name": "city_traffic@Business.0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-f7eee36e67e541a59679f9b1b7f4eab0",
  "guid": "f6e674d6-f657-4734-b417-837536c12eee",
  "code": null,
  "alias": "",
  "data_owner": "",
  "data_owner_list": "[\"abc\"]",
  "data_department": null,
  "path": "City traffic",
  "level": 1,
  "ordinal": 1,
  "owner": "abc",
  "parent_id": null,
  "swap_order_id": null,
  "id": "873232498044411904",
  "qualified_id": null,
  "create_by": "abc",
```

```

"update_by" : "abc",
"create_time" : "2021-08-06T15:54:11+08:00",
"update_time" : "2022-08-30T10:59:38+08:00",
"self_defined_fields" : [ {
  "fd_name_ch" : "Remarks",
  "fd_name_en" : "ez",
  "not_null" : false,
  "fd_value" : ""
} ],
"children_num" : null,
"children" : null
}

```

## Status Codes

Status Code	Description
200	The operation succeed. The l1, l2, and l3 entities are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.8 Subject Level APIs

### 7.8.1 Obtaining Subject Levels

#### Function

This API is used to obtain subject levels.

#### URI

GET /v2/{project\_id}/design/subject-levels

**Table 7-337** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

#### Request Parameters

None

#### Response Parameters

Status code: 200

**Table 7-338** Response body parameters

Parameter	Type	Description
levels	Array of <a href="#">CatalogLevelVO</a> objects	Subject level information

**Table 7-339** CatalogLevelVO

Parameter	Type	Description
id	Long	No.
level	Integer	Level
name_ch	String	Chinese name
name_en	String	English name

**Status code: 400****Table 7-340** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-341** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**



**Table 7-342** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-343** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. The subject level list is returned.

```
{
  "levels" : [ {
    "id" : "873154228410097664",
    "level" : 1,
    "name_ch" : "Subject area group",
    "name_en" : "Business Domain Group"
  }, {
    "id" : "873154228414291968",
    "level" : 2,
    "name_ch" : "Subject area",
    "name_en" : "Business Domain"
  }, {
    "id" : "873154228414291969",
    "level" : 3,
    "name_ch" : "Business object",
    "name_en" : "Business Object"
  } ]
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. The subject level list is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.8.2 Modifying or Deleting Subject Levels

### Function

This API is used to modify or delete subject levels.

### URI

PUT /v2/{project\_id}/design/subject-levels

**Table 7-344** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

### Request Parameters

**Table 7-345** Request body parameters

Parameter	Mandatory	Type	Description
levels	No	Array of <a href="#">CatalogLevel VO</a> objects	Subject level information

**Table 7-346** CatalogLevelVO

Parameter	Mandatory	Type	Description
id	No	Long	No.
level	No	Integer	Level

Parameter	Mandatory	Type	Description
name_ch	No	String	Chinese name
name_en	No	String	English name

## Response Parameters

**Status code: 200**

**Table 7-347** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400**

**Table 7-348** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-349** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-350** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 404**

**Table 7-351** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "levels" : [ {
    "id" : "873154228410097664",
    "level" : 1,
    "name_ch" : "Subject area group",
    "name_en" : "Business Domain Group"
  }, {
    "id" : "873154228414291968",
    "level" : 2,
    "name_ch" : "Subject area",
    "name_en" : "Business Domain"
  }, {
    "id" : "873154228414291969",
    "level" : 3,
    "name_ch" : "Business object",
    "name_en" : "Business Object"
  } ]
}
```

## Example Responses

**Status code: 200**

The operation succeeds. **CatalogLevelVOList** is returned.

```
{
  "data" : {
    "value" : [ {
      "name_ch" : "db",
      "name_en" : "db"
    } ]
  }
}
```

```
    }  
  }  
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>CatalogLevelVOList</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 7.9 Atomic Metric APIs

### 7.9.1 Querying Atomic Metrics

#### Function

This API is used to query atomic metrics based on the name, creator, approver, status, and modification time and display the results on different pages.

#### URI

GET /v2/{project\_id}/design/atomic-indexs

**Table 7-352** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-353** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
approver	No	String	Approver

Parameter	Mandatory	Type	Description
status	No	String	Business status Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .
l3_id	No	Long	ID of business object l3
table_id	No	Long	ID of the associated table
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-354** Response body parameters

Parameter	Type	Description
id	Long	ID
name_en	String	Atomic index name in English Maximum: <b>200</b>
name_ch	String	Atomic index name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
cal_exp	String	Calculation expression Maximum: <b>200</b>
cal_fn_ids	Array of integers	Calculation expression ID
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object GUID
table_id	Long	Table ID
tb_name	String	Table name
dw_type	String	Data connection type
field_ids	Array of integers	Field ID
field_names	Array of strings	Field names
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
approval_info	<b>ApprovalVO</b> object	Approval information



Parameter	Type	Description
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management

**Table 7-355** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-356** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	<p>Business types</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Status code: 400**

**Table 7-357** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-358** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-359** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

### Status code: 200

The operation succeeds. The **AtomicIndexVO** array and the total number of atomic metrics are returned.

```
{
  "id": "873264909264257024",
  "name_en": "sum_total_amount",
  "name_ch": "Total amount",
  "description": "",
  "create_by": "abc",
  "cal_exp": "sum(${873264563087376397})",
  "cal_fn_ids": null,
  "l1_id": "873232498044411904",
  "l2_id": "873232716601204736",
  "l3_id": "873233440420560896",
  "table_id": "873264563070599168",
  "tb_name": "Trip order",
  "dw_type": "DLI",
  "field_ids": [ "873264563087376397" ],
  "field_names": null,
  "status": "PUBLISHED",
  "biz_type": "FACT_LOGIC_TABLE",
  "create_time": "2021-08-06T18:02:59+08:00",
  "update_time": "2021-08-06T18:02:59+08:00",
  "l1": "City traffic",
  "l2": "Trip record",
  "l3": "Trip fact",
  "approval_info": {
    "id": "87326490926957056",
    "tenant_id": null,
    "name_ch": null,
    "name_en": null,
    "biz_id": "873264909264257024",
    "biz_type": null,
    "biz_info": null,
    "biz_info_obj": null,
    "biz_version": 0,
    "biz_status": "PUBLISHED",
    "approval_status": "APPROVED",
    "approval_type": null,
    "submit_time": "2021-08-06T18:02:59+08:00",
    "create_by": null,
    "l1": null,
    "l2": null,

```

```

    "l3" : null,
    "approval_time" : "2021-08-06T18:02:59+08:00",
    "approver" : "abc",
    "email" : null,
    "msg" : "Fast Approval OK.",
    "directory_path" : null
  },
  "new_biz" : null
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>AtomicIndexVO</b> array and the total number of atomic metrics are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.9.2 Querying Atomic Metric Details

### Function

This API is used to query the details of an atomic metric based on the ID.

### URI

GET /v2/{project\_id}/design/atomic-indexs/{id}

**Table 7-360** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

**Table 7-361** Query Parameters

Parameter	Mandatory	Type	Description
latest	No	Boolean	Whether to query the latest data

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-362** Response body parameters

Parameter	Type	Description
id	Long	ID
name_en	String	Atomic index name in English Maximum: <b>200</b>
name_ch	String	Atomic index name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
cal_exp	String	Calculation expression Maximum: <b>200</b>
cal_fn_ids	Array of integers	Calculation expression ID
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object GUID
table_id	Long	Table ID
tb_name	String	Table name
dw_type	String	Data connection type
field_ids	Array of integers	Field ID
field_names	Array of strings	Field names



Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• DRAFT</li> <li>• PUBLISH_DEVELOPING</li> <li>• PUBLISHED</li> <li>• OFFLINE_DEVELOPING</li> <li>• OFFLINE</li> <li>• REJECT</li> </ul>
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• ATOMIC_INDEX</li> <li>• DERIVATIVE_INDEX</li> <li>• DIMENSION</li> <li>• DIMENSION_ATTRIBUTE</li> <li>• DIMENSION_HIERARCHIES</li> <li>• CONDITION_GROUP</li> <li>• TIME_CONDITION</li> <li>• COMMON_CONDITION</li> <li>• FACT_LOGIC_TABLE</li> <li>• TABLE_MODEL</li> <li>• DIMENSION_LOGIC_TABLE</li> <li>• STANDARD_ELEMENT</li> <li>• AGGREGATION_LOGIC_TABLE</li> <li>• TAG</li> <li>• CODE_TABLE</li> <li>• TABLE_MODEL_ATTRIBUTE</li> <li>• FACT_DIMENSION</li> <li>• FACT_ATTRIBUTE</li> <li>• FACT_MEASURE</li> <li>• SUMMARY_DIMENSION_ATTRIBUTE</li> <li>• SUMMARY_TIME</li> <li>• DIMENSION_TABLE_ATTRIBUTE</li> <li>• QUALITY_RULE</li> <li>• BIZ_METRIC</li> <li>• COMPOUND_METRIC</li> <li>• INFO_ARCH</li> <li>• DEGENERATE_DIMENSION</li> <li>• TABLE_MODEL_LOGIC</li> </ul>

Parameter	Type	Description
create_time	String	Creation time
update_time	String	Update time
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionMa nageVO</b> object	Business version management

**Table 7-363** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-364** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Status code: 400**

**Table 7-365** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-366** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-367** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **AtomicIndexVO** is returned.

```
{
  "id" : "873264909264257024",
  "name_en" : "sum_total_amount",
  "name_ch" : "Total amount",
  "description" : "",
  "create_by" : "abc",
  "cal_exp" : "sum(${873264563087376397})",
  "cal_fn_ids" : null,
  "l1_id" : "873232498044411904",
  "l2_id" : "873232716601204736",
  "l3_id" : "873233440420560896",
  "table_id" : "873264563070599168",
  "tb_name" : "Trip order",
  "dw_type" : "DLI",
  "field_ids" : [ "873264563087376397" ],
  "field_names" : null,
  "status" : "PUBLISHED",
  "biz_type" : "FACT_LOGIC_TABLE",
  "create_time" : "2021-08-06T18:02:59+08:00",
  "update_time" : "2021-08-06T18:02:59+08:00",
  "l1" : "City traffic",
  "l2" : "Trip record",
  "l3" : "Trip fact",
  "approval_info" : {
    "id" : "873264909926957056",
    "tenant_id" : null,
    "name_ch" : null,
    "name_en" : null,
    "biz_id" : "873264909264257024",
    "biz_type" : null,
    "biz_info" : null,
    "biz_info_obj" : null,
    "biz_version" : 0,
    "biz_status" : "PUBLISHED",
    "approval_status" : "APPROVED",
    "approval_type" : null,
    "submit_time" : "2021-08-06T18:02:59+08:00",
    "create_by" : null,
    "l1" : null,
    "l2" : null,
    "l3" : null,
  }
}
```

```

"approval_time" : "2021-08-06T18:02:59+08:00",
"approver" : "abc",
"email" : null,
"msg" : "Fast Approval OK.",
"directory_path" : null
},
"new_biz" : null
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>AtomicIndexVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.10 Derivative Metric APIs

### 7.10.1 Querying Derivative Metrics

#### Function

This API is used to query derivative metrics based on the name, creator, approver, status, modification time, and l3Id, and display the results on different pages.

#### URI

GET /v2/{project\_id}/design/derivative-indexs

**Table 7-368** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-369** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
approver	No	String	Approver



Parameter	Mandatory	Type	Description
status	No	String	Business status Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
dimension_id	No	Long	Parameters for querying dimension attributes based on the dimension ID
dimension_group	No	String	Parameters for querying dimension attributes based on the dimension group
atomic_index_id	No	Long	Parameters for querying dimension attributes based on the atomic metric ID
all_metrics	No	Boolean	Whether to query compound metrics Default: <b>false</b>
dw_type	No	String	Data connection type
l3_id	No	Long	ID of business object l3
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>

Parameter	Mandatory	Type	Description
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

## Request Parameters

None

## Response Parameters

Status code: 200

Table 7-370 Response body parameters

Parameter	Type	Description
id	Long	ID
name_en	String	Derivative metric name in English Maximum: <b>200</b>
name_ch	String	Derivative metric name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
data_type	String	Data type
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object GUID

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
atomic_index_id	Long	Atomic metric ID
time_condition_id	Long	Time filter ID
time_field_id	Long	ID of the field associated with the time filter
time_field_name	String	Name of the field associated with the time filter
common_conditions	Array of <b>CommonConditionVO</b> objects	Common filters
dimension_groups	Array of <b>DerivativeIndexDimensionVO</b> objects	Dimension group (granularity)
monitor	<b>MetricMonitorVO</b> object	Metric monitoring
atomic_index	<b>AtomicIndexVO</b> object	Atomic metric information, including the name and unit
time_condition_name	String	Time filter name
create_time	String	Creation time
update_time	String	Update time
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
summary_table_id	Long	Summary table ID

Parameter	Type	Description
approval_info	<a href="#">ApprovalVO</a> object	Approval information
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management

**Table 7-371** CommonConditionVO

Parameter	Type	Description
name	String	Name
field_ids	Array of strings	Field ID, in the <b>table_id.field_id</b> format
field_names	Array of strings	Field name, in the <b>Table name.Field name</b> format
cal_exp	String	Calculation expression Maximum: <b>20000</b>
cal_fn_ids	Array of integers	Calculation expression ID
front_configs	String	Frontend expression configuration, which is used for frontend data restoration
id	Long	id

**Table 7-372** DerivativeIndexDimensionVO

Parameter	Type	Description
group_id	String	Dimension group ID
role	String	Dimension role
dimension_id	Long	Dimension ID
hierarchies_id	Long	Hierarchy ID
ordinal	Integer	Ordinal
group_name	String	Dimension group name
group_code	String	Dimension group code

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
hierarchies	Array of <b>DimensionHierarchiesVO</b> objects	Hierarchy attributes
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
l1_id	Long	Subject area group ID

Parameter	Type	Description
l2_id	String	Subject area ID
l3_id	Long	Business object ID
dw_type	String	Data connection type
id	Long	id

**Table 7-373** DimensionHierarchiesVO

Parameter	Type	Description
id	Long	ID
name	String	Hierarchy name Maximum: <b>600</b>
attrs	Array of <a href="#">HierarchiesAttrVO</a> objects	Hierarchy attribute
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the dimension hierarchy

**Table 7-374** HierarchiesAttrVO

Parameter	Type	Description
id	Long	ID
hierarchies_id	Long	Hierarchy ID
attr_id	Long	Attribute ID
level	Integer	Level
attr_name_en	String	Hierarchy attribute name in English
attr_name_ch	String	Hierarchy attribute name in Chinese
detail_attr_ids	Array of integers	IDs of detail attributes
detail_attr_name_ens	Array of strings	Detail attribute name in English

Parameter	Type	Description
detail_attr_name_chs	Array of strings	Detail attribute name in Chinese
attr	<a href="#">DimensionAttributeVO</a> object	Hierarchy attribute field
detail_attrs	Array of <a href="#">DimensionAttributeVO</a> objects	Detail attributes

**Table 7-375** DimensionAttributeVO

Parameter	Type	Description
id	Long	ID
dimension_id	Long	Dimension ID
code_table_field_id	Long	Lookup table attribute ID
name_en	String	Dimension attribute name in English Maximum: <b>600</b>
name_ch	String	Dimension attribute name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>• <b>NUMBER</b></li><li>• <b>STRING</b></li><li>• <b>DATETIME</b></li><li>• <b>BLOB</b></li><li>• <b>OTHER</b></li></ul>
data_type_extended	String	Data type extended field Maximum: <b>50</b>
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>

Parameter	Type	Description
is_biz_primary	Boolean	Whether the attribute is a business primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
ordinal	Integer	Ordinal
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <a href="#">QualityInfoVO</a> objects	Quality information
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-376** QualityInfoVO

Parameter	Type	Description
id	Long	ID
table_id	Long	Table ID
attr_id	Long	Attribute ID



Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
data_quality_id	Long	Quality ID
show_control	Integer	Whether to display the regular expression
data_quality_name	String	Quality name
alert_conf	String	Alarm configuration
expression	String	Regular expression in verification rules

Parameter	Type	Description
extend_info	String	Extended information
from_standard	Boolean	Whether the quality information is from data standard quality configuration Default: <b>false</b>
result_description	String	Result description
create_by	String	Creator
update_by	String	User who updated the quality information
create_time	String	Creation time
update_time	String	Update time

**Table 7-377** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Table 7-378** MetricMonitorVO

Parameter	Type	Description
id	Long	ID
other_metric_ids	Array of integers	IDs of other metrics
other_metric_names	Array of strings	Names of other metrics
expression	String	Alarm expression Maximum: <b>2000</b>
metric_id	Long	Metric ID
front_configs	String	Frontend expression configuration, which is used for frontend data restoration

Parameter	Type	Description
metric_type	String	<p>Metric type</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>

**Table 7-379** AtomicIndexVO

Parameter	Type	Description
id	Long	ID
name_en	String	<p>Atomic index name in English</p> <p>Maximum: <b>200</b></p>

Parameter	Type	Description
name_ch	String	Atomic index name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
cal_exp	String	Calculation expression Maximum: <b>200</b>
cal_fn_ids	Array of integers	Calculation expression ID
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object GUID
table_id	Long	Table ID
tb_name	String	Table name
dw_type	String	Data connection type
field_ids	Array of integers	Field ID
field_names	Array of strings	Field names
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
approval_info	<b>ApprovalVO</b> object	Approval information

Parameter	Type	Description
new_biz	<b>BizVersionManagementVO</b> object	Business version management

**Table 7-380** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-381** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information



Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Status code: 400**

**Table 7-382** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-383** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-384** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

### Status code: 200

The operation succeeds. The **DerivativeIndexVO** array and the total number of derivative metrics are returned.

```
{
  "id": "873265784540004352",
  "name_en": "sum_total_amount",
  "name_ch": "Total amount (rate code)",
  "description": "",
  "create_by": "abc",
  "data_type": "DOUBLE",
  "l1_id": "873232498044411904",
  "l2_id": "873232716601204736",
  "l3_id": "873233519286059008",
  "status": "PUBLISHED",
  "atomic_index_id": "873264909264257024",
  "time_condition_id": null,
  "time_field_id": null,
  "time_field_name": null,
  "common_conditions": [ ],
  "dimension_groups": [ {
    "group_id": "873252544997130240",
    "role": null,
    "dimension_id": "873252544997130240",
    "hierarchies_id": null,
    "ordinal": 1,
    "group_name": "Rate code",
    "group_code": "dim_rate_code",
    "biz_type": "DIMENSION",
    "hierarchies": null,
    "l1": null,
    "l2": null,
    "l3": null,
    "l1_id": null,
    "l2_id": null,
    "l3_id": null,
    "dw_type": null,
    "id": "873265784602918912"
  } ],
  "monitor": null,
  "atomic_index": {
    "id": "873264909264257024",
    "name_en": "sum_total_amount",
    "name_ch": "Total amount",

```

```

"description" : "",
"create_by" : null,
"cal_exp" : "sum(${873264563087376397})",
"cal_fn_ids" : null,
"l1_id" : null,
"l2_id" : null,
"l3_id" : null,
"table_id" : "873264563070599168",
"tb_name" : null,
"dw_type" : null,
"field_ids" : [ "873264563087376397" ],
"field_names" : null,
"status" : "DRAFT",
"biz_type" : "FACT_LOGIC_TABLE",
"create_time" : "2022-08-30T21:28:45.454+08:00",
"update_time" : "2022-08-30T21:28:45.454+08:00",
"l1" : null,
"l2" : null,
"l3" : null,
"approval_info" : null,
"new_biz" : null
},
"time_condition_name" : null,
"create_time" : "2021-08-06T18:06:28+08:00",
"update_time" : "2021-08-06T18:06:27+08:00",
"l1" : "City traffic",
"l2" : "Trip record",
"l3" : "Record statistics",
"summary_table_id" : null,
"approval_info" : {
  "id" : "873265785332727808",
  "tenant_id" : null,
  "name_ch" : null,
  "name_en" : null,
  "biz_id" : "873265784540004352",
  "biz_type" : null,
  "biz_info" : null,
  "biz_info_obj" : null,
  "biz_version" : 0,
  "biz_status" : "PUBLISHED",
  "approval_status" : "APPROVED",
  "approval_type" : null,
  "submit_time" : "2021-08-06T18:06:28+08:00",
  "create_by" : null,
  "l1" : null,
  "l2" : null,
  "l3" : null,
  "approval_time" : "2021-08-06T18:06:27+08:00",
  "approver" : "abc",
  "email" : null,
  "msg" : "Fast Approval OK.",
  "directory_path" : null
},
"new_biz" : null
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>DerivativeIndexVO</b> array and the total number of derivative metrics are returned.
400	BadRequest

Status Code	Description
401	Unauthorized
403	Forbidden

## 7.10.2 Querying Derivative Metric Details

### Function

This API is used to query the details of a derivative metric with a specified ID.

### URI

GET /v2/{project\_id}/design/derivative-indexes/{id}

**Table 7-385** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

**Table 7-386** Query Parameters

Parameter	Mandatory	Type	Description
latest	No	Boolean	Whether to query the latest data

### Request Parameters

None

### Response Parameters

**Status code: 200**

**Table 7-387** Response body parameters

Parameter	Type	Description
id	Long	ID

Parameter	Type	Description
name_en	String	Derivative metric name in English Maximum: <b>200</b>
name_ch	String	Derivative metric name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
data_type	String	Data type
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object GUID
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
atomic_index_id	Long	Atomic metric ID
time_condition_id	Long	Time filter ID
time_field_id	Long	ID of the field associated with the time filter
time_field_name	String	Name of the field associated with the time filter
common_conditions	Array of <b>CommonConditionVO</b> objects	Common filters
dimension_groups	Array of <b>DerivativeIndexDimensionVO</b> objects	Dimension group (granularity)
monitor	<b>MetricMonitorVO</b> object	Metric monitoring

Parameter	Type	Description
atomic_index	<a href="#">AtomicIndexVO</a> object	Atomic metric information, including the name and unit
time_condition_name	String	Time filter name
create_time	String	Creation time
update_time	String	Update time
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
summary_table_id	Long	Summary table ID
approval_info	<a href="#">ApprovalVO</a> object	Approval information
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management

**Table 7-388** CommonConditionVO

Parameter	Type	Description
name	String	Name
field_ids	Array of strings	Field ID, in the <b>table_id.field_id</b> format
field_names	Array of strings	Field name, in the <b>Table name.Field name</b> format
cal_exp	String	Calculation expression Maximum: <b>20000</b>
cal_fn_ids	Array of integers	Calculation expression ID
front_configs	String	Frontend expression configuration, which is used for frontend data restoration
id	Long	id

**Table 7-389** DerivativeIndexDimensionVO

Parameter	Type	Description
group_id	String	Dimension group ID
role	String	Dimension role
dimension_id	Long	Dimension ID
hierarchies_id	Long	Hierarchy ID
ordinal	Integer	Ordinal
group_name	String	Dimension group name
group_code	String	Dimension group code



Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
hierarchies	Array of <b>DimensionHierarchiesVO</b> objects	Hierarchy attributes
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
l1_id	Long	Subject area group ID

Parameter	Type	Description
l2_id	String	Subject area ID
l3_id	Long	Business object ID
dw_type	String	Data connection type
id	Long	id

**Table 7-390** DimensionHierarchiesVO

Parameter	Type	Description
id	Long	ID
name	String	Hierarchy name Maximum: <b>600</b>
attrs	Array of <a href="#">HierarchiesAttrVO</a> objects	Hierarchy attribute
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the dimension hierarchy

**Table 7-391** HierarchiesAttrVO

Parameter	Type	Description
id	Long	ID
hierarchies_id	Long	Hierarchy ID
attr_id	Long	Attribute ID
level	Integer	Level
attr_name_en	String	Hierarchy attribute name in English
attr_name_ch	String	Hierarchy attribute name in Chinese
detail_attr_ids	Array of integers	IDs of detail attributes
detail_attr_name_ens	Array of strings	Detail attribute name in English

Parameter	Type	Description
detail_attr_name_chs	Array of strings	Detail attribute name in Chinese
attr	<a href="#">DimensionAttributeVO</a> object	Hierarchy attribute field
detail_attrs	Array of <a href="#">DimensionAttributeVO</a> objects	Detail attributes

**Table 7-392** DimensionAttributeVO

Parameter	Type	Description
id	Long	ID
dimension_id	Long	Dimension ID
code_table_field_id	Long	Lookup table attribute ID
name_en	String	Dimension attribute name in English Maximum: <b>600</b>
name_ch	String	Dimension attribute name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>• <b>NUMBER</b></li><li>• <b>STRING</b></li><li>• <b>DATETIME</b></li><li>• <b>BLOB</b></li><li>• <b>OTHER</b></li></ul>
data_type_extended	String	Data type extended field Maximum: <b>50</b>
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>

Parameter	Type	Description
is_biz_primary	Boolean	Whether the attribute is a business primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
ordinal	Integer	Ordinal
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <a href="#">QualityInfoVO</a> objects	Quality information
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-393** QualityInfoVO

Parameter	Type	Description
id	Long	ID
table_id	Long	Table ID
attr_id	Long	Attribute ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
data_quality_id	Long	Quality ID
show_control	Integer	Whether to display the regular expression
data_quality_name	String	Quality name
alert_conf	String	Alarm configuration
expression	String	Regular expression in verification rules

Parameter	Type	Description
extend_info	String	Extended information
from_standard	Boolean	Whether the quality information is from data standard quality configuration Default: <b>false</b>
result_description	String	Result description
create_by	String	Creator
update_by	String	User who updated the quality information
create_time	String	Creation time
update_time	String	Update time

**Table 7-394** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Table 7-395** MetricMonitorVO

Parameter	Type	Description
id	Long	ID
other_metric_ids	Array of integers	IDs of other metrics
other_metric_names	Array of strings	Names of other metrics
expression	String	Alarm expression Maximum: <b>2000</b>
metric_id	Long	Metric ID
front_configs	String	Frontend expression configuration, which is used for frontend data restoration

Parameter	Type	Description
metric_type	String	Metric type Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>

**Table 7-396** AtomicIndexVO

Parameter	Type	Description
id	Long	ID
name_en	String	Atomic index name in English Maximum: <b>200</b>

Parameter	Type	Description
name_ch	String	Atomic index name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
cal_exp	String	Calculation expression Maximum: <b>200</b>
cal_fn_ids	Array of integers	Calculation expression ID
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object GUID
table_id	Long	Table ID
tb_name	String	Table name
dw_type	String	Data connection type
field_ids	Array of integers	Field ID
field_names	Array of strings	Field names
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>



Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
approval_info	<a href="#">ApprovalVO</a> object	Approval information

Parameter	Type	Description
new_biz	<b>BizVersionManagementVO</b> object	Business version management

**Table 7-397** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DEVELOPING</b></li><li>● <b>APPROVED</b></li><li>● <b>REJECT</b></li><li>● <b>WITHDREW</b></li></ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"><li>● <b>PUBLISH</b></li><li>● <b>OFFLINE</b></li></ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-398** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Status code: 400****Table 7-399** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-400** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-401** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **DerivativeIndexVO** is returned.

```
{
  "id": "873265784540004352",
  "name_en": "sum_total_amount",
  "name_ch": "Total amount (rate code)",
  "description": "",
  "create_by": "abc",
  "data_type": "DOUBLE",
  "l1_id": "873232498044411904",
  "l2_id": "873232716601204736",
  "l3_id": "873233519286059008",
  "status": "PUBLISHED",
  "atomic_index_id": "873264909264257024",
  "time_condition_id": null,
  "time_field_id": null,
  "time_field_name": null,
  "common_conditions": [ ],
  "dimension_groups": [ {
    "group_id": "873252544997130240",
    "role": null,
    "dimension_id": "873252544997130240",
    "hierarchies_id": null,
    "ordinal": 1,
    "group_name": "Rate code",
    "group_code": "dim_rate_code",
    "biz_type": "DIMENSION",
    "hierarchies": null,
    "l1": null,
    "l2": null,
    "l3": null,
    "l1_id": null,
    "l2_id": null,
    "l3_id": null,
    "dw_type": null,
    "id": "873265784602918912"
  } ],
  "monitor": null,
  "atomic_index": {
    "id": "873264909264257024",
    "name_en": "sum_total_amount",
    "name_ch": "Total amount",
    "description": ""
  }
}
```

```

"create_by" : null,
"cal_exp" : "sum(${873264563087376397})",
"cal_fn_ids" : null,
"l1_id" : null,
"l2_id" : null,
"l3_id" : null,
"table_id" : "873264563070599168",
"tb_name" : null,
"dw_type" : null,
"field_ids" : [ "873264563087376397" ],
"field_names" : null,
"status" : "DRAFT",
"biz_type" : "FACT_LOGIC_TABLE",
"create_time" : "2022-08-30T21:28:45.454+08:00",
"update_time" : "2022-08-30T21:28:45.454+08:00",
"l1" : null,
"l2" : null,
"l3" : null,
"approval_info" : null,
"new_biz" : null
},
"time_condition_name" : null,
"create_time" : "2021-08-06T18:06:28+08:00",
"update_time" : "2021-08-06T18:06:27+08:00",
"l1" : "City traffic",
"l2" : "Trip record",
"l3" : "Record statistics",
"summary_table_id" : null,
"approval_info" : {
  "id" : "873265785332727808",
  "tenant_id" : null,
  "name_ch" : null,
  "name_en" : null,
  "biz_id" : "873265784540004352",
  "biz_type" : null,
  "biz_info" : null,
  "biz_info_obj" : null,
  "biz_version" : 0,
  "biz_status" : "PUBLISHED",
  "approval_status" : "APPROVED",
  "approval_type" : null,
  "submit_time" : "2021-08-06T18:06:28+08:00",
  "create_by" : null,
  "l1" : null,
  "l2" : null,
  "l3" : null,
  "approval_time" : "2021-08-06T18:06:27+08:00",
  "approver" : "abc",
  "email" : null,
  "msg" : "Fast Approval OK.",
  "directory_path" : null
},
"new_biz" : null
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>DerivativeIndexVO</b> is returned.
400	BadRequest
401	Unauthorized



Status Code	Description
403	Forbidden

## 7.11 Compound Metric APIs

### 7.11.1 Querying Compound Metrics

#### Function

This API is used to query compound metrics based on the name, creator, approver, status, modification time, and l3Id, and display the results on different pages.

#### URI

GET /v2/{project\_id}/design/compound-metrics

**Table 7-402** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-403** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
approver	No	String	Approver
status	No	String	Business status Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
dimension_group	No	String	Parameters for querying dimension attributes based on the dimension group

Parameter	Mandatory	Type	Description
atomic_index_id	No	Long	Parameters for querying dimension attributes based on the atomic metric ID
l3_id	No	Long	ID of business object l3
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-404** Response body parameters

Parameter	Type	Description
id	Long	ID
name_en	String	Compound metric name in English Maximum: <b>200</b>

Parameter	Type	Description
name_ch	String	Compound metric name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
dimension_group	String	Dimension group Default: <b>0</b>
group_name	String	Dimension group name
group_code	String	Dimension group code
metric_ids	Array of integers	Metric IDs
metric_names	Array of strings	Metric names
cal_fn_ids	Array of integers	Referenced function ID
cal_exp	String	Calculation expression \${index_id} + \${index_id}
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object ID
data_type	String	Data type
create_by	String	Creator
update_by	String	User who updated the compound metric
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<a href="#">ApprovalVO</a> object	Approval information

Parameter	Type	Description
new_biz	<b>BizVersionMa nageVO</b> object	Business version management
monitor	<b>MetricMonit orVO</b> object	Metric monitoring information
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
summary_table_id	Long	Summary table ID

**Table 7-405** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-406** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-407** MetricMonitorVO

Parameter	Type	Description
id	Long	ID
other_metric_ids	Array of integers	IDs of other metrics
other_metric_names	Array of strings	Names of other metrics
expression	String	Alarm expression Maximum: <b>2000</b>
metric_id	Long	Metric ID
front_configs	String	Frontend expression configuration, which is used for frontend data restoration



Parameter	Type	Description
metric_type	String	<p>Metric type</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>

Status code: 400

**Table 7-408** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-409** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-410** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. The **CompoundMetricVO** array and the total number of compound metrics are returned.

```
{
  "id" : "1014222358430482432",
  "name_en" : "fuhe",
  "name_ch" : "fuhe",
  "description" : "",
  "dimension_group" : "873251932406448128",
  "group_name" : "Payment method",
  "group_code" : null,
  "metric_ids" : [ "873265905193426944" ],
  "metric_names" : null,
  "cal_fn_ids" : null,
  "cal_exp" : "${873265905193426944}",
  "l1_id" : "873232498044411904",
  "l2_id" : null,
  "l3_id" : null,
  "data_type" : "BIGINT",
  "create_by" : "abc",
  "update_by" : "abc",
  "status" : "DRAFT",
  "create_time" : "2022-08-30T17:17:34+08:00",
  "update_time" : "2022-08-30T17:17:34+08:00",
  "approval_info" : null,
  "new_biz" : null,
  "monitor" : null,
  "l1" : "City traffic",
  "l2" : null,
  "l3" : null,
  "summary_table_id" : null
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>CompoundMetricVO</b> array and the total number of compound metrics are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.11.2 Querying Compound Metric Details

### Function

This API is used to query the details of a compound metric based on the ID.

### URI

GET /v2/{project\_id}/design/compound-metrics/{id}

**Table 7-411** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

**Table 7-412** Query Parameters

Parameter	Mandatory	Type	Description
latest	No	Boolean	Whether to query the latest data

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 7-413** Response body parameters

Parameter	Type	Description
id	Long	ID
name_en	String	Compound metric name in English Maximum: <b>200</b>
name_ch	String	Compound metric name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
dimension_group	String	Dimension group Default: <b>0</b>
group_name	String	Dimension group name
group_code	String	Dimension group code
metric_ids	Array of integers	Metric IDs
metric_names	Array of strings	Metric names
cal_fn_ids	Array of integers	Referenced function ID

Parameter	Type	Description
cal_exp	String	Calculation expression \${index_id} + \${index_id}
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object ID
data_type	String	Data type
create_by	String	Creator
update_by	String	User who updated the compound metric
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionManagementVO</b> object	Business version management
monitor	<b>MetricMonitorVO</b> object	Metric monitoring information
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
summary_table_id	Long	Summary table ID

**Table 7-414** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information

Parameter	Type	Description
biz_info_obj	Object	Business information object
biz_version	Integer	Business version
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DEVELOPING</b></li><li>● <b>APPROVED</b></li><li>● <b>REJECT</b></li><li>● <b>WITHDREW</b></li></ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"><li>● <b>PUBLISH</b></li><li>● <b>OFFLINE</b></li></ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-415** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• ATOMIC_INDEX</li> <li>• DERIVATIVE_INDEX</li> <li>• DIMENSION</li> <li>• DIMENSION_ATTRIBUTE</li> <li>• DIMENSION_HIERARCHIES</li> <li>• CONDITION_GROUP</li> <li>• TIME_CONDITION</li> <li>• COMMON_CONDITION</li> <li>• FACT_LOGIC_TABLE</li> <li>• TABLE_MODEL</li> <li>• DIMENSION_LOGIC_TABLE</li> <li>• STANDARD_ELEMENT</li> <li>• AGGREGATION_LOGIC_TABLE</li> <li>• TAG</li> <li>• CODE_TABLE</li> <li>• TABLE_MODEL_ATTRIBUTE</li> <li>• FACT_DIMENSION</li> <li>• FACT_ATTRIBUTE</li> <li>• FACT_MEASURE</li> <li>• SUMMARY_DIMENSION_ATTRIBUTE</li> <li>• SUMMARY_TIME</li> <li>• DIMENSION_TABLE_ATTRIBUTE</li> <li>• QUALITY_RULE</li> <li>• BIZ_METRIC</li> <li>• COMPOUND_METRIC</li> <li>• INFO_ARCH</li> <li>• DEGENERATE_DIMENSION</li> <li>• TABLE_MODEL_LOGIC</li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information



Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-416** MetricMonitorVO

Parameter	Type	Description
id	Long	ID
other_metric_ids	Array of integers	IDs of other metrics
other_metric_names	Array of strings	Names of other metrics
expression	String	Alarm expression Maximum: <b>2000</b>
metric_id	Long	Metric ID
front_configs	String	Frontend expression configuration, which is used for frontend data restoration

Parameter	Type	Description
metric_type	String	Metric type Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>

Status code: 400

**Table 7-417** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-418** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-419** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **CompoundMetricVO** is returned.

```
{
  "id" : "1014222358430482432",
```

```
"name_en" : "fuhe",
"name_ch" : "fuhe",
"description" : "",
"dimension_group" : "873251932406448128",
"group_name" : "Payment method",
"group_code" : null,
"metric_ids" : [ "873265905193426944" ],
"metric_names" : null,
"cal_fn_ids" : null,
"cal_exp" : "${873265905193426944}",
"l1_id" : "873232498044411904",
"l2_id" : null,
"l3_id" : null,
"data_type" : "BIGINT",
"create_by" : "abc",
"update_by" : "abc",
"status" : "DRAFT",
"create_time" : "2022-08-30T17:17:34+08:00",
"update_time" : "2022-08-30T17:17:34+08:00",
"approval_info" : null,
"new_biz" : null,
"monitor" : null,
"l1" : "City traffic",
"l2" : null,
"l3" : null,
"summary_table_id" : null
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>CompoundMetricVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.12 Dimension APIs

### 7.12.1 Querying Dimensions

#### Function

This API is used to query dimensions based on the name, description, creator, approver, status, l3 ID, list of IDs of derivative metrics, and modification time and display the results on different pages.

#### URI

GET /v2/{project\_id}/design/dimensions

**Table 7-420** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-421** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
approver	No	String	Approver
status	No	String	Business status Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
l2_id	No	Long	ID of subject area l2
derivative_ids	No	Array	Parameters for querying dimensions based on the compound metric ID list
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .
fact_logic_id	No	Long	Fact table ID
dimension_type	No	String	Dimension type Enumeration values: <ul style="list-style-type: none"> <li>• <b>COMMON</b></li> <li>• <b>LOOKUP</b></li> <li>• <b>HIERARCHIES</b></li> </ul>

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>
biz_catalog_id	No	String	Business catalog ID

## Request Parameters

None

## Response Parameters

Status code: 200

Table 7-422 Response body parameters

Parameter	Type	Description
id	Long	ID
name_en	String	Dimension name in English Maximum: <b>200</b>
dimension_type	String	Dimension type Default: <b>COMMON</b> Enumeration values: <ul style="list-style-type: none"><li>• <b>COMMON</b></li><li>• <b>LOOKUP</b></li><li>• <b>HIERARCHIES</b></li></ul>
name_ch	String	Dimension name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>

Parameter	Type	Description
create_by	String	Creator
update_by	String	User who updated the dimension
code_table_id	Long	Lookup table ID
code_table	<a href="#">CodeTableVO</a> object	Lookup table
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object ID
hierarchies	Array of <a href="#">DimensionHierarchiesVO</a> objects	Hierarchies
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<a href="#">ApprovalVO</a> object	Approval information
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
attributes	Array of <a href="#">DimensionAttributeVO</a> objects	Dimension attributes

Parameter	Type	Description
mappings	Array of <a href="#">TableMappingVO</a> objects	Table mappings
datasource	<a href="#">BizDataSourceRelationVO</a> object	Data source information
owner	String	Asset owner
table_type	String	Table type
distribute	String	DISTRIBUTE BY [HASH(column) REPLICATION] Enumeration values: <ul style="list-style-type: none"><li>• <b>HASH</b></li><li>• <b>REPLICATION</b></li></ul>
distribute_column	String	DISTRIBUTE BY HASH column
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-423** CodeTableVO

Parameter	Type	Description
id	Long	ID
name_en	String	Table name in English Maximum: <b>200</b>
name_ch	String	Table name in Chinese Maximum: <b>200</b>
tb_version	Integer	Table version
directory_id	Long	Catalog ID
directory_path	String	Catalog tree
description	String	Description Maximum: <b>600</b>
create_by	String	Creator



Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● DRAFT</li><li>● PUBLISH_DEVELOPING</li><li>● PUBLISHED</li><li>● OFFLINE_DEVELOPING</li><li>● OFFLINE</li><li>● REJECT</li></ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	ApprovalVO object	Approval information
new_biz	BizVersionManagementVO object	Business version management
code_table_fields	Array of CodeTableFieldVO objects	Lookup table attribute information

**Table 7-424** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-425** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-426** CodeTableFieldVO

Parameter	Type	Description
id	Long	ID
code_table_id	Long	Lookup table ID
ordinal	Integer	Ordinal
name_en	String	Field name in English Maximum: <b>600</b>
name_ch	String	Field name in Chinese Maximum: <b>200</b>
description	String	Description Maximum: <b>600</b>
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>● <b>NUMBER</b></li><li>● <b>STRING</b></li><li>● <b>DATETIME</b></li><li>● <b>BLOB</b></li><li>● <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>

Parameter	Type	Description
is_unique_key	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	Integer	Number of lookup table attribute values

**Table 7-427** CodeTableFieldValueVO

Parameter	Type	Description
id	Long	ID
fd_id	Long	Lookup table attribute ID
fd_value	String	Lookup table attribute value
ordinal	Integer	Ordinal
description	String	Description Maximum: <b>600</b>

**Table 7-428** DimensionHierarchiesVO

Parameter	Type	Description
id	Long	ID
name	String	Hierarchy name Maximum: <b>600</b>
attrs	Array of <a href="#">HierarchiesAttrVO</a> objects	Hierarchy attribute
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the dimension hierarchy

**Table 7-429** HierarchiesAttrVO

Parameter	Type	Description
id	Long	ID
hierarchies_id	Long	Hierarchy ID
attr_id	Long	Attribute ID
level	Integer	Level
attr_name_en	String	Hierarchy attribute name in English
attr_name_ch	String	Hierarchy attribute name in Chinese
detail_attr_ids	Array of integers	IDs of detail attributes
detail_attr_name_ens	Array of strings	Detail attribute name in English
detail_attr_name_chs	Array of strings	Detail attribute name in Chinese
attr	<a href="#">DimensionAttributeVO</a> object	Hierarchy attribute field
detail_attrs	Array of <a href="#">DimensionAttributeVO</a> objects	Detail attributes

**Table 7-430** DimensionAttributeVO

Parameter	Type	Description
id	Long	ID
dimension_id	Long	Dimension ID
code_table_field_id	Long	Lookup table attribute ID
name_en	String	Dimension attribute name in English Maximum: <b>600</b>
name_ch	String	Dimension attribute name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
data_type	String	Data type

Parameter	Type	Description
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"> <li>● <b>NUMBER</b></li> <li>● <b>STRING</b></li> <li>● <b>DATETIME</b></li> <li>● <b>BLOB</b></li> <li>● <b>OTHER</b></li> </ul>
data_type_extended	String	Data type extended field Maximum: <b>50</b>
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>
is_biz_primary	Boolean	Whether the attribute is a business primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
ordinal	Integer	Ordinal
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <a href="#">QualityInfoVO</a> objects	Quality information
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
alias	String	Alias



Parameter	Type	Description
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-431** QualityInfoVO

Parameter	Type	Description
id	Long	ID
table_id	Long	Table ID
attr_id	Long	Attribute ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
data_quality_id	Long	Quality ID
show_control	Integer	Whether to display the regular expression
data_quality_name	String	Quality name
alert_conf	String	Alarm configuration
expression	String	Regular expression in verification rules

Parameter	Type	Description
extend_info	String	Extended information
from_standard	Boolean	Whether the quality information is from data standard quality configuration Default: <b>false</b>
result_description	String	Result description
create_by	String	Creator
update_by	String	User who updated the quality information
create_time	String	Creation time
update_time	String	Update time

**Table 7-432** TableMappingVO

Parameter	Type	Description
id	Long	ID
name	String	Name
description	String	Maximum: <b>600</b>
target_table_id	Long	Destination table ID
src_model_id	Long	Model ID for the source table
src_model_name	String	Source model name
view_text	String	Source view. The DWS view is used reversely.
target_table_name	String	Destination table name
details	Array of <a href="#">TableMappingDetailVO</a> objects	Details
source_tables	Array of <a href="#">MappingSourceTableVO</a> objects	Source tables

Parameter	Type	Description
source_fields	Array of <a href="#">MappingSourceFieldVO</a> objects	Source fields
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the table mapping

**Table 7-433** TableMappingDetailVO

Parameter	Type	Description
id	Long	ID
mapping_id	String	Mapping ID
target_attr_id	Long	Destination field ID
target_attr_name	String	Target attribute name
src_table_ids	String	ID of a source table
src_table_names	Array of strings	Source table names
src_table_db_names	Array of strings	Database names in the source table
src_table_model_ids	Array of integers	IDs of source table models
src_table_id_list	Array of integers	IDs of source tables
src_attr_ids	String	ID of a source table attribute
src_attr_names	Array of strings	Names of source table attributes
src_attr_id_list	Array of integers	IDs of source table attributes
remark	String	Remarks
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator

Parameter	Type	Description
update_by	String	User who updated the table mapping details
target_attr	Object	Target attribute

**Table 7-434** MappingSourceTableVO

Parameter	Type	Description
table1_id	Long	Table ID
table2_id	Long	Table ID Default: <b>0</b>
table1_name	String	Table 1 name
table2_name	String	Table 2 name
join_type	String	Association type Default: <b>LEFT</b> Enumeration values: <ul style="list-style-type: none"><li>• <b>LEFT</b></li><li>• <b>RIGHT</b></li><li>• <b>INNER</b></li><li>• <b>FULL</b></li></ul>
join_fields	Array of <a href="#">MappingJoinFieldVO</a> objects	ON clause

**Table 7-435** MappingJoinFieldVO

Parameter	Type	Description
field1_id	Long	Attribute ID
field2_id	Long	Attribute ID
field1_name	String	Name of join field 1
field2_name	String	Name of join field 2

**Table 7-436** MappingSourceFieldVO

Parameter	Type	Description
target_field_id	Long	Target field ID. The target field is a field in the current table.
target_field_name	String	Target field name
field_ids	String	IDs of source fields. Multiple IDs are separated by commas (,).
transform_expression	String	Conversion expression
field_names	Array of strings	Names of source fields
changed	Boolean	Whether the field has changed

**Table 7-437** BizDatasourceRelationVO

Parameter	Type	Description
id	Long	ID
biz_id	Long	Business object information

Parameter	Type	Description
biz_type	String	Business object type Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
dw_type	String	Data connection type
dw_id	String	Data connection ID
dw_name	String	Data connection name
db_name	String	Database name
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.

Parameter	Type	Description
schema	String	Schema, which is required for DWS

**Table 7-438** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400****Table 7-439** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-440** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**



**Table 7-441** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. The **DimensionVO** array and the total number of dimensions are returned.

```
{
  "id": "873251051724242944",
  "name_en": "dim_vendor",
  "dimension_type": "LOOKUP",
  "name_ch": "Vendor",
  "description": "None",
  "create_by": "abc",
  "update_by": null,
  "code_table_id": "873235088123527168",
  "code_table": null,
  "l1_id": "873232498044411904",
  "l2_id": "873232798230675456",
  "l3_id": "873233599258927104",
  "hierarchies": [ ],
  "status": "PUBLISHED",
  "create_time": "2021-08-06T17:07:55+08:00",
  "update_time": "2021-08-06T17:36:03+08:00",
  "approval_info": {
    "id": "873258129008336896",
    "tenant_id": null,
    "name_ch": null,
    "name_en": null,
    "biz_id": "873251051724242944",
    "biz_type": null,
    "biz_info": null,
    "biz_info_obj": null,
    "biz_version": 0,
    "biz_status": "PUBLISHED",
    "approval_status": "APPROVED",
    "approval_type": null,
    "submit_time": "2021-08-06T17:36:02+08:00",
    "create_by": null,
    "l1": null,
    "l2": null,
    "l3": null,
    "approval_time": "2021-08-06T17:36:03+08:00",
    "approver": "abc",
    "email": null,
    "msg": "Fast Approval OK.",
    "directory_path": null
  }
}
```

```
},
"new_biz" : null,
"l1" : "City traffic",
"l2" : "Corporation",
"l3" : "Vendor",
"attributes" : [ {
  "id" : "873251051732631552",
  "dimension_id" : "873251051724242944",
  "code_table_field_id" : null,
  "name_en" : "vendor_id",
  "name_ch" : "Vendor ID",
  "description" : "",
  "create_by" : "abc",
  "data_type" : "BIGINT",
  "domain_type" : "NUMBER",
  "data_type_extend" : null,
  "is_primary_key" : true,
  "is_biz_primary" : true,
  "is_partition_key" : false,
  "ordinal" : 1,
  "not_null" : true,
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "status" : null,
  "create_time" : "2021-08-06T17:07:55+08:00",
  "update_time" : "2021-10-14T10:54:54+08:00",
  "alias" : null,
  "self_defined_fields" : null
}, {
  "id" : "873251051732631553",
  "dimension_id" : "873251051724242944",
  "code_table_field_id" : null,
  "name_en" : "vendor_value",
  "name_ch" : "Vendor",
  "description" : "",
  "create_by" : "abc",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : null,
  "is_primary_key" : false,
  "is_biz_primary" : false,
  "is_partition_key" : false,
  "ordinal" : 2,
  "not_null" : false,
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "status" : null,
  "create_time" : "2021-08-06T17:07:55+08:00",
  "update_time" : "2021-10-14T10:54:54+08:00",
  "alias" : null,
  "self_defined_fields" : null
} ],
"mappings" : null,
"datasource" : {
  "id" : "873251051745214464",
  "biz_id" : "873251051724242944",
  "biz_type" : "DIMENSION",
  "dw_type" : "DLI",
  "dw_id" : "2c9080f07b03db8d017b198a4a20002f",
  "dw_name" : null,
  "db_name" : "demo_dwr_db",
  "queue_name" : "dgc_dli_test",
  "schema" : ""
},
"owner" : "abc",
"table_type" : "MANAGED",
"distribute" : null,
```

```
"distribute_column" : null,  
"alias" : "",  
"self_defined_fields" : null  
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>DimensionVO</b> array and the total number of dimensions are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.12.2 Querying Dimension Details

### Function

This API is used to query the details of a dimension with a specified ID.

### URI

GET /v2/{project\_id}/design/dimensions/{id}

**Table 7-442** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

**Table 7-443** Query Parameters

Parameter	Mandatory	Type	Description
latest	No	Boolean	Whether to query the latest data

### Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-444** Response body parameters

Parameter	Type	Description
id	Long	ID
name_en	String	Dimension name in English Maximum: <b>200</b>
dimension_type	String	Dimension type Default: <b>COMMON</b> Enumeration values: <ul style="list-style-type: none"><li>• <b>COMMON</b></li><li>• <b>LOOKUP</b></li><li>• <b>HIERARCHIES</b></li></ul>
name_ch	String	Dimension name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
update_by	String	User who updated the dimension
code_table_id	Long	Lookup table ID
code_table	<b>CodeTableVO</b> object	Lookup table
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object ID
hierarchies	Array of <b>DimensionHierarchiesVO</b> objects	Hierarchies

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionMa nageVO</b> object	Business version management
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
attributes	Array of <b>DimensionAt tributeVO</b> objects	Dimension attributes
mappings	Array of <b>TableMappin gVO</b> objects	Table mappings
datasource	<b>BizDatasourc eRelationVO</b> object	Data source information
owner	String	Asset owner
table_type	String	Table type
distribute	String	DISTRIBUTE BY [HASH(column) REPLICATION] Enumeration values: <ul style="list-style-type: none"> <li>● <b>HASH</b></li> <li>● <b>REPLICATION</b></li> </ul>
distribute_col umn	String	DISTRIBUTE BY HASH column
alias	String	Alias

Parameter	Type	Description
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-445** CodeTableVO

Parameter	Type	Description
id	Long	ID
name_en	String	Table name in English Maximum: <b>200</b>
name_ch	String	Table name in Chinese Maximum: <b>200</b>
tb_version	Integer	Table version
directory_id	Long	Catalog ID
directory_path	String	Catalog tree
description	String	Description Maximum: <b>600</b>
create_by	String	Creator
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<a href="#">ApprovalVO</a> object	Approval information
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management
code_table_fields	Array of <a href="#">CodeTableFieldVO</a> objects	Lookup table attribute information

**Table 7-446** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version



Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-447** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-448** CodeTableFieldVO

Parameter	Type	Description
id	Long	ID
code_table_id	Long	Lookup table ID
ordinal	Integer	Ordinal
name_en	String	Field name in English Maximum: <b>600</b>
name_ch	String	Field name in Chinese Maximum: <b>200</b>
description	String	Description Maximum: <b>600</b>
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>● <b>NUMBER</b></li><li>● <b>STRING</b></li><li>● <b>DATETIME</b></li><li>● <b>BLOB</b></li><li>● <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>

Parameter	Type	Description
is_unique_key	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	Integer	Number of lookup table attribute values

**Table 7-449** CodeTableFieldValueVO

Parameter	Type	Description
id	Long	ID
fd_id	Long	Lookup table attribute ID
fd_value	String	Lookup table attribute value
ordinal	Integer	Ordinal
description	String	Description Maximum: <b>600</b>

**Table 7-450** DimensionHierarchiesVO

Parameter	Type	Description
id	Long	ID
name	String	Hierarchy name Maximum: <b>600</b>
attrs	Array of <a href="#">HierarchiesAttrVO</a> objects	Hierarchy attribute
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the dimension hierarchy

**Table 7-451** HierarchiesAttrVO

Parameter	Type	Description
id	Long	ID
hierarchies_id	Long	Hierarchy ID
attr_id	Long	Attribute ID
level	Integer	Level
attr_name_en	String	Hierarchy attribute name in English
attr_name_ch	String	Hierarchy attribute name in Chinese
detail_attr_ids	Array of integers	IDs of detail attributes
detail_attr_name_ens	Array of strings	Detail attribute name in English
detail_attr_name_chs	Array of strings	Detail attribute name in Chinese
attr	<a href="#">DimensionAttributeVO</a> object	Hierarchy attribute field
detail_attrs	Array of <a href="#">DimensionAttributeVO</a> objects	Detail attributes

**Table 7-452** DimensionAttributeVO

Parameter	Type	Description
id	Long	ID
dimension_id	Long	Dimension ID
code_table_field_id	Long	Lookup table attribute ID
name_en	String	Dimension attribute name in English Maximum: <b>600</b>
name_ch	String	Dimension attribute name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
data_type	String	Data type

Parameter	Type	Description
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"> <li>● <b>NUMBER</b></li> <li>● <b>STRING</b></li> <li>● <b>DATETIME</b></li> <li>● <b>BLOB</b></li> <li>● <b>OTHER</b></li> </ul>
data_type_extended	String	Data type extended field Maximum: <b>50</b>
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>
is_biz_primary	Boolean	Whether the attribute is a business primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
ordinal	Integer	Ordinal
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <a href="#">QualityInfoVO</a> objects	Quality information
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
alias	String	Alias

Parameter	Type	Description
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-453** QualityInfoVO

Parameter	Type	Description
id	Long	ID
table_id	Long	Table ID
attr_id	Long	Attribute ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
data_quality_id	Long	Quality ID
show_control	Integer	Whether to display the regular expression
data_quality_name	String	Quality name
alert_conf	String	Alarm configuration
expression	String	Regular expression in verification rules



Parameter	Type	Description
extend_info	String	Extended information
from_standard	Boolean	Whether the quality information is from data standard quality configuration Default: <b>false</b>
result_description	String	Result description
create_by	String	Creator
update_by	String	User who updated the quality information
create_time	String	Creation time
update_time	String	Update time

**Table 7-454** TableMappingVO

Parameter	Type	Description
id	Long	ID
name	String	Name
description	String	Maximum: <b>600</b>
target_table_id	Long	Destination table ID
src_model_id	Long	Model ID for the source table
src_model_name	String	Source model name
view_text	String	Source view. The DWS view is used reversely.
target_table_name	String	Destination table name
details	Array of <a href="#">TableMappingDetailVO</a> objects	Details
source_tables	Array of <a href="#">MappingSourceTableVO</a> objects	Source tables

Parameter	Type	Description
source_fields	Array of <a href="#">MappingSourceFieldVO</a> objects	Source fields
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the table mapping

**Table 7-455** TableMappingDetailVO

Parameter	Type	Description
id	Long	ID
mapping_id	String	Mapping ID
target_attr_id	Long	Destination field ID
target_attr_name	String	Target attribute name
src_table_ids	String	ID of a source table
src_table_names	Array of strings	Source table names
src_table_db_names	Array of strings	Database names in the source table
src_table_model_ids	Array of integers	IDs of source table models
src_table_id_list	Array of integers	IDs of source tables
src_attr_ids	String	ID of a source table attribute
src_attr_names	Array of strings	Names of source table attributes
src_attr_id_list	Array of integers	IDs of source table attributes
remark	String	Remarks
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator

Parameter	Type	Description
update_by	String	User who updated the table mapping details
target_attr	Object	Target attribute

**Table 7-456** MappingSourceTableVO

Parameter	Type	Description
table1_id	Long	Table ID
table2_id	Long	Table ID Default: <b>0</b>
table1_name	String	Table 1 name
table2_name	String	Table 2 name
join_type	String	Association type Default: <b>LEFT</b> Enumeration values: <ul style="list-style-type: none"> <li>• <b>LEFT</b></li> <li>• <b>RIGHT</b></li> <li>• <b>INNER</b></li> <li>• <b>FULL</b></li> </ul>
join_fields	Array of <a href="#">MappingJoinFieldVO</a> objects	ON clause

**Table 7-457** MappingJoinFieldVO

Parameter	Type	Description
field1_id	Long	Attribute ID
field2_id	Long	Attribute ID
field1_name	String	Name of join field 1
field2_name	String	Name of join field 2

**Table 7-458** MappingSourceFieldVO

Parameter	Type	Description
target_field_id	Long	Target field ID. The target field is a field in the current table.
target_field_name	String	Target field name
field_ids	String	IDs of source fields. Multiple IDs are separated by commas (,).
transform_expression	String	Conversion expression
field_names	Array of strings	Names of source fields
changed	Boolean	Whether the field has changed

**Table 7-459** BizDatasourceRelationVO

Parameter	Type	Description
id	Long	ID
biz_id	Long	Business object information

Parameter	Type	Description
biz_type	String	Business object type Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
dw_type	String	Data connection type
dw_id	String	Data connection ID
dw_name	String	Data connection name
db_name	String	Database name
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.

Parameter	Type	Description
schema	String	Schema, which is required for DWS

**Table 7-460** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400****Table 7-461** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-462** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-463** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **DimensionVO** is returned.

```
{
  "id": "873251051724242944",
  "name_en": "dim_vendor",
  "dimension_type": "LOOKUP",
  "name_ch": "Vendor",
  "description": "None",
  "create_by": "abc",
  "update_by": null,
  "code_table_id": "873235088123527168",
  "code_table": null,
  "l1_id": "873232498044411904",
  "l2_id": "873232798230675456",
  "l3_id": "873233599258927104",
  "hierarchies": [ ],
  "status": "PUBLISHED",
  "create_time": "2021-08-06T17:07:55+08:00",
  "update_time": "2021-08-06T17:36:03+08:00",
  "approval_info": {
    "id": "873258129008336896",
    "tenant_id": null,
    "name_ch": null,
    "name_en": null,
    "biz_id": "873251051724242944",
    "biz_type": null,
    "biz_info": null,
    "biz_info_obj": null,
    "biz_version": 0,
    "biz_status": "PUBLISHED",
    "approval_status": "APPROVED",
    "approval_type": null,
    "submit_time": "2021-08-06T17:36:02+08:00",
    "create_by": null,
    "l1": null,
    "l2": null,
    "l3": null,
    "approval_time": "2021-08-06T17:36:03+08:00",
    "approver": "abc",
    "email": null,
    "msg": "Fast Approval OK.",
    "directory_path": null
  },
}
```

```
"new_biz" : null,
"l1" : "City traffic",
"l2" : "Group",
"l3" : "Vendor",
"attributes" : [ {
  "id" : "873251051732631552",
  "dimension_id" : "873251051724242944",
  "code_table_field_id" : null,
  "name_en" : "vendor_id",
  "name_ch" : "Vendor ID",
  "description" : "",
  "create_by" : "abc",
  "data_type" : "BIGINT",
  "domain_type" : "NUMBER",
  "data_type_extend" : null,
  "is_primary_key" : true,
  "is_biz_primary" : true,
  "is_partition_key" : false,
  "ordinal" : 1,
  "not_null" : true,
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "status" : null,
  "create_time" : "2021-08-06T17:07:55+08:00",
  "update_time" : "2021-10-14T10:54:54+08:00",
  "alias" : null,
  "self_defined_fields" : null
}, {
  "id" : "873251051732631553",
  "dimension_id" : "873251051724242944",
  "code_table_field_id" : null,
  "name_en" : "vendor_value",
  "name_ch" : "Vendor",
  "description" : "",
  "create_by" : "abc",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : null,
  "is_primary_key" : false,
  "is_biz_primary" : false,
  "is_partition_key" : false,
  "ordinal" : 2,
  "not_null" : false,
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "status" : null,
  "create_time" : "2021-08-06T17:07:55+08:00",
  "update_time" : "2021-10-14T10:54:54+08:00",
  "alias" : null,
  "self_defined_fields" : null
} ],
"mappings" : null,
"datasource" : {
  "id" : "873251051745214464",
  "biz_id" : "873251051724242944",
  "biz_type" : "DIMENSION",
  "dw_type" : "DLI",
  "dw_id" : "2c9080f07b03db8d017b198a4a20002f",
  "dw_name" : null,
  "db_name" : "demo_dwr_db",
  "queue_name" : "dgc_dli_test",
  "schema" : ""
},
"owner" : "abc",
"table_type" : "MANAGED",
"distribute" : null,
"distribute_column" : null,
```



```
"alias" : "",  
"self_defined_fields" : null  
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>DimensionVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.12.3 Querying Dimension Groups

### Function

This API is used to query dimension groups based on **tableId**. If **tableId** is not specified, all dimension groups will be queried.

### URI

GET /v2/{project\_id}/design/dimension/groups

**Table 7-464** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-465** Query Parameters

Parameter	Mandatory	Type	Description
table_id	No	Long	ID of the associated table
biz_type	No	String	Business types

### Request Parameters

None

### Response Parameters

**Status code: 200**

**Table 7-466** Response body parameters

Parameter	Type	Description
group_id	String	Dimension group ID
role	String	Dimension role
dimension_id	Long	Dimension ID
hierarchies_id	Long	Hierarchy ID
ordinal	Integer	Ordinal
group_name	String	Dimension group name
group_code	String	Dimension group code

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
hierarchies	Array of <b>DimensionHierarchiesVO</b> objects	Hierarchy attributes
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
l1_id	Long	Subject area group ID

Parameter	Type	Description
l2_id	String	Subject area ID
l3_id	Long	Business object ID
dw_type	String	Data connection type
id	Long	id

**Table 7-467** DimensionHierarchiesVO

Parameter	Type	Description
id	Long	ID
name	String	Hierarchy name Maximum: <b>600</b>
attrs	Array of <a href="#">HierarchiesAttrVO</a> objects	Hierarchy attribute
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the dimension hierarchy

**Table 7-468** HierarchiesAttrVO

Parameter	Type	Description
id	Long	ID
hierarchies_id	Long	Hierarchy ID
attr_id	Long	Attribute ID
level	Integer	Level
attr_name_en	String	Hierarchy attribute name in English
attr_name_ch	String	Hierarchy attribute name in Chinese
detail_attr_ids	Array of integers	IDs of detail attributes
detail_attr_name_ens	Array of strings	Detail attribute name in English

Parameter	Type	Description
detail_attr_name_chs	Array of strings	Detail attribute name in Chinese
attr	<a href="#">DimensionAttributeVO</a> object	Hierarchy attribute field
detail_attrs	Array of <a href="#">DimensionAttributeVO</a> objects	Detail attributes

**Table 7-469** DimensionAttributeVO

Parameter	Type	Description
id	Long	ID
dimension_id	Long	Dimension ID
code_table_field_id	Long	Lookup table attribute ID
name_en	String	Dimension attribute name in English Maximum: <b>600</b>
name_ch	String	Dimension attribute name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>• <b>NUMBER</b></li><li>• <b>STRING</b></li><li>• <b>DATETIME</b></li><li>• <b>BLOB</b></li><li>• <b>OTHER</b></li></ul>
data_type_extended	String	Data type extended field Maximum: <b>50</b>
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>

Parameter	Type	Description
is_biz_primary	Boolean	Whether the attribute is a business primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
ordinal	Integer	Ordinal
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <a href="#">QualityInfoVO</a> objects	Quality information
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-470** QualityInfoVO

Parameter	Type	Description
id	Long	ID
table_id	Long	Table ID
attr_id	Long	Attribute ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
data_quality_id	Long	Quality ID
show_control	Integer	Whether to display the regular expression
data_quality_name	String	Quality name
alert_conf	String	Alarm configuration
expression	String	Regular expression in verification rules

Parameter	Type	Description
extend_info	String	Extended information
from_standard	Boolean	Whether the quality information is from data standard quality configuration Default: <b>false</b>
result_description	String	Result description
create_by	String	Creator
update_by	String	User who updated the quality information
create_time	String	Creation time
update_time	String	Update time

**Table 7-471** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400****Table 7-472** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**



**Table 7-473** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-474** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **DerivativeIndexDimensionVO** is returned.

```
{
  "group_id" : "873264563070599168.873264563087376390",
  "role" : null,
  "dimension_id" : null,
  "hierarchies_id" : null,
  "ordinal" : null,
  "group_name" : "Trip order.Drop-off location",
  "group_code" : "fact_stroke_order.do_location_id",
  "biz_type" : null,
  "hierarchies" : null,
  "l1" : null,
  "l2" : null,
  "l3" : null,
  "l1_id" : null,
  "l2_id" : null,
  "l3_id" : null,
  "dw_type" : "DLI",
  "id" : null
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>DerivativeIndexDimensionVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.12.4 Querying Dimension Table Reverse Tasks

### Function

This API is used to query dimension table reverse tasks.

### URI

GET /v2/{project\_id}/design/dimension/database

**Table 7-475** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

### Request Parameters

None

### Response Parameters

**Status code: 200**

**Table 7-476** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400**

**Table 7-477** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 401**

**Table 7-478** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 403**

**Table 7-479** Response body parameters

Parameter	Type	Description
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

Success

```
{
  "data": {
    "value": ""
  }
}
```

## Status Codes

Status Code	Description
200	Success
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.13 Filter APIs

### 7.13.1 Querying Filters

#### Function

This API is used to query filters based on the name, description, creator, approver, filter group ID, and modification time, and display the results on different pages.

#### URI

GET /v2/{project\_id}/design/conditions

**Table 7-480** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-481** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
approver	No	String	Approver
status	No	String	Business status Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

## Request Parameters

None

## Response Parameters

Status code: 200

Table 7-482 Response body parameters

Parameter	Type	Description
id	Long	ID
name_en	String	Filter name in English Maximum: <b>100</b>
name_ch	String	Filter name in Chinese Maximum: <b>250</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator

Parameter	Type	Description
condition_fn	String	Filter calculation method Enumeration values: <ul style="list-style-type: none"> <li>• <b>LAST_YEAR</b></li> <li>• <b>CURRENT_YEAR</b></li> <li>• <b>BETWEEN_YEAR</b></li> <li>• <b>LAST_MONTH</b></li> <li>• <b>CURRENT_MONTH</b></li> <li>• <b>BETWEEN_MONTH</b></li> <li>• <b>LAST_DAY</b></li> <li>• <b>CURRENT_DAY</b></li> <li>• <b>BETWEEN_DAY</b></li> <li>• <b>LAST_HOUR</b></li> <li>• <b>CURRENT_HOUR</b></li> <li>• <b>BETWEEN_HOUR</b></li> <li>• <b>LAST_MINUTE</b></li> <li>• <b>CURRENT_MINUTE</b></li> <li>• <b>BETWEEN_MINUTE</b></li> </ul>
condition_fn_param	String	Filter calculation parameters
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionManagementVO</b> object	Business version management
base_time	Integer	Baseline time

**Table 7-483** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_info	String	Business information

Parameter	Type	Description
biz_info_obj	Object	Business information object
biz_version	Integer	Business version
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DEVELOPING</b></li><li>● <b>APPROVED</b></li><li>● <b>REJECT</b></li><li>● <b>WITHDREW</b></li></ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"><li>● <b>PUBLISH</b></li><li>● <b>OFFLINE</b></li></ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree



**Table 7-484** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• ATOMIC_INDEX</li> <li>• DERIVATIVE_INDEX</li> <li>• DIMENSION</li> <li>• DIMENSION_ATTRIBUTE</li> <li>• DIMENSION_HIERARCHIES</li> <li>• CONDITION_GROUP</li> <li>• TIME_CONDITION</li> <li>• COMMON_CONDITION</li> <li>• FACT_LOGIC_TABLE</li> <li>• TABLE_MODEL</li> <li>• DIMENSION_LOGIC_TABLE</li> <li>• STANDARD_ELEMENT</li> <li>• AGGREGATION_LOGIC_TABLE</li> <li>• TAG</li> <li>• CODE_TABLE</li> <li>• TABLE_MODEL_ATTRIBUTE</li> <li>• FACT_DIMENSION</li> <li>• FACT_ATTRIBUTE</li> <li>• FACT_MEASURE</li> <li>• SUMMARY_DIMENSION_ATTRIBUTE</li> <li>• SUMMARY_TIME</li> <li>• DIMENSION_TABLE_ATTRIBUTE</li> <li>• QUALITY_RULE</li> <li>• BIZ_METRIC</li> <li>• COMPOUND_METRIC</li> <li>• INFO_ARCH</li> <li>• DEGENERATE_DIMENSION</li> <li>• TABLE_MODEL_LOGIC</li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Status code: 400**

**Table 7-485** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-486** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-487** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

### Status code: 200

The operation succeeds. The **ConditionVO** array and the total number of filters are returned.

```
[ {
  "id" : "873154196235517965",
  "name_en" : "f4w",
  "name_ch" : "Next 4 weeks",
  "description" : "Average daily value of historical data x 7 x 4",
  "create_by" : "SYSTEM",
  "condition_fn" : "BETWEEN_DAY",
  "condition_fn_param" : "1,28",
  "status" : "PUBLISHED",
  "create_time" : "2021-08-06T10:43:03+08:00",
  "update_time" : "2021-08-06T10:43:03+08:00",
  "approval_info" : null,
  "new_biz" : null,
  "base_time" : null
} ]
```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>ConditionVO</b> array and the total number of filters are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.13.2 Querying Filter Details

### Function

This API is used to query the details of a filter based on the ID.

### URI

GET /v2/{project\_id}/design/conditions/{id}

**Table 7-488** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

**Table 7-489** Query Parameters

Parameter	Mandatory	Type	Description
latest	No	Boolean	Whether to query the latest data

### Request Parameters

None

### Response Parameters

**Status code: 200**

**Table 7-490** Response body parameters

Parameter	Type	Description
id	Long	ID
name_en	String	Filter name in English Maximum: <b>100</b>
name_ch	String	Filter name in Chinese Maximum: <b>250</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator

Parameter	Type	Description
condition_fn	String	Filter calculation method Enumeration values: <ul style="list-style-type: none"><li>• <b>LAST_YEAR</b></li><li>• <b>CURRENT_YEAR</b></li><li>• <b>BETWEEN_YEAR</b></li><li>• <b>LAST_MONTH</b></li><li>• <b>CURRENT_MONTH</b></li><li>• <b>BETWEEN_MONTH</b></li><li>• <b>LAST_DAY</b></li><li>• <b>CURRENT_DAY</b></li><li>• <b>BETWEEN_DAY</b></li><li>• <b>LAST_HOUR</b></li><li>• <b>CURRENT_HOUR</b></li><li>• <b>BETWEEN_HOUR</b></li><li>• <b>LAST_MINUTE</b></li><li>• <b>CURRENT_MINUTE</b></li><li>• <b>BETWEEN_MINUTE</b></li></ul>
condition_fn_param	String	Filter calculation parameters
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionManagementVO</b> object	Business version management
base_time	Integer	Baseline time

**Table 7-491** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information

Parameter	Type	Description
biz_info_obj	Object	Business information object
biz_version	Integer	Business version
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-492** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• ATOMIC_INDEX</li> <li>• DERIVATIVE_INDEX</li> <li>• DIMENSION</li> <li>• DIMENSION_ATTRIBUTE</li> <li>• DIMENSION_HIERARCHIES</li> <li>• CONDITION_GROUP</li> <li>• TIME_CONDITION</li> <li>• COMMON_CONDITION</li> <li>• FACT_LOGIC_TABLE</li> <li>• TABLE_MODEL</li> <li>• DIMENSION_LOGIC_TABLE</li> <li>• STANDARD_ELEMENT</li> <li>• AGGREGATION_LOGIC_TABLE</li> <li>• TAG</li> <li>• CODE_TABLE</li> <li>• TABLE_MODEL_ATTRIBUTE</li> <li>• FACT_DIMENSION</li> <li>• FACT_ATTRIBUTE</li> <li>• FACT_MEASURE</li> <li>• SUMMARY_DIMENSION_ATTRIBUTE</li> <li>• SUMMARY_TIME</li> <li>• DIMENSION_TABLE_ATTRIBUTE</li> <li>• QUALITY_RULE</li> <li>• BIZ_METRIC</li> <li>• COMPOUND_METRIC</li> <li>• INFO_ARCH</li> <li>• DEGENERATE_DIMENSION</li> <li>• TABLE_MODEL_LOGIC</li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information



Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Status code: 400**

**Table 7-493** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-494** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-495** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **ConditionVO** is returned.

```
[ {
  "id" : "873154196235517965",
  "name_en" : "f4w",
  "name_ch" : "Next 4 weeks",
  "description" : "Average daily value of historical data x 7 x 4",
  "create_by" : "SYSTEM",
  "condition_fn" : "BETWEEN_DAY",
  "condition_fn_param" : "1,28",
  "status" : "PUBLISHED",
  "create_time" : "2021-08-06T10:43:03+08:00",
  "update_time" : "2021-08-06T10:43:03+08:00",
  "approval_info" : null,
  "new_biz" : null,
  "base_time" : null
} ]
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>ConditionVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.14 Dimension Table APIs

## 7.14.1 Querying Dimension Tables

### Function

This API is used to query dimension tables based on the name, creator, approver, status, and modification time and display the results on different pages.

### URI

GET /v2/{project\_id}/design/dimension-logic-tables

**Table 7-496** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-497** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
approver	No	String	Approver
owner	No	String	Query by owner
status	No	String	Business status Enumeration values: <ul style="list-style-type: none"><li>● DRAFT</li><li>● PUBLISH_DEVELOPING</li><li>● PUBLISHED</li><li>● OFFLINE_DEVELOPING</li><li>● OFFLINE</li><li>● REJECT</li></ul>
sync_status	No	String	Enumeration values: <ul style="list-style-type: none"><li>● RUNNING</li><li>● NO_NEED</li><li>● SUMMARY_SUCCESS</li><li>● SUMMARY_FAILED</li></ul>

Parameter	Mandatory	Type	Description
sync_key	No	Array	Enumeration values: <ul style="list-style-type: none"> <li>● <b>BUSINESS_ASSET</b></li> <li>● <b>DATA_QUALITY</b></li> <li>● <b>TECHNICAL_ASSET</b></li> <li>● <b>META_DATA_LINK</b></li> <li>● <b>PHYSICAL_TABLE</b></li> <li>● <b>DLF_TASK</b></li> <li>● <b>MATERIALIZATION</b></li> </ul>
l2_id	No	Long	ID of subject area l2
dimension_id	No	Long	Parameters for querying dimension attributes based on the dimension ID
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>
biz_catalog_id	No	String	Business catalog ID
dimension_type	No	String	Dimension type Enumeration values: <ul style="list-style-type: none"> <li>● <b>COMMON</b></li> <li>● <b>LOOKUP</b></li> <li>● <b>HIERARCHIES</b></li> </ul>

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-498** Response body parameters

Parameter	Type	Description
id	String	Table ID
tb_name	String	Table name Maximum: <b>600</b>
tb_logic_name	String	Logical entity name Maximum: <b>200</b>
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object ID
create_by	String	Creator
description	String	Description Maximum: <b>600</b>
dimension_id	Long	Dimension ID
owner	String	Asset owner
dimension_type	String	Dimension type Default: <b>COMMON</b> Enumeration values: <ul style="list-style-type: none"> <li>• <b>COMMON</b></li> <li>• <b>LOOKUP</b></li> <li>• <b>HIERARCHIES</b></li> </ul>
code_table_id	Long	Lookup table ID
code_table	<a href="#">CodeTableVO</a> object	Lookup table
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.
dw_id	String	Data connection ID

Parameter	Type	Description
reversed	Boolean	Whether the table is reversed Default: <b>false</b>
partition_conf	String	Partition expression
dirty_out_switch	Boolean	Whether to export dirty data Default: <b>false</b>
dirty_out_database	String	Database to which dirty data will be exported
dirty_out_prefix	String	Prefix of an abnormal table
dirty_out_suffix	String	Suffix of an abnormal table
db_name	String	Database name
tb_id	String	Data table ID
schema	String	Schema, which is required for DWS
table_type	String	Table type
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
tb_guid	String	GUID of the physical table corresponding to the published table
tb_logic_guid	String	GUID of the logical entity corresponding to the published table
dimension_name	String	Dimension name
attributes	Array of <a href="#">DimensionLogicTableAttributeVO</a> objects	Attributes
dw_type	String	Data connection type
dw_name	String	Data connection name

Parameter	Type	Description
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionMa nageVO</b> object	Business version management
physical_table	String	Table creation status Enumeration values: <ul style="list-style-type: none"> <li>● NO_NEED</li> <li>● CREATE_SUCCESS</li> <li>● CREATE_FAILED</li> <li>● UPDATE_SUCCESS</li> <li>● UPDATE_FAILED</li> <li>● SUMMARY_SUCCESS</li> <li>● SUMMARY_FAILED</li> <li>● RUNNING</li> <li>● OFFLINE</li> </ul>
technical_asset	String	Technical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>● NO_NEED</li> <li>● CREATE_SUCCESS</li> <li>● CREATE_FAILED</li> <li>● UPDATE_SUCCESS</li> <li>● UPDATE_FAILED</li> <li>● SUMMARY_SUCCESS</li> <li>● SUMMARY_FAILED</li> <li>● RUNNING</li> <li>● OFFLINE</li> </ul>

Parameter	Type	Description
business_asset	String	Logical asset synchronization status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>
meta_data_link	String	Asset association status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>
data_quality	String	Quality job status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>



Parameter	Type	Description
materialization	String	Storage status of the value Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
summary_status	String	Overall synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
distribute	String	DISTRIBUTE BY [HASH(column) REPLICATION] Enumeration values: <ul style="list-style-type: none"> <li>• HASH</li> <li>• REPLICATION</li> </ul>
distribute_column	String	DISTRIBUTE BY HASH column
quality_id	Long	Quality ID
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-499** CodeTableVO

Parameter	Type	Description
id	Long	ID
name_en	String	Table name in English Maximum: <b>200</b>
name_ch	String	Table name in Chinese Maximum: <b>200</b>
tb_version	Integer	Table version
directory_id	Long	Catalog ID
directory_path	String	Catalog tree
description	String	Description Maximum: <b>600</b>
create_by	String	Creator
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionMa nageVO</b> object	Business version management
code_table_fie lds	Array of <b>CodeTableFie ldVO</b> objects	Lookup table attribute information

**Table 7-500** ApprovalVO

Parameter	Type	Description
id	Long	ID

Parameter	Type	Description
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object

Parameter	Type	Description
biz_version	Integer	Business version
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DEVELOPING</b></li> <li>• <b>APPROVED</b></li> <li>• <b>REJECT</b></li> <li>• <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>• <b>PUBLISH</b></li> <li>• <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-501** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-502** CodeTableFieldVO

Parameter	Type	Description
id	Long	ID
code_table_id	Long	Lookup table ID
ordinal	Integer	Ordinal
name_en	String	Field name in English Maximum: <b>600</b>
name_ch	String	Field name in Chinese Maximum: <b>200</b>
description	String	Description Maximum: <b>600</b>
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>● <b>NUMBER</b></li><li>● <b>STRING</b></li><li>● <b>DATETIME</b></li><li>● <b>BLOB</b></li><li>● <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>

Parameter	Type	Description
is_unique_key	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	Integer	Number of lookup table attribute values

**Table 7-503** CodeTableFieldValueVO

Parameter	Type	Description
id	Long	ID
fd_id	Long	Lookup table attribute ID
fd_value	String	Lookup table attribute value
ordinal	Integer	Ordinal
description	String	Description Maximum: <b>600</b>

**Table 7-504** DimensionLogicTableAttributeVO

Parameter	Type	Description
id	Long	id
dimension_logic_table_id	String	Dimension table ID
ordinal	Integer	Ordinal
dimension_attribute_id	Long	Dimension attribute ID
name_en	String	Dimension table attribute name in English
name_ch	String	Dimension table attribute name in Chinese
description	String	Description
data_type	String	Data type

Parameter	Type	Description
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"> <li>• <b>NUMBER</b></li> <li>• <b>STRING</b></li> <li>• <b>DATETIME</b></li> <li>• <b>BLOB</b></li> <li>• <b>OTHER</b></li> </ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>
is_biz_primary	Boolean	Whether the attribute is a business primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <a href="#">QualityInfoVO</a> objects	Quality information
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-505** QualityInfoVO

Parameter	Type	Description
id	Long	ID
table_id	Long	Table ID
attr_id	Long	Attribute ID



Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
data_quality_id	Long	Quality ID
show_control	Integer	Whether to display the regular expression
data_quality_name	String	Quality name
alert_conf	String	Alarm configuration
expression	String	Regular expression in verification rules

Parameter	Type	Description
extend_info	String	Extended information
from_standard	Boolean	Whether the quality information is from data standard quality configuration Default: <b>false</b>
result_description	String	Result description
create_by	String	Creator
update_by	String	User who updated the quality information
create_time	String	Creation time
update_time	String	Update time

**Table 7-506** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400****Table 7-507** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-508** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-509** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. The **DimensionLogicTableVO** array and the total number of dimension tables are returned.

```
{
  "id": "873258132317642752",
  "tb_name": "dim_vendor",
  "tb_logic_name": "Vendor",
  "l1_id": "873232498044411904",
  "l2_id": "873232798230675456",
  "l3_id": "873233599258927104",
  "create_by": "abc",
  "description": "None",
  "dimension_id": "873251051724242944",
  "owner": "abc",
  "dimension_type": "LOOKUP",
  "code_table_id": "873235088123527168",
  "code_table": null,
  "queue_name": "dgc_dli_test",
  "dw_id": "2c9080f07b03db8d017b198a4a20002f",
  "reversed": null,
  "partition_conf": null,
  "dirty_out_switch": false,
  "dirty_out_database": ""
}
```

```
"dirty_out_prefix" : "",
"dirty_out_suffix" : "",
"db_name" : "demo_dwr_db",
"tb_id" : "NativeTable-2c9080f07b03db8d017b198a4a20002f-demo_dwr_db-dim_vendor",
"schema" : "",
"table_type" : "MANAGED",
"status" : "PUBLISHED",
"tb_guid" : "cea79c27-446e-4529-86e7-d1b371ebb876",
"tb_logic_guid" : "048cc0b7-3c0f-40cb-b0e9-e81261117f2d",
"dimension_name" : "Vendor",
"attributes" : [ {
  "id" : "873258132321837056",
  "dimension_logic_table_id" : "873258132317642752",
  "ordinal" : 1,
  "dimension_attribute_id" : "873251051732631552",
  "name_en" : "vendor_id",
  "name_ch" : "Vendor ID",
  "description" : "",
  "data_type" : "BIGINT",
  "domain_type" : "NUMBER",
  "data_type_extend" : null,
  "is_primary_key" : true,
  "is_biz_primary" : true,
  "is_partition_key" : false,
  "not_null" : true,
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : null,
  "self_defined_fields" : null
}, {
  "id" : "873258132321837057",
  "dimension_logic_table_id" : "873258132317642752",
  "ordinal" : 2,
  "dimension_attribute_id" : "873251051732631553",
  "name_en" : "vendor_value",
  "name_ch" : "Vendor",
  "description" : "",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : null,
  "is_primary_key" : false,
  "is_biz_primary" : false,
  "is_partition_key" : false,
  "not_null" : false,
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : null,
  "self_defined_fields" : null
} ],
"dw_type" : "DLI",
"dw_name" : null,
"l1" : "City traffic",
"l2" : "Corporation",
"l3" : "Vendor",
"create_time" : "2021-08-06T17:36:03+08:00",
"update_time" : "2021-10-14T10:54:58+08:00",
"approval_info" : {
  "id" : "873258129008336896",
  "tenant_id" : null,
  "name_ch" : null,
  "name_en" : null,
  "biz_id" : "873251051724242944",
  "biz_type" : null,
  "biz_info" : null,
  "biz_info_obj" : null,
  "biz_version" : 0,
  "biz_status" : "PUBLISHED",
```

```

"approval_status" : "APPROVED",
"approval_type" : null,
"submit_time" : "2021-08-06T17:36:02+08:00",
"create_by" : null,
"l1" : null,
"l2" : null,
"l3" : null,
"approval_time" : "2021-08-06T17:36:03+08:00",
"approver" : "abc",
"email" : null,
"msg" : "Fast Approval OK.",
"directory_path" : null
},
"new_biz" : null,
"physical_table" : "CREATE_SUCCESS",
"technical_asset" : "UPDATE_SUCCESS",
"business_asset" : "UPDATE_SUCCESS",
"meta_data_link" : "UPDATE_SUCCESS",
"data_quality" : "UPDATE_SUCCESS",
"materialization" : null,
"summary_status" : "SUMMARY_SUCCESS",
"distribute" : null,
"distribute_column" : null,
"quality_id" : "873258150667665409",
"alias" : "",
"self_defined_fields" : null
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>DimensionLogicTableVO</b> array and the total number of dimension tables are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.14.2 Querying Dimension Table Details

### Function

This API is used to query the details of a dimension table with a specified ID.

### URI

GET /v2/{project\_id}/design/dimension-logic-tables/{id}

**Table 7-510** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

Parameter	Mandatory	Type	Description
id	Yes	String	Entity ID

**Table 7-511** Query Parameters

Parameter	Mandatory	Type	Description
latest	No	Boolean	Whether to query the latest data

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 7-512** Response body parameters

Parameter	Type	Description
id	String	Table ID
tb_name	String	Table name Maximum: <b>600</b>
tb_logic_name	String	Logical entity name Maximum: <b>200</b>
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object ID
create_by	String	Creator
description	String	Description Maximum: <b>600</b>
dimension_id	Long	Dimension ID
owner	String	Asset owner

Parameter	Type	Description
dimension_type	String	Dimension type Default: <b>COMMON</b> Enumeration values: <ul style="list-style-type: none"><li>● <b>COMMON</b></li><li>● <b>LOOKUP</b></li><li>● <b>HIERARCHIES</b></li></ul>
code_table_id	Long	Lookup table ID
code_table	<a href="#">CodeTableVO</a> object	Lookup table
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.
dw_id	String	Data connection ID
reversed	Boolean	Whether the table is reversed Default: <b>false</b>
partition_conf	String	Partition expression
dirty_out_switch	Boolean	Whether to export dirty data Default: <b>false</b>
dirty_out_database	String	Database to which dirty data will be exported
dirty_out_prefix	String	Prefix of an abnormal table
dirty_out_suffix	String	Suffix of an abnormal table
db_name	String	Database name
tb_id	String	Data table ID
schema	String	Schema, which is required for DWS
table_type	String	Table type
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>

Parameter	Type	Description
tb_guid	String	GUID of the physical table corresponding to the published table
tb_logic_guid	String	GUID of the logical entity corresponding to the published table
dimension_name	String	Dimension name
attributes	Array of <b>DimensionLogicalTableAttributeVO</b> objects	Attributes
dw_type	String	Data connection type
dw_name	String	Data connection name
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionManagementVO</b> object	Business version management
physical_table	String	Table creation status Enumeration values: <ul style="list-style-type: none"> <li>● <b>NO_NEED</b></li> <li>● <b>CREATE_SUCCESS</b></li> <li>● <b>CREATE_FAILED</b></li> <li>● <b>UPDATE_SUCCESS</b></li> <li>● <b>UPDATE_FAILED</b></li> <li>● <b>SUMMARY_SUCCESS</b></li> <li>● <b>SUMMARY_FAILED</b></li> <li>● <b>RUNNING</b></li> <li>● <b>OFFLINE</b></li> </ul>



Parameter	Type	Description
technical_asset	String	Technical asset synchronization status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>
business_asset	String	Logical asset synchronization status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>
meta_data_link	String	Asset association status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>

Parameter	Type	Description
data_quality	String	Quality job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
materialization	String	Storage status of the value Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
summary_status	String	Overall synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
distribute	String	DISTRIBUTE BY [HASH(column) REPLICATION] Enumeration values: <ul style="list-style-type: none"> <li>• HASH</li> <li>• REPLICATION</li> </ul>

Parameter	Type	Description
distribute_column	String	DISTRIBUTE BY HASH column
quality_id	Long	Quality ID
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-513** CodeTableVO

Parameter	Type	Description
id	Long	ID
name_en	String	Table name in English Maximum: <b>200</b>
name_ch	String	Table name in Chinese Maximum: <b>200</b>
tb_version	Integer	Table version
directory_id	Long	Catalog ID
directory_path	String	Catalog tree
description	String	Description Maximum: <b>600</b>
create_by	String	Creator
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<a href="#">ApprovalVO</a> object	Approval information

Parameter	Type	Description
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management
code_table_file_ids	Array of <a href="#">CodeTableFileIdVO</a> objects	Lookup table attribute information

**Table 7-514** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DEVELOPING</b></li><li>● <b>APPROVED</b></li><li>● <b>REJECT</b></li><li>● <b>WITHDREW</b></li></ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"><li>● <b>PUBLISH</b></li><li>● <b>OFFLINE</b></li></ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-515** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-516** CodeTableFieldVO

Parameter	Type	Description
id	Long	ID
code_table_id	Long	Lookup table ID
ordinal	Integer	Ordinal
name_en	String	Field name in English Maximum: <b>600</b>
name_ch	String	Field name in Chinese Maximum: <b>200</b>
description	String	Description Maximum: <b>600</b>
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>● <b>NUMBER</b></li><li>● <b>STRING</b></li><li>● <b>DATETIME</b></li><li>● <b>BLOB</b></li><li>● <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>



Parameter	Type	Description
is_unique_key	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	Integer	Number of lookup table attribute values

**Table 7-517** CodeTableFieldValueVO

Parameter	Type	Description
id	Long	ID
fd_id	Long	Lookup table attribute ID
fd_value	String	Lookup table attribute value
ordinal	Integer	Ordinal
description	String	Description Maximum: <b>600</b>

**Table 7-518** DimensionLogicTableAttributeVO

Parameter	Type	Description
id	Long	id
dimension_logic_table_id	String	Dimension table ID
ordinal	Integer	Ordinal
dimension_attribute_id	Long	Dimension attribute ID
name_en	String	Dimension table attribute name in English
name_ch	String	Dimension table attribute name in Chinese
description	String	Description
data_type	String	Data type

Parameter	Type	Description
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"> <li>• <b>NUMBER</b></li> <li>• <b>STRING</b></li> <li>• <b>DATETIME</b></li> <li>• <b>BLOB</b></li> <li>• <b>OTHER</b></li> </ul>
data_type_extended	String	Data type extended field Maximum: <b>50</b>
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>
is_biz_primary	Boolean	Whether the attribute is a business primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <a href="#">QualityInfoVO</a> objects	Quality information
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-519** QualityInfoVO

Parameter	Type	Description
id	Long	ID
table_id	Long	Table ID
attr_id	Long	Attribute ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
data_quality_id	Long	Quality ID
show_control	Integer	Whether to display the regular expression
data_quality_name	String	Quality name
alert_conf	String	Alarm configuration
expression	String	Regular expression in verification rules

Parameter	Type	Description
extend_info	String	Extended information
from_standard	Boolean	Whether the quality information is from data standard quality configuration Default: <b>false</b>
result_description	String	Result description
create_by	String	Creator
update_by	String	User who updated the quality information
create_time	String	Creation time
update_time	String	Update time

**Table 7-520** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400****Table 7-521** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-522** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-523** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **DimensionLogicTableVO** is returned.

```
{
  "id": "873258132317642752",
  "tb_name": "dim_vendor",
  "tb_logic_name": "Vendor",
  "l1_id": "873232498044411904",
  "l2_id": "873232798230675456",
  "l3_id": "873233599258927104",
  "create_by": "abc",
  "description": "None",
  "dimension_id": "873251051724242944",
  "owner": "abc",
  "dimension_type": "LOOKUP",
  "code_table_id": "873235088123527168",
  "code_table": null,
  "queue_name": "dgc_dli_test",
  "dw_id": "2c9080f07b03db8d017b198a4a20002f",
  "reversed": null,
  "partition_conf": null,
  "dirty_out_switch": false,
  "dirty_out_database": "",
  "dirty_out_prefix": ""
}
```

```
"dirty_out_suffix" : "",
"db_name" : "demo_dwr_db",
"tb_id" : "NativeTable-2c9080f07b03db8d017b198a4a20002f-demo_dwr_db-dim_vendor",
"schema" : "",
"table_type" : "MANAGED",
"status" : "PUBLISHED",
"tb_guid" : "cea79c27-446e-4529-86e7-d1b371ebb876",
"tb_logic_guid" : "048cc0b7-3c0f-40cb-b0e9-e81261117f2d",
"dimension_name" : "Vendor",
"attributes" : [ {
  "id" : "873258132321837056",
  "dimension_logic_table_id" : "873258132317642752",
  "ordinal" : 1,
  "dimension_attribute_id" : "873251051732631552",
  "name_en" : "vendor_id",
  "name_ch" : "Vendor ID",
  "description" : "",
  "data_type" : "BIGINT",
  "domain_type" : "NUMBER",
  "data_type_extend" : null,
  "is_primary_key" : true,
  "is_biz_primary" : true,
  "is_partition_key" : false,
  "not_null" : true,
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : null,
  "self_defined_fields" : null
}, {
  "id" : "873258132321837057",
  "dimension_logic_table_id" : "873258132317642752",
  "ordinal" : 2,
  "dimension_attribute_id" : "873251051732631553",
  "name_en" : "vendor_value",
  "name_ch" : "Vendor",
  "description" : "",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : null,
  "is_primary_key" : false,
  "is_biz_primary" : false,
  "is_partition_key" : false,
  "not_null" : false,
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : null,
  "self_defined_fields" : null
} ],
"dw_type" : "DLI",
"dw_name" : null,
"l1" : "City traffic",
"l2" : "Corporation",
"l3" : "Vendor",
"create_time" : "2021-08-06T17:36:03+08:00",
"update_time" : "2021-10-14T10:54:58+08:00",
"approval_info" : {
  "id" : "873258129008336896",
  "tenant_id" : null,
  "name_ch" : null,
  "name_en" : null,
  "biz_id" : "873251051724242944",
  "biz_type" : null,
  "biz_info" : null,
  "biz_info_obj" : null,
  "biz_version" : 0,
  "biz_status" : "PUBLISHED",
  "approval_status" : "APPROVED",
```

```

"approval_type" : null,
"submit_time" : "2021-08-06T17:36:02+08:00",
"create_by" : null,
"l1" : null,
"l2" : null,
"l3" : null,
"approval_time" : "2021-08-06T17:36:03+08:00",
"approver" : "abc",
"email" : null,
"msg" : "Fast Approval OK.",
"directory_path" : null
},
"new_biz" : null,
"physical_table" : "CREATE_SUCCESS",
"technical_asset" : "UPDATE_SUCCESS",
"business_asset" : "UPDATE_SUCCESS",
"meta_data_link" : "UPDATE_SUCCESS",
"data_quality" : "UPDATE_SUCCESS",
"materialization" : null,
"summary_status" : "SUMMARY_SUCCESS",
"distribute" : null,
"distribute_column" : null,
"quality_id" : "873258150667665409",
"alias" : "",
"self_defined_fields" : null
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>DimensionLogicTableVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.15 Fact Table APIs

### 7.15.1 Querying Fact Tables

#### Function

This API is used to query fact tables based on the name, creator, approver, status, and modification time and display the results on different pages.

#### URI

GET /v2/{project\_id}/design/fact-logic-tables

**Table 7-524** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-525** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
approver	No	String	Approver
owner	No	String	Query by owner
status	No	String	Business status Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
sync_status	No	String	Enumeration values: <ul style="list-style-type: none"> <li>• <b>RUNNING</b></li> <li>• <b>NO_NEED</b></li> <li>• <b>SUMMARY_SUCCESS</b></li> <li>• <b>SUMMARY_FAILED</b></li> </ul>
sync_key	No	Array	Enumeration values: <ul style="list-style-type: none"> <li>• <b>BUSINESS_ASSET</b></li> <li>• <b>DATA_QUALITY</b></li> <li>• <b>TECHNICAL_ASSET</b></li> <li>• <b>META_DATA_LINK</b></li> <li>• <b>PHYSICAL_TABLE</b></li> <li>• <b>DLF_TASK</b></li> <li>• <b>MATERIALIZATION</b></li> </ul>
l3_id	No	Long	ID of business object l3
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .



Parameter	Mandatory	Type	Description
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>
biz_catalog_id	No	String	Business catalog ID

## Request Parameters

None

## Response Parameters

Status code: 200

Table 7-526 Response body parameters

Parameter	Type	Description
id	Long	Table ID
tb_name	String	Table name Maximum: <b>600</b>
tb_logic_name	String	Logical entity name Maximum: <b>200</b>
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object GUID

Parameter	Type	Description
description	String	Maximum: <b>600</b>
dw_name	String	Data connection name
owner	String	Asset owner
create_by	String	Creator
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.
dw_id	String	Data connection ID
db_name	String	Database name
tb_id	String	Data table ID
dim_table_ids	Array of strings	IDs of the dimension tables associated with the fact table
reversed	Boolean	Whether the table is reversed Default: <b>false</b>
partition_conf	String	Partition expression
dirty_out_switch	Boolean	Whether to export dirty data Default: <b>false</b>
dirty_out_database	String	Database to which dirty data will be exported
dirty_out_prefix	String	Prefix of the table with dirty data
dirty_out_suffix	String	Suffix of the table with dirty data
schema	String	Schema, which is required for DWS
distribute	String	DISTRIBUTE BY [HASH(column) REPLICATION] Enumeration values: <ul style="list-style-type: none"> <li>● <b>HASH</b></li> <li>● <b>REPLICATION</b></li> </ul>
distribute_column	String	DISTRIBUTE BY HASH column
table_type	String	Table type

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
tb_guid	String	GUID of the physical table corresponding to the published table
tb_logic_guid	String	GUID of the logical entity corresponding to the published table
dw_type	String	Data connection type
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionManagementVO</b> object	Business version management
dimensions	Array of <b>FactTableAttributeVO</b> objects	Fact table dimensions
attributes	Array of <b>FactTableAttributeVO</b> objects	Fact table attributes
mappings	Array of <b>TableMappingVO</b> objects	Table mappings
measures	Array of <b>FactTableAttributeVO</b> objects	Fact table measures

Parameter	Type	Description
table_attributes	Array of <a href="#">FactTableAttributeVO</a> objects	All attributes of a fact table
physical_table	String	Table creation status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
technical_asset	String	Technical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
business_asset	String	Logical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>

Parameter	Type	Description
meta_data_link	String	Asset association status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
data_quality	String	Quality job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
summary_status	String	Overall synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
quality_id	Long	Quality ID
alias	String	Alias

Parameter	Type	Description
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-527** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-528** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information



Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-529** FactTableAttributeVO

Parameter	Type	Description
id	Long	ID
fact_logic_table_id	Long	Fact table ID
ordinal	Integer	Ordinal
dimension_id	Long	Dimension ID
role	String	Attribute role Maximum: <b>200</b>
dimension	<b>DimensionVO</b> object	Dimension
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
is_foreign_key	Boolean	Whether the attribute is a foreign key Default: <b>false</b>
description	String	Maximum: <b>600</b>
data_type	String	Data type

Parameter	Type	Description
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>• <b>NUMBER</b></li><li>• <b>STRING</b></li><li>• <b>DATETIME</b></li><li>• <b>BLOB</b></li><li>• <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>
name_en	String	Attribute name in English Maximum: <b>600</b>
name_ch	String	Attribute name in Chinese Maximum: <b>200</b>
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>

Parameter	Type	Description
attribute_type	String	<p>Attribute type, which can be <b>FACT_DIMENSION</b>, <b>FACT_ATTRIBUTE</b>, or <b>FACT_MEASURE</b>.</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <b>QualityInfoVO</b> objects	Quality information

Parameter	Type	Description
alias	String	Alias
self_defined_fields	Array of <b>SelfDefinedFieldVO</b> objects	Custom fields

**Table 7-530** DimensionVO

Parameter	Type	Description
id	Long	ID
name_en	String	Dimension name in English Maximum: <b>200</b>
dimension_type	String	Dimension type Default: <b>COMMON</b> Enumeration values: <ul style="list-style-type: none"><li>• <b>COMMON</b></li><li>• <b>LOOKUP</b></li><li>• <b>HIERARCHIES</b></li></ul>
name_ch	String	Dimension name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
update_by	String	User who updated the dimension
code_table_id	Long	Lookup table ID
code_table	<b>CodeTableVO</b> object	Lookup table
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object ID
hierarchies	Array of <b>DimensionHierarchiesVO</b> objects	Hierarchies

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionMa nageVO</b> object	Business version management
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
attributes	Array of <b>DimensionAt tributeVO</b> objects	Dimension attributes
mappings	Array of <b>TableMappin gVO</b> objects	Table mappings
datasource	<b>BizDatasourc eRelationVO</b> object	Data source information
owner	String	Asset owner
table_type	String	Table type
distribute	String	DISTRIBUTE BY [HASH(column) REPLICATION] Enumeration values: <ul style="list-style-type: none"> <li>● <b>HASH</b></li> <li>● <b>REPLICATION</b></li> </ul>
distribute_col umn	String	DISTRIBUTE BY HASH column
alias	String	Alias

Parameter	Type	Description
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-531** CodeTableVO

Parameter	Type	Description
id	Long	ID
name_en	String	Table name in English Maximum: <b>200</b>
name_ch	String	Table name in Chinese Maximum: <b>200</b>
tb_version	Integer	Table version
directory_id	Long	Catalog ID
directory_path	String	Catalog tree
description	String	Description Maximum: <b>600</b>
create_by	String	Creator
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<a href="#">ApprovalVO</a> object	Approval information
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management
code_table_fields	Array of <a href="#">CodeTableFieldVO</a> objects	Lookup table attribute information

**Table 7-532** CodeTableFieldVO

Parameter	Type	Description
id	Long	ID
code_table_id	Long	Lookup table ID
ordinal	Integer	Ordinal
name_en	String	Field name in English Maximum: <b>600</b>
name_ch	String	Field name in Chinese Maximum: <b>200</b>
description	String	Description Maximum: <b>600</b>
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>• <b>NUMBER</b></li><li>• <b>STRING</b></li><li>• <b>DATETIME</b></li><li>• <b>BLOB</b></li><li>• <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>
is_unique_key	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	Integer	Number of lookup table attribute values

**Table 7-533** CodeTableFieldValueVO

Parameter	Type	Description
id	Long	ID



Parameter	Type	Description
fd_id	Long	Lookup table attribute ID
fd_value	String	Lookup table attribute value
ordinal	Integer	Ordinal
description	String	Description Maximum: <b>600</b>

**Table 7-534** DimensionHierarchiesVO

Parameter	Type	Description
id	Long	ID
name	String	Hierarchy name Maximum: <b>600</b>
attrs	Array of <a href="#">HierarchiesAttrVO</a> objects	Hierarchy attribute
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the dimension hierarchy

**Table 7-535** HierarchiesAttrVO

Parameter	Type	Description
id	Long	ID
hierarchies_id	Long	Hierarchy ID
attr_id	Long	Attribute ID
level	Integer	Level
attr_name_en	String	Hierarchy attribute name in English
attr_name_ch	String	Hierarchy attribute name in Chinese
detail_attr_ids	Array of integers	IDs of detail attributes
detail_attr_name_ens	Array of strings	Detail attribute name in English

Parameter	Type	Description
detail_attr_name_chs	Array of strings	Detail attribute name in Chinese
attr	<a href="#">DimensionAttributeVO</a> object	Hierarchy attribute field
detail_attrs	Array of <a href="#">DimensionAttributeVO</a> objects	Detail attributes

**Table 7-536** DimensionAttributeVO

Parameter	Type	Description
id	Long	ID
dimension_id	Long	Dimension ID
code_table_field_id	Long	Lookup table attribute ID
name_en	String	Dimension attribute name in English Maximum: <b>600</b>
name_ch	String	Dimension attribute name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>• <b>NUMBER</b></li><li>• <b>STRING</b></li><li>• <b>DATETIME</b></li><li>• <b>BLOB</b></li><li>• <b>OTHER</b></li></ul>
data_type_extended	String	Data type extended field Maximum: <b>50</b>
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>

Parameter	Type	Description
is_biz_primary	Boolean	Whether the attribute is a business primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
ordinal	Integer	Ordinal
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <a href="#">QualityInfoVO</a> objects	Quality information
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-537** TableMappingVO

Parameter	Type	Description
id	Long	ID
name	String	Name
description	String	Maximum: <b>600</b>

Parameter	Type	Description
target_table_id	Long	Destination table ID
src_model_id	Long	Model ID for the source table
src_model_name	String	Source model name
view_text	String	Source view. The DWS view is used reversely.
target_table_name	String	Destination table name
details	Array of <a href="#">TableMappingDetailVO</a> objects	Details
source_tables	Array of <a href="#">MappingSourceTableVO</a> objects	Source tables
source_fields	Array of <a href="#">MappingSourceFieldVO</a> objects	Source fields
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the table mapping

**Table 7-538** TableMappingDetailVO

Parameter	Type	Description
id	Long	ID
mapping_id	String	Mapping ID
target_attr_id	Long	Destination field ID
target_attr_name	String	Target attribute name
src_table_ids	String	ID of a source table
src_table_names	Array of strings	Source table names

Parameter	Type	Description
src_table_db_names	Array of strings	Database names in the source table
src_table_model_ids	Array of integers	IDs of source table models
src_table_id_list	Array of integers	IDs of source tables
src_attr_ids	String	ID of a source table attribute
src_attr_names	Array of strings	Names of source table attributes
src_attr_id_list	Array of integers	IDs of source table attributes
remark	String	Remarks
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the table mapping details
target_attr	Object	Target attribute

**Table 7-539** MappingSourceTableVO

Parameter	Type	Description
table1_id	Long	Table ID
table2_id	Long	Table ID Default: <b>0</b>
table1_name	String	Table 1 name
table2_name	String	Table 2 name
join_type	String	Association type Default: <b>LEFT</b> Enumeration values: <ul style="list-style-type: none"> <li>● <b>LEFT</b></li> <li>● <b>RIGHT</b></li> <li>● <b>INNER</b></li> <li>● <b>FULL</b></li> </ul>

Parameter	Type	Description
join_fields	Array of <a href="#">MappingJoinFieldVO</a> objects	ON clause

**Table 7-540** MappingJoinFieldVO

Parameter	Type	Description
field1_id	Long	Attribute ID
field2_id	Long	Attribute ID
field1_name	String	Name of join field 1
field2_name	String	Name of join field 2

**Table 7-541** MappingSourceFieldVO

Parameter	Type	Description
target_field_id	Long	Target field ID. The target field is a field in the current table.
target_field_name	String	Target field name
field_ids	String	IDs of source fields. Multiple IDs are separated by commas (,).
transform_expression	String	Conversion expression
field_names	Array of strings	Names of source fields
changed	Boolean	Whether the field has changed

**Table 7-542** BizDatasourceRelationVO

Parameter	Type	Description
id	Long	ID
biz_id	Long	Business object information

Parameter	Type	Description
biz_type	String	Business object type Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
dw_type	String	Data connection type
dw_id	String	Data connection ID
dw_name	String	Data connection name
db_name	String	Database name
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.

Parameter	Type	Description
schema	String	Schema, which is required for DWS

**Table 7-543** QualityInfoVO

Parameter	Type	Description
id	Long	ID
table_id	Long	Table ID
attr_id	Long	Attribute ID



Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
data_quality_id	Long	Quality ID
show_control	Integer	Whether to display the regular expression
data_quality_name	String	Quality name
alert_conf	String	Alarm configuration
expression	String	Regular expression in verification rules

Parameter	Type	Description
extend_info	String	Extended information
from_standard	Boolean	Whether the quality information is from data standard quality configuration Default: <b>false</b>
result_description	String	Result description
create_by	String	Creator
update_by	String	User who updated the quality information
create_time	String	Creation time
update_time	String	Update time

**Table 7-544** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400****Table 7-545** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-546** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-547** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. The **FactLogicTableVO** array and the total number of fact tables are returned.

```
{
  "id": "873264563070599168",
  "tb_name": "fact_stroke_order",
  "tb_logic_name": "Trip order",
  "l1_id": "873232498044411904",
  "l2_id": "873232716601204736",
  "l3_id": "873233440420560896",
  "description": "None",
  "dw_name": null,
  "owner": "abc",
  "create_by": "abc",
  "queue_name": "dgc_dli_test",
  "dw_id": "2c9080f07b03db8d017b198a4a20002f",
  "db_name": "demo_dwr_db",
  "tb_id": "NativeTable-2c9080f07b03db8d017b198a4a20002f-demo_dwr_db-fact_stroke_order",
  "dim_table_ids": null,
  "reversed": null,
  "partition_conf": null,
  "dirty_out_switch": false,
  "dirty_out_database": ""
}
```

```
"dirty_out_prefix" : "",
"dirty_out_suffix" : "",
"schema" : "",
"distribute" : null,
"distribute_column" : null,
"table_type" : "MANAGED",
"status" : "PUBLISHED",
"tb_guid" : "60c0a59c-fc48-437a-94a3-48680e342114",
"tb_logic_guid" : "3ebe8fda-5417-4934-80bd-46ed7d46906a",
"dw_type" : "DLI",
"l1" : "City traffic",
"l2" : "Trip record",
"l3" : "Trip fact",
"create_time" : "2021-08-06T18:01:36+08:00",
"update_time" : "2021-10-14T11:08:16+08:00",
"approval_info" : {
  "id" : "873264617198166016",
  "tenant_id" : null,
  "name_ch" : null,
  "name_en" : null,
  "biz_id" : "873264563070599168",
  "biz_type" : null,
  "biz_info" : null,
  "biz_info_obj" : null,
  "biz_version" : 0,
  "biz_status" : "PUBLISHED",
  "approval_status" : "APPROVED",
  "approval_type" : null,
  "submit_time" : "2021-08-06T18:01:49+08:00",
  "create_by" : null,
  "l1" : null,
  "l2" : null,
  "l3" : null,
  "approval_time" : "2021-08-06T18:01:49+08:00",
  "approver" : "abc",
  "email" : null,
  "msg" : "Fast Approval OK.",
  "directory_path" : null
},
"new_biz" : null,
"dimensions" : [ {
  "id" : "873264563087376384",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 1,
  "dimension_id" : "873252544997130240",
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : true,
  "description" : "",
  "data_type" : "BIGINT",
  "domain_type" : "NUMBER",
  "data_type_extend" : null,
  "name_en" : "rate_code_id",
  "name_ch" : "Rate code ID",
  "not_null" : false,
  "attribute_type" : "FACT_DIMENSION",
  "stand_row_id" : "873241897769082881",
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376385",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 2,
  "dimension_id" : "873251932406448128",
  "role" : null,
```

```
"dimension" : null,
"is_primary_key" : false,
"is_partition_key" : false,
"is_foreign_key" : true,
"description" : "",
"data_type" : "BIGINT",
"domain_type" : "NUMBER",
"data_type_extend" : null,
"name_en" : "payment_type_id",
"name_ch" : "Payment type ID",
"not_null" : false,
"attribute_type" : "FACT_DIMENSION",
"stand_row_id" : null,
"stand_row_name" : null,
"quality_infos" : null,
"alias" : "",
"self_defined_fields" : null
}, {
  "id" : "873264563087376386",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 3,
  "dimension_id" : "873251051724242944",
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : true,
  "description" : "",
  "data_type" : "BIGINT",
  "domain_type" : "NUMBER",
  "data_type_extend" : null,
  "name_en" : "vendor_id",
  "name_ch" : "Vendor ID",
  "not_null" : false,
  "attribute_type" : "FACT_DIMENSION",
  "stand_row_id" : "873241295328616449",
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376387",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 4,
  "dimension_id" : "873254266029113344",
  "role" : "dim_pickup",
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : true,
  "description" : "",
  "data_type" : "TIMESTAMP",
  "domain_type" : "DATETIME",
  "data_type_extend" : null,
  "name_en" : "dim_pickup_date_key",
  "name_ch" : "Pickup time",
  "not_null" : false,
  "attribute_type" : "FACT_DIMENSION",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376388",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 5,
  "dimension_id" : "873254266029113344",
  "role" : "dim_dropoff",
```

```
"dimension" : null,
"is_primary_key" : false,
"is_partition_key" : false,
"is_foreign_key" : true,
"description" : "",
"data_type" : "TIMESTAMP",
"domain_type" : "DATETIME",
"data_type_extend" : null,
"name_en" : "dim_dropoff_date_key",
"name_ch" : "Drop-off time",
"not_null" : false,
"attribute_type" : "FACT_DIMENSION",
"stand_row_id" : null,
"stand_row_name" : null,
"quality_infos" : null,
"alias" : "",
"self_defined_fields" : null
} ],
"attributes" : null,
"mappings" : null,
"measures" : [ {
  "id" : "873264563087376389",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 6,
  "dimension_id" : null,
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : null,
  "description" : "",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : "",
  "name_en" : "pu_location_id",
  "name_ch" : "Pickup location",
  "not_null" : false,
  "attribute_type" : "FACT_MEASURE",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376390",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 7,
  "dimension_id" : null,
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : null,
  "description" : "",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : "",
  "name_en" : "do_location_id",
  "name_ch" : "Drop-off location",
  "not_null" : false,
  "attribute_type" : "FACT_MEASURE",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376391",
  "fact_logic_table_id" : "873264563070599168",
```

```
"ordinal" : 8,
"dimension_id" : null,
"role" : null,
"dimension" : null,
"is_primary_key" : false,
"is_partition_key" : false,
"is_foreign_key" : null,
"description" : "",
"data_type" : "DECIMAL",
"domain_type" : "NUMBER",
"data_type_extend" : "(10,2)",
"name_en" : "fare_amount",
"name_ch" : "Fare",
"not_null" : false,
"attribute_type" : "FACT_MEASURE",
"stand_row_id" : null,
"stand_row_name" : null,
"quality_infos" : null,
"alias" : "",
"self_defined_fields" : null
}, {
  "id" : "873264563087376392",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 9,
  "dimension_id" : null,
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : null,
  "description" : "",
  "data_type" : "DECIMAL",
  "domain_type" : "NUMBER",
  "data_type_extend" : "(10,2)",
  "name_en" : "extra",
  "name_ch" : "Extra fee",
  "not_null" : false,
  "attribute_type" : "FACT_MEASURE",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376393",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 10,
  "dimension_id" : null,
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : null,
  "description" : "",
  "data_type" : "DECIMAL",
  "domain_type" : "NUMBER",
  "data_type_extend" : "(10,2)",
  "name_en" : "mta_tax",
  "name_ch" : "MTA tax",
  "not_null" : false,
  "attribute_type" : "FACT_MEASURE",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376394",
  "fact_logic_table_id" : "873264563070599168",
```

```
"ordinal" : 11,
"dimension_id" : null,
"role" : null,
"dimension" : null,
"is_primary_key" : false,
"is_partition_key" : false,
"is_foreign_key" : null,
"description" : "",
"data_type" : "DECIMAL",
"domain_type" : "NUMBER",
"data_type_extend" : "(10,2)",
"name_en" : "tip_amount",
"name_ch" : "Handling fee",
"not_null" : false,
"attribute_type" : "FACT_MEASURE",
"stand_row_id" : null,
"stand_row_name" : null,
"quality_infos" : null,
"alias" : "",
"self_defined_fields" : null
}, {
  "id" : "873264563087376395",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 12,
  "dimension_id" : null,
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : null,
  "description" : "",
  "data_type" : "DECIMAL",
  "domain_type" : "NUMBER",
  "data_type_extend" : "(10,2)",
  "name_en" : "tolls_amount",
  "name_ch" : "Toll",
  "not_null" : false,
  "attribute_type" : "FACT_MEASURE",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376396",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 13,
  "dimension_id" : null,
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : null,
  "description" : "",
  "data_type" : "DECIMAL",
  "domain_type" : "NUMBER",
  "data_type_extend" : "(10,2)",
  "name_en" : "improvement_surcharge",
  "name_ch" : "Improvement surcharge",
  "not_null" : false,
  "attribute_type" : "FACT_MEASURE",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376397",
  "fact_logic_table_id" : "873264563070599168",
```



```
"ordinal" : 14,
"dimension_id" : null,
"role" : null,
"dimension" : null,
"is_primary_key" : false,
"is_partition_key" : false,
"is_foreign_key" : null,
"description" : "",
"data_type" : "DECIMAL",
"domain_type" : "NUMBER",
"data_type_extend" : "(10,2)",
"name_en" : "total_amount",
"name_ch" : "Total amount",
"not_null" : false,
"attribute_type" : "FACT_MEASURE",
"stand_row_id" : null,
"stand_row_name" : null,
"quality_infos" : null,
"alias" : "",
"self_defined_fields" : null
} ],
"table_attributes" : [ {
  "id" : "873264563087376384",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 1,
  "dimension_id" : "873252544997130240",
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : true,
  "description" : "",
  "data_type" : "BIGINT",
  "domain_type" : "NUMBER",
  "data_type_extend" : null,
  "name_en" : "rate_code_id",
  "name_ch" : "Rate code ID",
  "not_null" : false,
  "attribute_type" : "FACT_DIMENSION",
  "stand_row_id" : "873241897769082881",
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376385",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 2,
  "dimension_id" : "873251932406448128",
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : true,
  "description" : "",
  "data_type" : "BIGINT",
  "domain_type" : "NUMBER",
  "data_type_extend" : null,
  "name_en" : "payment_type_id",
  "name_ch" : "Payment type ID",
  "not_null" : false,
  "attribute_type" : "FACT_DIMENSION",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376386",
```

```
"fact_logic_table_id" : "873264563070599168",
"ordinal" : 3,
"dimension_id" : "873251051724242944",
"role" : null,
"dimension" : null,
"is_primary_key" : false,
"is_partition_key" : false,
"is_foreign_key" : true,
"description" : "",
"data_type" : "BIGINT",
"domain_type" : "NUMBER",
"data_type_extend" : null,
"name_en" : "vendor_id",
"name_ch" : "Vendor ID",
"not_null" : false,
"attribute_type" : "FACT_DIMENSION",
"stand_row_id" : "873241295328616449",
"stand_row_name" : null,
"quality_infos" : null,
"alias" : "",
"self_defined_fields" : null
}, {
  "id" : "873264563087376387",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 4,
  "dimension_id" : "873254266029113344",
  "role" : "dim_pickup",
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : true,
  "description" : "",
  "data_type" : "TIMESTAMP",
  "domain_type" : "DATETIME",
  "data_type_extend" : null,
  "name_en" : "dim_pickup_date_key",
  "name_ch" : "Pickup time",
  "not_null" : false,
  "attribute_type" : "FACT_DIMENSION",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376388",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 5,
  "dimension_id" : "873254266029113344",
  "role" : "dim_dropoff",
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : true,
  "description" : "",
  "data_type" : "TIMESTAMP",
  "domain_type" : "DATETIME",
  "data_type_extend" : null,
  "name_en" : "dim_dropoff_date_key",
  "name_ch" : "Drop-off time",
  "not_null" : false,
  "attribute_type" : "FACT_DIMENSION",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376389",
```

```
"fact_logic_table_id" : "873264563070599168",
"ordinal" : 6,
"dimension_id" : null,
"role" : null,
"dimension" : null,
"is_primary_key" : false,
"is_partition_key" : false,
"is_foreign_key" : null,
"description" : "",
"data_type" : "STRING",
"domain_type" : "STRING",
"data_type_extend" : "",
"name_en" : "pu_location_id",
"name_ch" : "Pickup location",
"not_null" : false,
"attribute_type" : "FACT_MEASURE",
"stand_row_id" : null,
"stand_row_name" : null,
"quality_infos" : null,
"alias" : "",
"self_defined_fields" : null
}, {
  "id" : "873264563087376390",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 7,
  "dimension_id" : null,
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : null,
  "description" : "",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : "",
  "name_en" : "do_location_id",
  "name_ch" : "Drop-off location",
  "not_null" : false,
  "attribute_type" : "FACT_MEASURE",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376391",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 8,
  "dimension_id" : null,
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : null,
  "description" : "",
  "data_type" : "DECIMAL",
  "domain_type" : "NUMBER",
  "data_type_extend" : "(10,2)",
  "name_en" : "fare_amount",
  "name_ch" : "Fare",
  "not_null" : false,
  "attribute_type" : "FACT_MEASURE",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376392",
```

```
"fact_logic_table_id" : "873264563070599168",
"ordinal" : 9,
"dimension_id" : null,
"role" : null,
"dimension" : null,
"is_primary_key" : false,
"is_partition_key" : false,
"is_foreign_key" : null,
"description" : "",
"data_type" : "DECIMAL",
"domain_type" : "NUMBER",
"data_type_extend" : "(10,2)",
"name_en" : "extra",
"name_ch" : "Extra fee",
"not_null" : false,
"attribute_type" : "FACT_MEASURE",
"stand_row_id" : null,
"stand_row_name" : null,
"quality_infos" : null,
"alias" : "",
"self_defined_fields" : null
}, {
  "id" : "873264563087376393",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 10,
  "dimension_id" : null,
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : null,
  "description" : "",
  "data_type" : "DECIMAL",
  "domain_type" : "NUMBER",
  "data_type_extend" : "(10,2)",
  "name_en" : "mta_tax",
  "name_ch" : "MTA tax",
  "not_null" : false,
  "attribute_type" : "FACT_MEASURE",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376394",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 11,
  "dimension_id" : null,
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : null,
  "description" : "",
  "data_type" : "DECIMAL",
  "domain_type" : "NUMBER",
  "data_type_extend" : "(10,2)",
  "name_en" : "tip_amount",
  "name_ch" : "Handling fee",
  "not_null" : false,
  "attribute_type" : "FACT_MEASURE",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376395",
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```
"fact_logic_table_id" : "873264563070599168",
"ordinal" : 12,
"dimension_id" : null,
"role" : null,
"dimension" : null,
"is_primary_key" : false,
"is_partition_key" : false,
"is_foreign_key" : null,
"description" : "",
"data_type" : "DECIMAL",
"domain_type" : "NUMBER",
"data_type_extend" : "(10,2)",
"name_en" : "tolls_amount",
"name_ch" : "Toll",
"not_null" : false,
"attribute_type" : "FACT_MEASURE",
"stand_row_id" : null,
"stand_row_name" : null,
"quality_infos" : null,
"alias" : "",
"self_defined_fields" : null
}, {
  "id" : "873264563087376396",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 13,
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  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : null,
  "description" : "",
  "data_type" : "DECIMAL",
  "domain_type" : "NUMBER",
  "data_type_extend" : "(10,2)",
  "name_en" : "improvement_surcharge",
  "name_ch" : "Improvement surcharge",
  "not_null" : false,
  "attribute_type" : "FACT_MEASURE",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}, {
  "id" : "873264563087376397",
  "fact_logic_table_id" : "873264563070599168",
  "ordinal" : 14,
  "dimension_id" : null,
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : null,
  "description" : "",
  "data_type" : "DECIMAL",
  "domain_type" : "NUMBER",
  "data_type_extend" : "(10,2)",
  "name_en" : "total_amount",
  "name_ch" : "Total amount",
  "not_null" : false,
  "attribute_type" : "FACT_MEASURE",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : null
}
}],
"physical_table" : "CREATE_SUCCESS",
```

```

"technical_asset": "CREATE_SUCCESS",
"business_asset": "CREATE_SUCCESS",
"meta_data_link": "UPDATE_SUCCESS",
"data_quality": "UPDATE_SUCCESS",
"summary_status": "SUMMARY_SUCCESS",
"quality_id": "898163867648204801",
"alias": "",
"self_defined_fields": [ ]
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>FactLogicTableVO</b> array and the total number of fact tables are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.15.2 Querying Fact Table Details

### Function

This API is used to query the details of a fact table with a specified ID.

### URI

GET /v2/{project\_id}/design/fact-logic-tables/{id}

**Table 7-548** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

**Table 7-549** Query Parameters

Parameter	Mandatory	Type	Description
latest	No	Boolean	Whether to query the latest data

## Request Parameters

None

## Response Parameters

Status code: 200

Table 7-550 Response body parameters

Parameter	Type	Description
id	Long	Table ID
tb_name	String	Table name Maximum: <b>600</b>
tb_logic_name	String	Logical entity name Maximum: <b>200</b>
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object GUID
description	String	Maximum: <b>600</b>
dw_name	String	Data connection name
owner	String	Asset owner
create_by	String	Creator
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.
dw_id	String	Data connection ID
db_name	String	Database name
tb_id	String	Data table ID
dim_table_ids	Array of strings	IDs of the dimension tables associated with the fact table
reversed	Boolean	Whether the table is reversed Default: <b>false</b>
partition_conf	String	Partition expression
dirty_out_switch	Boolean	Whether to export dirty data Default: <b>false</b>
dirty_out_database	String	Database to which dirty data will be exported

Parameter	Type	Description
dirty_out_prefix	String	Prefix of the table with dirty data
dirty_out_suffix	String	Suffix of the table with dirty data
schema	String	Schema, which is required for DWS
distribute	String	DISTRIBUTE BY [HASH(column)] REPLICATION] Enumeration values: <ul style="list-style-type: none"><li>● <b>HASH</b></li><li>● <b>REPLICATION</b></li></ul>
distribute_column	String	DISTRIBUTE BY HASH column
table_type	String	Table type
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
tb_guid	String	GUID of the physical table corresponding to the published table
tb_logic_guid	String	GUID of the logical entity corresponding to the published table
dw_type	String	Data connection type
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
create_time	String	Creation time
update_time	String	Update time
approval_info	<a href="#">ApprovalVO</a> object	Approval information
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management



Parameter	Type	Description
dimensions	Array of <a href="#">FactTableAttributeVO</a> objects	Fact table dimensions
attributes	Array of <a href="#">FactTableAttributeVO</a> objects	Fact table attributes
mappings	Array of <a href="#">TableMappingVO</a> objects	Table mappings
measures	Array of <a href="#">FactTableAttributeVO</a> objects	Fact table measures
table_attributes	Array of <a href="#">FactTableAttributeVO</a> objects	All attributes of a fact table
physical_table	String	Table creation status Enumeration values: <ul style="list-style-type: none"><li>• <b>NO_NEED</b></li><li>• <b>CREATE_SUCCESS</b></li><li>• <b>CREATE_FAILED</b></li><li>• <b>UPDATE_SUCCESS</b></li><li>• <b>UPDATE_FAILED</b></li><li>• <b>SUMMARY_SUCCESS</b></li><li>• <b>SUMMARY_FAILED</b></li><li>• <b>RUNNING</b></li><li>• <b>OFFLINE</b></li></ul>

Parameter	Type	Description
technical_asset	String	Technical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
business_asset	String	Logical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
meta_data_link	String	Asset association status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>

Parameter	Type	Description
data_quality	String	Quality job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
summary_status	String	Overall synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
quality_id	Long	Quality ID
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-551** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-552** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-553** FactTableAttributeVO

Parameter	Type	Description
id	Long	ID
fact_logic_table_id	Long	Fact table ID
ordinal	Integer	Ordinal
dimension_id	Long	Dimension ID
role	String	Attribute role Maximum: <b>200</b>
dimension	<b>DimensionVO</b> object	Dimension
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
is_foreign_key	Boolean	Whether the attribute is a foreign key Default: <b>false</b>
description	String	Maximum: <b>600</b>
data_type	String	Data type

Parameter	Type	Description
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>• <b>NUMBER</b></li><li>• <b>STRING</b></li><li>• <b>DATETIME</b></li><li>• <b>BLOB</b></li><li>• <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>
name_en	String	Attribute name in English Maximum: <b>600</b>
name_ch	String	Attribute name in Chinese Maximum: <b>200</b>
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>



Parameter	Type	Description
attribute_type	String	<p>Attribute type, which can be <b>FACT_DIMENSION</b>, <b>FACT_ATTRIBUTE</b>, or <b>FACT_MEASURE</b>.</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <b>QualityInfoVO</b> objects	Quality information

Parameter	Type	Description
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-554** DimensionVO

Parameter	Type	Description
id	Long	ID
name_en	String	Dimension name in English Maximum: <b>200</b>
dimension_type	String	Dimension type Default: <b>COMMON</b> Enumeration values: <ul style="list-style-type: none"><li>• <b>COMMON</b></li><li>• <b>LOOKUP</b></li><li>• <b>HIERARCHIES</b></li></ul>
name_ch	String	Dimension name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
update_by	String	User who updated the dimension
code_table_id	Long	Lookup table ID
code_table	<a href="#">CodeTableVO</a> object	Lookup table
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object ID
hierarchies	Array of <a href="#">DimensionHierarchiesVO</a> objects	Hierarchies

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionMa nageVO</b> object	Business version management
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
attributes	Array of <b>DimensionAt tributeVO</b> objects	Dimension attributes
mappings	Array of <b>TableMappin gVO</b> objects	Table mappings
datasource	<b>BizDatasourc eRelationVO</b> object	Data source information
owner	String	Asset owner
table_type	String	Table type
distribute	String	DISTRIBUTE BY [HASH(column) REPLICATION] Enumeration values: <ul style="list-style-type: none"> <li>● <b>HASH</b></li> <li>● <b>REPLICATION</b></li> </ul>
distribute_col umn	String	DISTRIBUTE BY HASH column
alias	String	Alias

Parameter	Type	Description
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-555** CodeTableVO

Parameter	Type	Description
id	Long	ID
name_en	String	Table name in English Maximum: <b>200</b>
name_ch	String	Table name in Chinese Maximum: <b>200</b>
tb_version	Integer	Table version
directory_id	Long	Catalog ID
directory_path	String	Catalog tree
description	String	Description Maximum: <b>600</b>
create_by	String	Creator
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
approval_info	<a href="#">ApprovalVO</a> object	Approval information
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management
code_table_fields	Array of <a href="#">CodeTableFieldVO</a> objects	Lookup table attribute information

**Table 7-556** CodeTableFieldVO

Parameter	Type	Description
id	Long	ID
code_table_id	Long	Lookup table ID
ordinal	Integer	Ordinal
name_en	String	Field name in English Maximum: <b>600</b>
name_ch	String	Field name in Chinese Maximum: <b>200</b>
description	String	Description Maximum: <b>600</b>
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>• <b>NUMBER</b></li><li>• <b>STRING</b></li><li>• <b>DATETIME</b></li><li>• <b>BLOB</b></li><li>• <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>
is_unique_key	Boolean	Whether the attribute is unique Default: <b>false</b>
code_table_field_values	Array of <a href="#">CodeTableFieldValueVO</a> objects	Lookup table attribute value
count_field_values	Integer	Number of lookup table attribute values

**Table 7-557** CodeTableFieldValueVO

Parameter	Type	Description
id	Long	ID

Parameter	Type	Description
fd_id	Long	Lookup table attribute ID
fd_value	String	Lookup table attribute value
ordinal	Integer	Ordinal
description	String	Description Maximum: <b>600</b>

**Table 7-558** DimensionHierarchiesVO

Parameter	Type	Description
id	Long	ID
name	String	Hierarchy name Maximum: <b>600</b>
attrs	Array of <a href="#">HierarchiesAttrVO</a> objects	Hierarchy attribute
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the dimension hierarchy

**Table 7-559** HierarchiesAttrVO

Parameter	Type	Description
id	Long	ID
hierarchies_id	Long	Hierarchy ID
attr_id	Long	Attribute ID
level	Integer	Level
attr_name_en	String	Hierarchy attribute name in English
attr_name_ch	String	Hierarchy attribute name in Chinese
detail_attr_ids	Array of integers	IDs of detail attributes
detail_attr_name_ens	Array of strings	Detail attribute name in English

Parameter	Type	Description
detail_attr_name_chs	Array of strings	Detail attribute name in Chinese
attr	<a href="#">DimensionAttributeVO</a> object	Hierarchy attribute field
detail_attrs	Array of <a href="#">DimensionAttributeVO</a> objects	Detail attributes

**Table 7-560** DimensionAttributeVO

Parameter	Type	Description
id	Long	ID
dimension_id	Long	Dimension ID
code_table_field_id	Long	Lookup table attribute ID
name_en	String	Dimension attribute name in English Maximum: <b>600</b>
name_ch	String	Dimension attribute name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>• <b>NUMBER</b></li><li>• <b>STRING</b></li><li>• <b>DATETIME</b></li><li>• <b>BLOB</b></li><li>• <b>OTHER</b></li></ul>
data_type_extended	String	Data type extended field Maximum: <b>50</b>
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>

Parameter	Type	Description
is_biz_primary	Boolean	Whether the attribute is a business primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
ordinal	Integer	Ordinal
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <a href="#">QualityInfoVO</a> objects	Quality information
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>
create_time	String	Creation time
update_time	String	Update time
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-561** TableMappingVO

Parameter	Type	Description
id	Long	ID
name	String	Name
description	String	Maximum: <b>600</b>



Parameter	Type	Description
target_table_id	Long	Destination table ID
src_model_id	Long	Model ID for the source table
src_model_name	String	Source model name
view_text	String	Source view. The DWS view is used reversely.
target_table_name	String	Destination table name
details	Array of <a href="#">TableMappingDetailVO</a> objects	Details
source_tables	Array of <a href="#">MappingSourceTableVO</a> objects	Source tables
source_fields	Array of <a href="#">MappingSourceFieldVO</a> objects	Source fields
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the table mapping

**Table 7-562** TableMappingDetailVO

Parameter	Type	Description
id	Long	ID
mapping_id	String	Mapping ID
target_attr_id	Long	Destination field ID
target_attr_name	String	Target attribute name
src_table_ids	String	ID of a source table
src_table_names	Array of strings	Source table names

Parameter	Type	Description
src_table_db_names	Array of strings	Database names in the source table
src_table_model_ids	Array of integers	IDs of source table models
src_table_id_list	Array of integers	IDs of source tables
src_attr_ids	String	ID of a source table attribute
src_attr_names	Array of strings	Names of source table attributes
src_attr_id_list	Array of integers	IDs of source table attributes
remark	String	Remarks
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the table mapping details
target_attr	Object	Target attribute

**Table 7-563** MappingSourceTableVO

Parameter	Type	Description
table1_id	Long	Table ID
table2_id	Long	Table ID Default: <b>0</b>
table1_name	String	Table 1 name
table2_name	String	Table 2 name
join_type	String	Association type Default: <b>LEFT</b> Enumeration values: <ul style="list-style-type: none"> <li>● <b>LEFT</b></li> <li>● <b>RIGHT</b></li> <li>● <b>INNER</b></li> <li>● <b>FULL</b></li> </ul>

Parameter	Type	Description
join_fields	Array of <a href="#">MappingJoinFieldVO</a> objects	ON clause

**Table 7-564** MappingJoinFieldVO

Parameter	Type	Description
field1_id	Long	Attribute ID
field2_id	Long	Attribute ID
field1_name	String	Name of join field 1
field2_name	String	Name of join field 2

**Table 7-565** MappingSourceFieldVO

Parameter	Type	Description
target_field_id	Long	Target field ID. The target field is a field in the current table.
target_field_name	String	Target field name
field_ids	String	IDs of source fields. Multiple IDs are separated by commas (,).
transform_expression	String	Conversion expression
field_names	Array of strings	Names of source fields
changed	Boolean	Whether the field has changed

**Table 7-566** BizDatasourceRelationVO

Parameter	Type	Description
id	Long	ID
biz_id	Long	Business object information

Parameter	Type	Description
biz_type	String	Business object type Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
dw_type	String	Data connection type
dw_id	String	Data connection ID
dw_name	String	Data connection name
db_name	String	Database name
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.

Parameter	Type	Description
schema	String	Schema, which is required for DWS

**Table 7-567** QualityInfoVO

Parameter	Type	Description
id	Long	ID
table_id	Long	Table ID
attr_id	Long	Attribute ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
data_quality_id	Long	Quality ID
show_control	Integer	Whether to display the regular expression
data_quality_name	String	Quality name
alert_conf	String	Alarm configuration
expression	String	Regular expression in verification rules

Parameter	Type	Description
extend_info	String	Extended information
from_standard	Boolean	Whether the quality information is from data standard quality configuration Default: <b>false</b>
result_description	String	Result description
create_by	String	Creator
update_by	String	User who updated the quality information
create_time	String	Creation time
update_time	String	Update time

**Table 7-568** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400****Table 7-569** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-570** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-571** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **FactLogicTableVO** is returned.

```
{
  "id" : "1014288257548156928",
  "tb_name" : "fact_order",
  "tb_logic_name" : "Order",
  "l1_id" : "873232498044411904",
  "l2_id" : null,
  "l3_id" : null,
  "description" : "None",
  "dw_name" : "dli_link_1",
  "owner" : "test02",
  "create_by" : "abc",
  "queue_name" : "default",
  "dw_id" : "2c9080f07b03db8d017b198a4a20002f",
  "db_name" : "ctz_test",
  "tb_id" : null,
  "dim_table_ids" : null,
  "reversed" : null,
  "partition_conf" : null,
  "dirty_out_switch" : false,
  "dirty_out_database" : "",
  "dirty_out_prefix" : ""
}
```



```
"dirty_out_suffix" : "",
"schema" : "",
"distribute" : null,
"distribute_column" : null,
"table_type" : "MANAGED",
"status" : "DRAFT",
"tb_guid" : null,
"tb_logic_guid" : null,
"dw_type" : "DLI",
"l1" : "City traffic",
"l2" : null,
"l3" : null,
"create_time" : "2022-08-30T21:39:25+08:00",
"update_time" : "2022-08-30T21:39:25+08:00",
"approval_info" : null,
"new_biz" : null,
"dimensions" : [ {
  "id" : "1014288257556545536",
  "fact_logic_table_id" : "1014288257548156928",
  "ordinal" : 1,
  "dimension_id" : "873251051724242944",
  "role" : null,
  "dimension" : {
    "id" : "873251051724242944",
    "name_en" : "dim_vendor",
    "dimension_type" : "LOOKUP",
    "name_ch" : "Vendor",
    "description" : "None",
    "create_by" : "abc",
    "update_by" : null,
    "code_table_id" : "873235088123527168",
    "code_table" : null,
    "l1_id" : null,
    "l2_id" : null,
    "l3_id" : "873233599258927104",
    "hierarchies" : [ ],
    "status" : "PUBLISHED",
    "create_time" : "2021-08-06T17:07:55+08:00",
    "update_time" : "2021-08-06T17:36:03+08:00",
    "approval_info" : null,
    "new_biz" : null,
    "l1" : null,
    "l2" : null,
    "l3" : null,
    "attributes" : [ {
      "id" : "873251051732631552",
      "dimension_id" : "873251051724242944",
      "code_table_field_id" : null,
      "name_en" : "vendor_id",
      "name_ch" : "Vendor ID",
      "description" : "",
      "create_by" : "abc",
      "data_type" : "BIGINT",
      "domain_type" : "NUMBER",
      "data_type_extend" : null,
      "is_primary_key" : true,
      "is_biz_primary" : true,
      "is_partition_key" : false,
      "ordinal" : 1,
      "not_null" : true,
      "stand_row_id" : null,
      "stand_row_name" : null,
      "quality_infos" : null,
      "status" : null,
      "create_time" : "2021-08-06T17:07:55+08:00",
      "update_time" : "2021-10-14T10:54:54+08:00",
      "alias" : null,
      "self_defined_fields" : null
    }, {

```

```
"id" : "873251051732631553",
"dimension_id" : "873251051724242944",
"code_table_field_id" : null,
"name_en" : "vendor_value",
"name_ch" : "Vendor",
"description" : "",
"create_by" : "abc",
"data_type" : "STRING",
"domain_type" : "STRING",
"data_type_extend" : null,
"is_primary_key" : false,
"is_biz_primary" : false,
"is_partition_key" : false,
"ordinal" : 2,
"not_null" : false,
"stand_row_id" : null,
"stand_row_name" : null,
"quality_infos" : null,
"status" : null,
"create_time" : "2021-08-06T17:07:55+08:00",
"update_time" : "2021-10-14T10:54:54+08:00",
"alias" : null,
"self_defined_fields" : null
}],
"mappings" : null,
"datasource" : {
  "id" : "873251051745214464",
  "biz_id" : "873251051724242944",
  "biz_type" : "DIMENSION",
  "dw_type" : "DLI",
  "dw_id" : "2c9080f07b03db8d017b198a4a20002f",
  "dw_name" : null,
  "db_name" : "demo_dwr_db",
  "queue_name" : "dgc_dli_test",
  "schema" : ""
},
"owner" : "abc",
"table_type" : "MANAGED",
"distribute" : null,
"distribute_column" : null,
"alias" : "",
"self_defined_fields" : null
},
"is_primary_key" : false,
"is_partition_key" : false,
"is_foreign_key" : true,
"description" : "",
"data_type" : "BIGINT",
"domain_type" : "NUMBER",
"data_type_extend" : null,
"name_en" : "vendor_id",
"name_ch" : "Vendor ID",
"not_null" : false,
"attribute_type" : "FACT_DIMENSION",
"stand_row_id" : null,
"stand_row_name" : null,
"quality_infos" : [ ],
"alias" : "",
"self_defined_fields" : [ ]
}],
"attributes" : null,
"mappings" : [ ],
"measures" : [ {
  "id" : "1014288257556545537",
  "fact_logic_table_id" : "1014288257548156928",
  "ordinal" : 2,
  "dimension_id" : null,
  "role" : null,
  "dimension" : null,
```

```
"is_primary_key" : false,
"is_partition_key" : false,
"is_foreign_key" : null,
"description" : "",
"data_type" : "BIGINT",
"domain_type" : "NUMBER",
"data_type_extend" : "",
"name_en" : "fare",
"name_ch" : "Fare",
"not_null" : false,
"attribute_type" : "FACT_MEASURE",
"stand_row_id" : null,
"stand_row_name" : null,
"quality_infos" : [ ],
"alias" : "",
"self_defined_fields" : [ ]
}],
"table_attributes" : [ {
  "id" : "1014288257556545536",
  "fact_logic_table_id" : "1014288257548156928",
  "ordinal" : 1,
  "dimension_id" : "873251051724242944",
  "role" : null,
  "dimension" : {
    "id" : "873251051724242944",
    "name_en" : "dim_vendor",
    "dimension_type" : "LOOKUP",
    "name_ch" : "Vendor",
    "description" : "None",
    "create_by" : "abc",
    "update_by" : null,
    "code_table_id" : "873235088123527168",
    "code_table" : null,
    "l1_id" : null,
    "l2_id" : null,
    "l3_id" : "873233599258927104",
    "hierarchies" : [ ],
    "status" : "PUBLISHED",
    "create_time" : "2021-08-06T17:07:55+08:00",
    "update_time" : "2021-08-06T17:36:03+08:00",
    "approval_info" : null,
    "new_biz" : null,
    "l1" : null,
    "l2" : null,
    "l3" : null,
    "attributes" : [ {
      "id" : "873251051732631552",
      "dimension_id" : "873251051724242944",
      "code_table_field_id" : null,
      "name_en" : "vendor_id",
      "name_ch" : "Vendor ID",
      "description" : "",
      "create_by" : "abc",
      "data_type" : "BIGINT",
      "domain_type" : "NUMBER",
      "data_type_extend" : null,
      "is_primary_key" : true,
      "is_biz_primary" : true,
      "is_partition_key" : false,
      "ordinal" : 1,
      "not_null" : true,
      "stand_row_id" : null,
      "stand_row_name" : null,
      "quality_infos" : null,
      "status" : null,
      "create_time" : "2021-08-06T17:07:55+08:00",
      "update_time" : "2021-10-14T10:54:54+08:00",
      "alias" : null,
      "self_defined_fields" : null
    }
  ]
}
```

```
}, {
  "id" : "873251051732631553",
  "dimension_id" : "873251051724242944",
  "code_table_field_id" : null,
  "name_en" : "vendor_value",
  "name_ch" : "Vendor",
  "description" : "",
  "create_by" : "abc",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : null,
  "is_primary_key" : false,
  "is_biz_primary" : false,
  "is_partition_key" : false,
  "ordinal" : 2,
  "not_null" : false,
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "status" : null,
  "create_time" : "2021-08-06T17:07:55+08:00",
  "update_time" : "2021-10-14T10:54:54+08:00",
  "alias" : null,
  "self_defined_fields" : null
}],
"mappings" : null,
"datasource" : {
  "id" : "873251051745214464",
  "biz_id" : "873251051724242944",
  "biz_type" : "DIMENSION",
  "dw_type" : "DLI",
  "dw_id" : "2c9080f07b03db8d017b198a4a20002f",
  "dw_name" : null,
  "db_name" : "demo_dwr_db",
  "queue_name" : "dgc_dli_test",
  "schema" : ""
},
"owner" : "abc",
"table_type" : "MANAGED",
"distribute" : null,
"distribute_column" : null,
"alias" : "",
"self_defined_fields" : null
},
"is_primary_key" : false,
"is_partition_key" : false,
"is_foreign_key" : true,
"description" : "",
"data_type" : "BIGINT",
"domain_type" : "NUMBER",
"data_type_extend" : null,
"name_en" : "vendor_id",
"name_ch" : "Vendor ID",
"not_null" : false,
"attribute_type" : "FACT_DIMENSION",
"stand_row_id" : null,
"stand_row_name" : null,
"quality_infos" : [ ],
"alias" : "",
"self_defined_fields" : [ ]
}, {
  "id" : "1014288257556545537",
  "fact_logic_table_id" : "1014288257548156928",
  "ordinal" : 2,
  "dimension_id" : null,
  "role" : null,
  "dimension" : null,
  "is_primary_key" : false,
  "is_partition_key" : false,
```

```

    "is_foreign_key" : null,
    "description" : "",
    "data_type" : "BIGINT",
    "domain_type" : "NUMBER",
    "data_type_extend" : "",
    "name_en" : "fare",
    "name_ch" : "Billing",
    "not_null" : false,
    "attribute_type" : "FACT_MEASURE",
    "stand_row_id" : null,
    "stand_row_name" : null,
    "quality_infos" : [ ],
    "alias" : "",
    "self_defined_fields" : [ ]
  } ],
  "physical_table" : "NO_NEED",
  "technical_asset" : "NO_NEED",
  "business_asset" : "NO_NEED",
  "meta_data_link" : "NO_NEED",
  "data_quality" : "NO_NEED",
  "summary_status" : "NO_NEED",
  "quality_id" : null,
  "alias" : "",
  "self_defined_fields" : [ {
    "fd_name_ch" : "Data steward",
    "fd_name_en" : "sjgj",
    "not_null" : false,
    "fd_value" : ""
  }, {
    "fd_name_ch" : "Responsible department",
    "fd_name_en" : "zrbm",
    "not_null" : false,
    "fd_value" : ""
  } ]
} ]
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>FactLogicTableVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.15.3 Querying Fact Table Reverse Tasks

### Function

This API is used to query fact table reverse tasks.

### URI

GET /v2/{project\_id}/design/fact-logic-tables/database

**Table 7-572** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 7-573** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400**

**Table 7-574** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 401**

**Table 7-575** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 403**

**Table 7-576** Response body parameters

Parameter	Type	Description
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

Success

```
{
  "data": {
    "value": {
      "id": null,
      "tenant_id": "0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-f7eee36e67e541a59679f9b1b7f4eab0",
      "group_id": "1014914259626397696",
      "biz_name": null,
      "biz_id": null,
      "operation_status": "SUCCESS",
      "operation_type": "FACT_LOGIC_TABLE_REVERSE_DB",
      "biz_info": null,
      "create_by": "abc",
      "remark": null,
      "total": 1,
      "success": 1,
      "failed": 0,
      "rate": "1.00",
      "logs": null,
      "groups": [ {
        "id": "1014914260641419264",
        "tenant_id": "0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-f7eee36e67e541a59679f9b1b7f4eab0",
        "group_id": "1014914259626397696",
        "biz_name": "fact_stroke_order",
        "biz_id": null,
        "operation_status": "SUCCESS",
        "operation_type": "FACT_LOGIC_TABLE_REVERSE_DB",
        "biz_info": "",
        "create_by": "abc",
        "remark": "SKIP | Reverse data: false, Update Exist: false",
        "total": 0,
        "success": 0,
        "failed": 0,
        "rate": null,
        "logs": null,
        "groups": null
      } ]
    }
  }
}
```

## Status Codes

Status Code	Description
200	Success
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.16 Summary Table APIs

### 7.16.1 Querying Summary Tables

#### Function

This API is used to query summary tables based on the name, creator, approver, status, and modification time and display the results on different pages.

#### URI

GET /v2/{project\_id}/design/aggregation-logic-tables

**Table 7-577** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-578** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
approver	No	String	Approver
owner	No	String	Query by owner
status	No	String	Business status Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>
sync_status	No	String	Enumeration values: <ul style="list-style-type: none"><li>• <b>RUNNING</b></li><li>• <b>NO_NEED</b></li><li>• <b>SUMMARY_SUCCESS</b></li><li>• <b>SUMMARY_FAILED</b></li></ul>



Parameter	Mandatory	Type	Description
sync_key	No	Array	Enumeration values: <ul style="list-style-type: none"><li>• <b>BUSINESS_ASSET</b></li><li>• <b>DATA_QUALITY</b></li><li>• <b>TECHNICAL_ASSET</b></li><li>• <b>META_DATA_LINK</b></li><li>• <b>PHYSICAL_TABLE</b></li><li>• <b>DLF_TASK</b></li><li>• <b>MATERIALIZATION</b></li></ul>
l3_id	No	Long	ID of business object l3
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>
biz_catalog_id	No	String	Business catalog ID
auto_generate	No	Boolean	Whether the table is automatically generated

## Request Parameters

None

## Response Parameters

Status code: **200**

**Table 7-579** Response body parameters

Parameter	Type	Description
id	Long	ID
tb_name	String	Table name Maximum: <b>600</b>
tb_logic_name	String	Logical entity name Maximum: <b>200</b>
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object GUID
description	String	Maximum: <b>600</b>
owner	String	Asset owner
create_by	String	Creator
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.
dw_id	String	Data connection ID
db_name	String	Database name
tb_id	String	Data table ID
schema	String	Schema, which is required for DWS
dw_name	String	Data connection name
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
tb_guid	String	GUID of the physical table corresponding to the published table
tb_logic_guid	String	GUID of the logical entity corresponding to the published table
dw_type	String	Data connection type
l1	String	Chinese name of the subject area group

Parameter	Type	Description
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
create_time	String	Creation time
update_time	String	Update time
approval_info	<a href="#">ApprovalVO</a> object	Approval information
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management
dimension_group	String	Dimension group Default: <b>0</b>
group_name	String	Dimension group name
group_code	String	Dimension group code
time_period	<a href="#">AggregationLogicTableAttributeVO</a> object	Time period of the summary table
table_attributes	Array of <a href="#">AggregationLogicTableAttributeVO</a> objects	Summary table attributes. The type is determined by <b>attribute_type</b> .
physical_table	String	Table creation status Enumeration values: <ul style="list-style-type: none"><li>• <b>NO_NEED</b></li><li>• <b>CREATE_SUCCESS</b></li><li>• <b>CREATE_FAILED</b></li><li>• <b>UPDATE_SUCCESS</b></li><li>• <b>UPDATE_FAILED</b></li><li>• <b>SUMMARY_SUCCESS</b></li><li>• <b>SUMMARY_FAILED</b></li><li>• <b>RUNNING</b></li><li>• <b>OFFLINE</b></li></ul>

Parameter	Type	Description
technical_asset	String	Technical asset synchronization status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>
business_asset	String	Logical asset synchronization status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>
meta_data_link	String	Asset association status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>

Parameter	Type	Description
data_quality	String	Quality job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
dlf_task	String	Data development job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
publish_to_dlm	String	DLM API generation status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>

Parameter	Type	Description
summary_status	String	Overall synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
distribute	String	DISTRIBUTE BY [HASH(column) REPLICATION] Enumeration values: <ul style="list-style-type: none"> <li>• HASH</li> <li>• REPLICATION</li> </ul>
distribute_column	String	DISTRIBUTE BY HASH column
table_type	String	Table type
dlf_task_id	String	Data development job ID
quality_id	Long	Quality ID
reversed	Boolean	Whether the table model is reversed Default: <b>false</b>
table_version	Integer	Table version. If the value is <b>2</b> , the summary table is generated by data summarization.
partition_conf	String	Partition expression
dirty_out_switch	Boolean	Whether to export dirty data Default: <b>false</b>
dirty_out_database	String	Database to which dirty data will be exported
dirty_out_prefix	String	Prefix of an abnormal table
dirty_out_suffix	String	Suffix of an abnormal table
alias	String	Alias

Parameter	Type	Description
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields
api_id	String	API ID

**Table 7-580** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version



Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-581** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-582** AggregationLogicTableAttributeVO

Parameter	Type	Description
id	Long	ID
aggregation_logic_table_id	Long	Summary table ID
ordinal	Integer	Ordinal
name_en	String	Attribute name in English Maximum: <b>600</b>
name_ch	String	Attribute name in Chinese Maximum: <b>200</b>

Parameter	Type	Description
attribute_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>
description	String	Maximum: <b>1000</b>

Parameter	Type	Description
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>• <b>NUMBER</b></li><li>• <b>STRING</b></li><li>• <b>DATETIME</b></li><li>• <b>BLOB</b></li><li>• <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>
ref_id	String	Association ID
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <a href="#">QualityInfoVO</a> objects	Quality information
alias	String	Alias

**Table 7-583** QualityInfoVO

Parameter	Type	Description
id	Long	ID
table_id	Long	Table ID
attr_id	Long	Attribute ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
data_quality_id	Long	Quality ID
show_control	Integer	Whether to display the regular expression
data_quality_name	String	Quality name
alert_conf	String	Alarm configuration
expression	String	Regular expression in verification rules

Parameter	Type	Description
extend_info	String	Extended information
from_standard	Boolean	Whether the quality information is from data standard quality configuration Default: <b>false</b>
result_description	String	Result description
create_by	String	Creator
update_by	String	User who updated the quality information
create_time	String	Creation time
update_time	String	Update time

**Table 7-584** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400****Table 7-585** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-586** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-587** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. The **AggregationLogicTableVO** array and the total number of summary tables are returned.

```
{
  "id": "874242075850342400",
  "tb_name": "dws_rate_code",
  "tb_logic_name": "Rate code summary",
  "l1_id": "873232498044411904",
  "l2_id": "873232716601204736",
  "l3_id": "873233519286059008",
  "description": "None",
  "owner": "abc",
  "create_by": "abc",
  "queue_name": "dgc_dli_test",
  "dw_id": "2c9080f07b03db8d017b198a4a20002f",
  "db_name": "demo_dm_db",
  "tb_id": "NativeTable-2c9080f07b03db8d017b198a4a20002f-demo_dm_db-dws_rate_code",
  "schema": "",
  "dw_name": null,
  "status": "PUBLISHED",
  "tb_guid": "a268644b-31b6-42e5-84ec-e35c31b541a5",
  "tb_logic_guid": "8948f715-3567-4684-9950-e3ed01e77121",
  "dw_type": "DLI",
}
```



```
"l1" : "City traffic",
"l2" : "Trip record",
"l3" : "Record statistics",
"create_time" : "2021-08-09T10:45:54+08:00",
"update_time" : "2021-09-26T15:36:53+08:00",
"approval_info" : {
  "id" : "874242076399796224",
  "tenant_id" : null,
  "name_ch" : null,
  "name_en" : null,
  "biz_id" : "874242075850342400",
  "biz_type" : null,
  "biz_info" : null,
  "biz_info_obj" : null,
  "biz_version" : 0,
  "biz_status" : "PUBLISHED",
  "approval_status" : "APPROVED",
  "approval_type" : null,
  "submit_time" : "2021-08-09T10:45:54+08:00",
  "create_by" : null,
  "l1" : null,
  "l2" : null,
  "l3" : null,
  "approval_time" : "2021-08-09T10:45:53+08:00",
  "approver" : "abc",
  "email" : null,
  "msg" : "Fast Approval OK.",
  "directory_path" : null
},
"new_biz" : null,
"dimension_group" : "873252544997130240",
"group_name" : "Rate code",
"group_code" : null,
"time_period" : {
  "id" : "874242075984560130",
  "aggregation_logic_table_id" : "874242075850342400",
  "ordinal" : 1,
  "name_en" : "dtime",
  "name_ch" : "Date",
  "attribute_type" : "SUMMARY_TIME",
  "is_primary_key" : false,
  "is_partition_key" : true,
  "not_null" : false,
  "description" : null,
  "data_type" : "TIMESTAMP",
  "domain_type" : "DATETIME",
  "data_type_extend" : null,
  "ref_id" : null,
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : null
},
"table_attributes" : [ {
  "id" : "874242075984560130",
  "aggregation_logic_table_id" : "874242075850342400",
  "ordinal" : 1,
  "name_en" : "dtime",
  "name_ch" : "Date",
  "attribute_type" : "SUMMARY_TIME",
  "is_primary_key" : false,
  "is_partition_key" : true,
  "not_null" : false,
  "description" : null,
  "data_type" : "TIMESTAMP",
  "domain_type" : "DATETIME",
  "data_type_extend" : null,
  "ref_id" : null,
  "stand_row_id" : null,
```

```
"stand_row_name" : null,
"quality_infos" : null,
"alias" : null
}, {
  "id" : "874242075984560131",
  "aggregation_logic_table_id" : "874242075850342400",
  "ordinal" : 2,
  "name_en" : "sum_total_amount",
  "name_ch" : "Total amount (rate code)",
  "attribute_type" : "DERIVATIVE_INDEX",
  "is_primary_key" : false,
  "is_partition_key" : false,
  "not_null" : false,
  "description" : "",
  "data_type" : "DOUBLE",
  "domain_type" : "NUMBER",
  "data_type_extend" : null,
  "ref_id" : "873265784540004352",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : null
}, {
  "id" : "874242075984560132",
  "aggregation_logic_table_id" : "874242075850342400",
  "ordinal" : 3,
  "name_en" : "dim_rate_code_rate_code_id",
  "name_ch" : "Rate code_ID",
  "attribute_type" : "SUMMARY_DIMENSION_ATTRIBUTE",
  "is_primary_key" : false,
  "is_partition_key" : false,
  "not_null" : true,
  "description" : "",
  "data_type" : "BIGINT",
  "domain_type" : "NUMBER",
  "data_type_extend" : null,
  "ref_id" : "873252544997130240.873258130849636352",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : null
}, {
  "id" : "874242075984560133",
  "aggregation_logic_table_id" : "874242075850342400",
  "ordinal" : 4,
  "name_en" : "dim_rate_code_rate_code_value",
  "name_ch" : "Rate code_description",
  "attribute_type" : "SUMMARY_DIMENSION_ATTRIBUTE",
  "is_primary_key" : false,
  "is_partition_key" : false,
  "not_null" : false,
  "description" : "",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : null,
  "ref_id" : "873252544997130240.873258130849636353",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : null
} ],
"physical_table" : "CREATE_SUCCESS",
"technical_asset" : "UPDATE_SUCCESS",
"business_asset" : "UPDATE_SUCCESS",
"meta_data_link" : "UPDATE_SUCCESS",
"data_quality" : "UPDATE_SUCCESS",
"dlf_task" : "CREATE_SUCCESS",
"publish_to_dlm" : "NO_NEED",
"summary_status" : "SUMMARY_SUCCESS",
```

```

"distribute" : null,
"distribute_column" : null,
"table_type" : "MANAGED",
"dlf_task_id" : "demo_dm_db_dws_rate_code_874242075850342400",
"quality_id" : "874242188178075649",
"reversed" : null,
"table_version" : 0,
"partition_conf" : null,
"dirty_out_switch" : false,
"dirty_out_database" : "",
"dirty_out_prefix" : "",
"dirty_out_suffix" : "",
"alias" : "",
"self_defined_fields" : [ ],
"api_id" : null
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>AggregationLogicTableVO</b> array and the total number of summary tables are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.16.2 Querying Summary Table Details

### Function

This API is used to query the details of a summary table based on the ID.

### URI

GET /v2/{project\_id}/design/aggregation-logic-tables/{id}

**Table 7-588** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

**Table 7-589** Query Parameters

Parameter	Mandatory	Type	Description
latest	No	Boolean	Whether to query the latest data

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-590** Response body parameters

Parameter	Type	Description
id	Long	ID
tb_name	String	Table name Maximum: <b>600</b>
tb_logic_name	String	Logical entity name Maximum: <b>200</b>
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object GUID
description	String	Maximum: <b>600</b>
owner	String	Asset owner
create_by	String	Creator
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.
dw_id	String	Data connection ID
db_name	String	Database name
tb_id	String	Data table ID
schema	String	Schema, which is required for DWS
dw_name	String	Data connection name

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
tb_guid	String	GUID of the physical table corresponding to the published table
tb_logic_guid	String	GUID of the logical entity corresponding to the published table
dw_type	String	Data connection type
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
create_time	String	Creation time
update_time	String	Update time
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionManagementVO</b> object	Business version management
dimension_group	String	Dimension group Default: <b>0</b>
group_name	String	Dimension group name
group_code	String	Dimension group code
time_period	<b>AggregationLogicTableAttributeVO</b> object	Time period of the summary table
table_attributes	Array of <b>AggregationLogicTableAttributeVO</b> objects	Summary table attributes. The type is determined by <b>attribute_type</b> .

Parameter	Type	Description
physical_table	String	Table creation status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
technical_asset	String	Technical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
business_asset	String	Logical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>

Parameter	Type	Description
meta_data_link	String	Asset association status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
data_quality	String	Quality job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
dlf_task	String	Data development job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>

Parameter	Type	Description
publish_to_dlm	String	DLM API generation status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>
summary_status	String	Overall synchronization status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>
distribute	String	DISTRIBUTE BY [HASH(column) REPLICATION] Enumeration values: <ul style="list-style-type: none"><li>• HASH</li><li>• REPLICATION</li></ul>
distribute_column	String	DISTRIBUTE BY HASH column
table_type	String	Table type
dlf_task_id	String	Data development job ID
quality_id	Long	Quality ID
reversed	Boolean	Whether the table model is reversed Default: <b>false</b>
table_version	Integer	Table version. If the value is <b>2</b> , the summary table is generated by data summarization.
partition_conf	String	Partition expression



Parameter	Type	Description
dirty_out_switch	Boolean	Whether to export dirty data Default: <b>false</b>
dirty_out_database	String	Database to which dirty data will be exported
dirty_out_prefix	String	Prefix of an abnormal table
dirty_out_suffix	String	Suffix of an abnormal table
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields
api_id	String	API ID

**Table 7-591** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-592** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-593** AggregationLogicTableAttributeVO

Parameter	Type	Description
id	Long	ID
aggregation_logic_table_id	Long	Summary table ID
ordinal	Integer	Ordinal
name_en	String	Attribute name in English Maximum: <b>600</b>
name_ch	String	Attribute name in Chinese Maximum: <b>200</b>

Parameter	Type	Description
attribute_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>
description	String	Maximum: <b>1000</b>

Parameter	Type	Description
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>• <b>NUMBER</b></li><li>• <b>STRING</b></li><li>• <b>DATETIME</b></li><li>• <b>BLOB</b></li><li>• <b>OTHER</b></li></ul>
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>
ref_id	String	Association ID
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <a href="#">QualityInfoVO</a> objects	Quality information
alias	String	Alias

**Table 7-594** QualityInfoVO

Parameter	Type	Description
id	Long	ID
table_id	Long	Table ID
attr_id	Long	Attribute ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
data_quality_id	Long	Quality ID
show_control	Integer	Whether to display the regular expression
data_quality_name	String	Quality name
alert_conf	String	Alarm configuration
expression	String	Regular expression in verification rules



Parameter	Type	Description
extend_info	String	Extended information
from_standard	Boolean	Whether the quality information is from data standard quality configuration Default: <b>false</b>
result_description	String	Result description
create_by	String	Creator
update_by	String	User who updated the quality information
create_time	String	Creation time
update_time	String	Update time

**Table 7-595** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400****Table 7-596** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-597** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-598** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **AggregationLogicTableVO** is returned.

```
{
  "id": "874242075850342400",
  "tb_name": "dws_rate_code",
  "tb_logic_name": "Rate code summary",
  "l1_id": "873232498044411904",
  "l2_id": "873232716601204736",
  "l3_id": "873233519286059008",
  "description": "None",
  "owner": "abc",
  "create_by": "abc",
  "queue_name": "dgc_dli_test",
  "dw_id": "2c9080f07b03db8d017b198a4a20002f",
  "db_name": "demo_dm_db",
  "tb_id": "NativeTable-2c9080f07b03db8d017b198a4a20002f-demo_dm_db-dws_rate_code",
  "schema": "",
  "dw_name": null,
  "status": "PUBLISHED",
  "tb_guid": "a268644b-31b6-42e5-84ec-e35c31b541a5",
  "tb_logic_guid": "8948f715-3567-4684-9950-e3ed01e77121",
  "dw_type": "DLI",
  "l1": "City traffic",
}
```

```
"l2" : "Trip record",
"l3" : "Record statistics",
"create_time" : "2021-08-09T10:45:54+08:00",
"update_time" : "2021-09-26T15:36:53+08:00",
"approval_info" : {
  "id" : "874242076399796224",
  "tenant_id" : null,
  "name_ch" : null,
  "name_en" : null,
  "biz_id" : "874242075850342400",
  "biz_type" : null,
  "biz_info" : null,
  "biz_info_obj" : null,
  "biz_version" : 0,
  "biz_status" : "PUBLISHED",
  "approval_status" : "APPROVED",
  "approval_type" : null,
  "submit_time" : "2021-08-09T10:45:54+08:00",
  "create_by" : null,
  "l1" : null,
  "l2" : null,
  "l3" : null,
  "approval_time" : "2021-08-09T10:45:53+08:00",
  "approver" : "abc",
  "email" : null,
  "msg" : "Fast Approval OK.",
  "directory_path" : null
},
"new_biz" : null,
"dimension_group" : "873252544997130240",
"group_name" : "Rate code",
"group_code" : null,
"time_period" : {
  "id" : "874242075984560130",
  "aggregation_logic_table_id" : "874242075850342400",
  "ordinal" : 1,
  "name_en" : "dtime",
  "name_ch" : "Date",
  "attribute_type" : "SUMMARY_TIME",
  "is_primary_key" : false,
  "is_partition_key" : true,
  "not_null" : false,
  "description" : null,
  "data_type" : "TIMESTAMP",
  "domain_type" : "DATETIME",
  "data_type_extend" : null,
  "ref_id" : null,
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : null
},
"table_attributes" : [ {
  "id" : "874242075984560130",
  "aggregation_logic_table_id" : "874242075850342400",
  "ordinal" : 1,
  "name_en" : "dtime",
  "name_ch" : "Date",
  "attribute_type" : "SUMMARY_TIME",
  "is_primary_key" : false,
  "is_partition_key" : true,
  "not_null" : false,
  "description" : null,
  "data_type" : "TIMESTAMP",
  "domain_type" : "DATETIME",
  "data_type_extend" : null,
  "ref_id" : null,
  "stand_row_id" : null,
  "stand_row_name" : null,
```

```
"quality_infos" : null,
"alias" : null
}, {
  "id" : "874242075984560131",
  "aggregation_logic_table_id" : "874242075850342400",
  "ordinal" : 2,
  "name_en" : "sum_total_amount",
  "name_ch" : "Total amount (rate code)",
  "attribute_type" : "DERIVATIVE_INDEX",
  "is_primary_key" : false,
  "is_partition_key" : false,
  "not_null" : false,
  "description" : "",
  "data_type" : "DOUBLE",
  "domain_type" : "NUMBER",
  "data_type_extend" : null,
  "ref_id" : "873265784540004352",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : null
}, {
  "id" : "874242075984560132",
  "aggregation_logic_table_id" : "874242075850342400",
  "ordinal" : 3,
  "name_en" : "dim_rate_code_rate_code_id",
  "name_ch" : "Rate code_ID",
  "attribute_type" : "SUMMARY_DIMENSION_ATTRIBUTE",
  "is_primary_key" : false,
  "is_partition_key" : false,
  "not_null" : true,
  "description" : "",
  "data_type" : "BIGINT",
  "domain_type" : "NUMBER",
  "data_type_extend" : null,
  "ref_id" : "873252544997130240.873258130849636352",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : null
}, {
  "id" : "874242075984560133",
  "aggregation_logic_table_id" : "874242075850342400",
  "ordinal" : 4,
  "name_en" : "dim_rate_code_rate_code_value",
  "name_ch" : "Rate code_description",
  "attribute_type" : "SUMMARY_DIMENSION_ATTRIBUTE",
  "is_primary_key" : false,
  "is_partition_key" : false,
  "not_null" : false,
  "description" : "",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : null,
  "ref_id" : "873252544997130240.873258130849636353",
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : null
} ],
"physical_table" : "CREATE_SUCCESS",
"technical_asset" : "UPDATE_SUCCESS",
"business_asset" : "UPDATE_SUCCESS",
"meta_data_link" : "UPDATE_SUCCESS",
"data_quality" : "UPDATE_SUCCESS",
"dif_task" : "CREATE_SUCCESS",
"publish_to_dlm" : "NO_NEED",
"summary_status" : "SUMMARY_SUCCESS",
"distribute" : null,
```

```

"distribute_column" : null,
"table_type" : "MANAGED",
"dlf_task_id" : "demo_dm_db_dws_rate_code_874242075850342400",
"quality_id" : "874242188178075649",
"reversed" : null,
"table_version" : 0,
"partition_conf" : null,
"dirty_out_switch" : false,
"dirty_out_database" : "",
"dirty_out_prefix" : "",
"dirty_out_suffix" : "",
"alias" : "",
"self_defined_fields" : [ ],
"api_id" : null
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>AggregationLogicTableVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.17 Business Metric APIs

### 7.17.1 Querying Business Metrics

#### Function

This API is used to query business metrics based on the name, creator, and modification time.

#### URI

GET /v2/{project\_id}/design/biz-metrics

**Table 7-599** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-600** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
owner	No	String	Query by owner
status	No	String	Business status Enumeration values: <ul style="list-style-type: none"><li>• <b>DRAFT</b></li><li>• <b>PUBLISH_DEVELOPING</b></li><li>• <b>PUBLISHED</b></li><li>• <b>OFFLINE_DEVELOPING</b></li><li>• <b>OFFLINE</b></li><li>• <b>REJECT</b></li></ul>
sync_status	No	String	Enumeration values: <ul style="list-style-type: none"><li>• <b>RUNNING</b></li><li>• <b>NO_NEED</b></li><li>• <b>SUMMARY_SUCCESS</b></li><li>• <b>SUMMARY_FAILED</b></li></ul>
sync_key	No	Array	Enumeration values: <ul style="list-style-type: none"><li>• <b>BUSINESS_ASSET</b></li><li>• <b>DATA_QUALITY</b></li><li>• <b>TECHNICAL_ASSET</b></li><li>• <b>META_DATA_LINK</b></li><li>• <b>PHYSICAL_TABLE</b></li><li>• <b>DLF_TASK</b></li><li>• <b>MATERIALIZATION</b></li></ul>
biz_catalog_id	No	String	Business catalog ID
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-601** Response body parameters

Parameter	Type	Description
id	Long	ID
name	String	Metric name. The value can contain letters, digits, underscores (_), hyphens (-), and parentheses (). Maximum: <b>500</b>
code	String	Metric code
name_alias	String	Metric name. The value can contain letters, digits, underscores (_), hyphens (-), and parentheses (). Maximum: <b>500</b>

Parameter	Type	Description
biz_type	String	<p>Business types</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
status	String	<p>Business statuses</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>



Parameter	Type	Description
biz_catalog_id	Long	Business catalog ID
biz_catalog_path	String	Business catalog path
create_by	String	Creator
update_by	String	User who updated the business metric
data_origin	String	Data source Maximum: <b>1000</b>
unit	String	Unit Maximum: <b>50</b>
time_filters	String	Statistical period Maximum: <b>500</b>
dimensions	String	Statistical dimensions Maximum: <b>1000</b>
general_filters	String	Statistical standards and modifiers (general filters)
interval_type	String	Update frequency Default: <b>DAY</b> Enumeration values: <ul style="list-style-type: none"> <li>• <b>MINUTE</b></li> <li>• <b>HOUR</b></li> <li>• <b>DAY</b></li> <li>• <b>WEEK</b></li> <li>• <b>MONTH</b></li> <li>• <b>YEAR</b></li> <li>• <b>REAL_TIME</b></li> <li>• <b>HALF_HOUR</b></li> <li>• <b>QUART</b></li> <li>• <b>DOUBLE_WEEK</b></li> <li>• <b>HALF_YEAR</b></li> <li>• <b>HALF_DAY</b></li> </ul>
apply_scenario	String	Application scenario Maximum: <b>255</b>
technical_metric	Long	Technical metric associated with the business metric
technical_metric_name	String	Name of the technical metric associated with the business metric

Parameter	Type	Description
technical_metric_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
measure	String	Measurement object Maximum: <b>255</b>
owner	String	Owner who is responsible for explaining the metric Maximum: <b>600</b>

Parameter	Type	Description
owner_department	String	Metric management department. The value can contain letters, digits, underscores (_), hyphens (-), parentheses (), and spaces. Maximum: <b>600</b>
destination	String	Purpose
guid	String	GUID after asset synchronization
definition	String	Metric definition
expression	String	Calculation formula
remark	String	Remarks
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionManagementVO</b> object	Business version management
create_time	String	Creation time
update_time	String	Update time
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
biz_metric	String	Business metric synchronization status Enumeration values: <ul style="list-style-type: none"><li>• <b>NO_NEED</b></li><li>• <b>CREATE_SUCCESS</b></li><li>• <b>CREATE_FAILED</b></li><li>• <b>UPDATE_SUCCESS</b></li><li>• <b>UPDATE_FAILED</b></li><li>• <b>SUMMARY_SUCCESS</b></li><li>• <b>SUMMARY_FAILED</b></li><li>• <b>RUNNING</b></li><li>• <b>OFFLINE</b></li></ul>

Parameter	Type	Description
summary_status	String	Synchronization statistics status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>

**Table 7-602** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-603** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Status code: 400**

**Table 7-604** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-605** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**



**Table 7-606** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

### Status code: 200

The operation succeeds. The **BizMetricVO** array and the total number of business metrics are returned.

```
{
  "id": "902866491765080064",
  "name": "Total amount",
  "code": "ZB000001",
  "name_alias": "",
  "biz_type": null,
  "status": "PUBLISHED",
  "biz_catalog_id": "887366192090767360",
  "biz_catalog_path": null,
  "create_by": "abc",
  "update_by": "abc",
  "data_origin": "",
  "unit": "",
  "time_filters": "Day",
  "dimensions": "test",
  "general_filters": "",
  "interval_type": "REAL_TIME",
  "apply_scenario": "",
  "technical_metric": "873265992019640320",
  "technical_metric_name": "Total amount 1 (vendor)",
  "technical_metric_type": "DERIVATIVE_INDEX",
  "measure": "",
  "owner": "abc",
  "owner_department": "Data management department",
  "destination": "Taxi company revenue statistics",
  "guid": "2c993087-2aff-43f7-9252-178ce52e7e7c",
  "definition": "Taxi company revenue",
  "expression": "sum (total amount)",
  "remark": "",
  "approval_info": {
    "id": "933768706708971520",
    "tenant_id": null,
    "name_ch": null,
    "name_en": null,
    "biz_id": "902866491765080064",
    "biz_type": null,
    "biz_info": null,
    "biz_info_obj": null,
    "biz_version": 0,
    "biz_status": "PUBLISHED",
  }
}
```

```

"approval_status" : "APPROVED",
"approval_type" : null,
"submit_time" : "2022-01-20T17:03:28+08:00",
"create_by" : null,
"l1" : null,
"l2" : null,
"l3" : null,
"approval_time" : "2022-01-20T17:03:28+08:00",
"approver" : "abc",
"email" : null,
"msg" : "Fast Approval OK.",
"directory_path" : null
},
"new_biz" : null,
"create_time" : "2021-10-27T10:29:06+08:00",
"update_time" : "2022-01-20T17:03:28+08:00",
"l1" : "L1",
"l2" : null,
"l3" : null,
"biz_metric" : "UPDATE_SUCCESS",
"summary_status" : "SUMMARY_SUCCESS"
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>BizMetricVO</b> array and the total number of business metrics are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.17.2 Querying Metric Details

### Function

This API is used to query the details of a metric based on the ID.

### URI

GET /v2/{project\_id}/design/biz-metrics/{id}

**Table 7-607** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

**Table 7-608** Query Parameters

Parameter	Mandatory	Type	Description
latest	No	Boolean	Whether to query the latest data

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-609** Response body parameters

Parameter	Type	Description
id	Long	ID
name	String	Metric name. The value can contain letters, digits, underscores (_), hyphens (-), and parentheses (). Maximum: <b>500</b>
code	String	Metric code
name_alias	String	Metric name. The value can contain letters, digits, underscores (_), hyphens (-), and parentheses (). Maximum: <b>500</b>

Parameter	Type	Description
biz_type	String	<p>Business types</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
status	String	<p>Business statuses</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> <li>• <b>DRAFT</b></li> <li>• <b>PUBLISH_DEVELOPING</b></li> <li>• <b>PUBLISHED</b></li> <li>• <b>OFFLINE_DEVELOPING</b></li> <li>• <b>OFFLINE</b></li> <li>• <b>REJECT</b></li> </ul>

Parameter	Type	Description
biz_catalog_id	Long	Business catalog ID
biz_catalog_path	String	Business catalog path
create_by	String	Creator
update_by	String	User who updated the business metric
data_origin	String	Data source Maximum: <b>1000</b>
unit	String	Unit Maximum: <b>50</b>
time_filters	String	Statistical period Maximum: <b>500</b>
dimensions	String	Statistical dimensions Maximum: <b>1000</b>
general_filters	String	Statistical standards and modifiers (general filters)
interval_type	String	Update frequency Default: <b>DAY</b> Enumeration values: <ul style="list-style-type: none"> <li>● <b>MINUTE</b></li> <li>● <b>HOUR</b></li> <li>● <b>DAY</b></li> <li>● <b>WEEK</b></li> <li>● <b>MONTH</b></li> <li>● <b>YEAR</b></li> <li>● <b>REAL_TIME</b></li> <li>● <b>HALF_HOUR</b></li> <li>● <b>QUART</b></li> <li>● <b>DOUBLE_WEEK</b></li> <li>● <b>HALF_YEAR</b></li> <li>● <b>HALF_DAY</b></li> </ul>
apply_scenario	String	Application scenario Maximum: <b>255</b>
technical_metric	Long	Technical metric associated with the business metric
technical_metric_name	String	Name of the technical metric associated with the business metric

Parameter	Type	Description
technical_metric_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
measure	String	Measurement object Maximum: <b>255</b>
owner	String	Owner who is responsible for explaining the metric Maximum: <b>600</b>

Parameter	Type	Description
owner_department	String	Metric management department. The value can contain letters, digits, underscores (_), hyphens (-), parentheses (), and spaces. Maximum: <b>600</b>
destination	String	Purpose
guid	String	GUID after asset synchronization
definition	String	Metric definition
expression	String	Calculation formula
remark	String	Remarks
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionManagementVO</b> object	Business version management
create_time	String	Creation time
update_time	String	Update time
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
biz_metric	String	Business metric synchronization status Enumeration values: <ul style="list-style-type: none"><li>• <b>NO_NEED</b></li><li>• <b>CREATE_SUCCESS</b></li><li>• <b>CREATE_FAILED</b></li><li>• <b>UPDATE_SUCCESS</b></li><li>• <b>UPDATE_FAILED</b></li><li>• <b>SUMMARY_SUCCESS</b></li><li>• <b>SUMMARY_FAILED</b></li><li>• <b>RUNNING</b></li><li>• <b>OFFLINE</b></li></ul>

Parameter	Type	Description
summary_status	String	Synchronization statistics status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>

**Table 7-610** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID



Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-611** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Status code: 400**

**Table 7-612** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-613** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-614** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **BizMetricVO** is returned.

```
{
  "id": "902866491765080064",
  "name": "Total amount",
  "code": "ZB000001",
  "name_alias": "",
  "biz_type": null,
  "status": "PUBLISHED",
  "biz_catalog_id": "887366192090767360",
  "biz_catalog_path": null,
  "create_by": "abc",
  "update_by": "abc",
  "data_origin": "",
  "unit": "",
  "time_filters": "Day",
  "dimensions": "test",
  "general_filters": "",
  "interval_type": "REAL_TIME",
  "apply_scenario": "",
  "technical_metric": "873265992019640320",
  "technical_metric_name": "Total amount 1 (vendor)",
  "technical_metric_type": "DERIVATIVE_INDEX",
  "measure": "",
  "owner": "abc",
  "owner_department": "Data management department",
  "destination": "Taxi company revenue statistics",
  "guid": "2c993087-2aff-43f7-9252-178ce52e7e7c",
  "definition": "Taxi company revenue",
  "expression": "Sum (total amount)",
  "remark": "",
  "approval_info": {
    "id": "933768706708971520",
    "tenant_id": null,
    "name_ch": null,
    "name_en": null,
    "biz_id": "902866491765080064",
    "biz_type": null,
    "biz_info": null,
    "biz_info_obj": null,
    "biz_version": 0,
    "biz_status": "PUBLISHED",
    "approval_status": "APPROVED",
  }
}
```

```

"approval_type" : null,
"submit_time" : "2022-01-20T17:03:28+08:00",
"create_by" : null,
"l1" : null,
"l2" : null,
"l3" : null,
"approval_time" : "2022-01-20T17:03:28+08:00",
"approver" : "abc",
"email" : null,
"msg" : "Fast Approval OK.",
"directory_path" : null
},
"new_biz" : null,
"create_time" : "2021-10-27T10:29:06+08:00",
"update_time" : "2022-01-20T17:03:28+08:00",
"l1" : "L1",
"l2" : null,
"l3" : null,
"biz_metric" : "UPDATE_SUCCESS",
"summary_status" : "SUMMARY_SUCCESS"
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>BizMetricVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.17.3 Querying Metric Dimensions

### Function

This API is used to query metric dimensions.

### URI

GET /v2/{project\_id}/design/biz-metrics/dimensions

**Table 7-615** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

### Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 7-616** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400**

**Table 7-617** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-618** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-619** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

Parameter	Type	Description
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. An array of dimension names is returned.

```
{
  "data" : {
    "value" : [ "Vendor" ]
  }
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. An array of dimension names is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.17.4 Querying Metric Owners

### Function

This API is used to query metric owners.

### URI

GET /v2/{project\_id}/design/biz-metrics/owners

**Table 7-620** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID



## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 7-621** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400**

**Table 7-622** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-623** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-624** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. An array of owner names is returned.

```
{
  "data" : {
    "value" : [ "abc" ]
  }
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. An array of owner names is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.17.5 Obtaining Relationship Information of a Metric

### Function

This API is used to obtain the graphs of a specified metric.

### URI

GET /v2/{project\_id}/design/metric-relations/{id}

**Table 7-625** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

**Table 7-626** Query Parameters

Parameter	Mandatory	Type	Description
biz_type	Yes	String	Metric type

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 7-627** Response body parameters

Parameter	Type	Description
total	Integer	Quantity
all	Array of <a href="#">MetricRelationVO</a> objects	Information about all objects
groups	Object	Statistical dimension information
links	<a href="#">MetricRelationVO</a> object	Information about links

**Table 7-628** MetricRelationVO

Parameter	Type	Description
vo	Object	Business object
id	Long	Object ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
child_ids	Array of strings	IDs of subobjects
parent_ids	Array of strings	IDs of parent objects
tables	Array of <a href="#">MetricRelationVO</a> objects	Associated table

**Status code: 400****Table 7-629** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-630** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-631** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Example Requests**

None

**Example Responses****Status code: 200**

The operation succeeds, and **MetricRelationVOList** is returned.

```
{
  "all": [ {
    "vo": {
      "id": "1014197025488699392",
      "name_en": "zonghe8830",
      "name_ch": "zonghe8830(testweidu830)",
      "description": "",
      "create_by": "abc",
      "data_type": "STRING",
      "l1_id": null,
      "l2_id": null,
      "l3_id": "767858832738234368",
      "status": "DRAFT",
      "atomic_index_id": "1014195214723756032",
      "time_condition_id": null,
      "time_field_id": null,
      "time_field_name": null,
      "common_conditions": [ ],
      "dimension_groups": [ {
        "group_id": "1014194851576721408",
        "role": null,
        "dimension_id": "1014194851576721408",
        "hierarchies_id": null,
        "ordinal": 1,
        "group_name": "testweidu830",
        "group_code": "testweidu830",
        "biz_type": "DIMENSION",
        "hierarchies": null,
        "l1": null,
        "l2": null,
        "l3": null,
        "l1_id": null,
        "l2_id": null,
        "l3_id": null,
        "dw_type": null,
        "id": "1014197025585168384"
      } ],
      "monitor": null,
      "atomic_index": {
        "id": "1014195214723756032",
        "name_en": "zonghe8830",
        "name_ch": "zonghe8830",
        "description": "",
        "create_by": null,
        "cal_exp": "sum(${1014195020200325120})",
        "cal_fn_ids": null,
        "l1_id": null,
        "l2_id": null,
        "l3_id": null,
        "table_id": "1014195020183547904",
        "tb_name": null,
        "dw_type": null,
        "field_ids": [ "1014195020200325120" ],
        "field_names": null,
        "status": "DRAFT",
        "biz_type": "FACT_LOGIC_TABLE",
        "create_time": "2022-09-02T09:56:31.536+08:00",
        "update_time": "2022-09-02T09:56:31.536+08:00",
        "l1": null,
        "l2": null,
        "l3": null,
        "approval_info": null,
        "new_biz": null
      },
      "time_condition_name": null,
      "create_time": "2022-08-30T15:36:54+08:00",
      "update_time": "2022-08-30T15:36:54+08:00",
      "l1": null,
    }
  ]
}
```

```
"l2" : null,
"l3" : null,
"summary_table_id" : null,
"approval_info" : null,
"new_biz" : null
},
"id" : "1014197025488699392",
"tables" : [ ],
"biz_type" : "DERIVATIVE_INDEX",
"parent_ids" : [ ],
"child_ids" : [ "1014195214723756032" ]
}],
"total" : 2,
"groups" : {
  "1014194851576721408" : {
    "dimension_groups" : [ {
      "group_id" : "1014194851576721408",
      "role" : null,
      "dimension_id" : "1014194851576721408",
      "hierarchies_id" : null,
      "ordinal" : 1,
      "group_name" : "testweidu830",
      "group_code" : "testweidu830",
      "biz_type" : "DIMENSION",
      "hierarchies" : null,
      "l1" : null,
      "l2" : null,
      "l3" : null,
      "l1_id" : null,
      "l2_id" : null,
      "l3_id" : null,
      "dw_type" : null,
      "id" : "1014197025585168384"
    } ],
    "ids" : [ "1014197025488699392" ]
  }
},
"links" : {
  "vo" : {
    "id" : "1014197025488699392",
    "name_en" : "zonghe8830",
    "name_ch" : "zonghe8830(testweidu830)",
    "description" : "",
    "create_by" : "abc",
    "data_type" : "STRING",
    "l1_id" : null,
    "l2_id" : null,
    "l3_id" : "767858832738234368",
    "status" : "DRAFT",
    "atomic_index_id" : "1014195214723756032",
    "time_condition_id" : null,
    "time_field_id" : null,
    "time_field_name" : null,
    "common_conditions" : [ ],
    "dimension_groups" : [ {
      "group_id" : "1014194851576721408",
      "role" : null,
      "dimension_id" : "1014194851576721408",
      "hierarchies_id" : null,
      "ordinal" : 1,
      "group_name" : "testweidu830",
      "group_code" : "testweidu830",
      "biz_type" : "DIMENSION",
      "hierarchies" : null,
      "l1" : null,
      "l2" : null,
      "l3" : null,
      "l1_id" : null,
      "l2_id" : null,
```

```

        "l3_id" : null,
        "dw_type" : null,
        "id" : "1014197025585168384"
    }],
    "monitor" : null,
    "atomic_index" : {
        "id" : "1014195214723756032",
        "name_en" : "zonghe8830",
        "name_ch" : "zonghe8830",
        "description" : "",
        "create_by" : null,
        "cal_exp" : "sum(${1014195020200325120}) ",
        "cal_fn_ids" : null,
        "l1_id" : null,
        "l2_id" : null,
        "l3_id" : null,
        "table_id" : "1014195020183547904",
        "tb_name" : null,
        "dw_type" : null,
        "field_ids" : [ "1014195020200325120" ],
        "field_names" : null,
        "status" : "DRAFT",
        "biz_type" : "FACT_LOGIC_TABLE",
        "create_time" : "2022-09-02T09:56:31.536+08:00",
        "update_time" : "2022-09-02T09:56:31.536+08:00",
        "l1" : null,
        "l2" : null,
        "l3" : null,
        "approval_info" : null,
        "new_biz" : null
    },
    "time_condition_name" : null,
    "create_time" : "2022-08-30T15:36:54+08:00",
    "update_time" : "2022-08-30T15:36:54+08:00",
    "l1" : null,
    "l2" : null,
    "l3" : null,
    "summary_table_id" : null,
    "approval_info" : null,
    "new_biz" : null
},
"id" : "1014197025488699392",
"tables" : [ ],
"biz_type" : "DERIVATIVE_INDEX",
"parent_ids" : [ ],
"child_ids" : [ "1014195214723756032" ]
}
}

```

## Status Codes

Status Code	Description
200	The operation succeeds, and <b>MetricRelationVOList</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden



## 7.18 ER Modeling APIs

### 7.18.1 Obtaining the Model Entity List

#### Function

This API is used to obtain the list of model entities, including logical entities, tables, and attributes by name, creator, reviewer, status, and modification time.

#### URI

GET /v2/{project\_id}/design/table-model

**Table 7-632** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-633** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
approver	No	String	Approver
status	No	String	Business status Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
sync_status	No	String	Enumeration values: <ul style="list-style-type: none"><li>● <b>RUNNING</b></li><li>● <b>NO_NEED</b></li><li>● <b>SUMMARY_SUCCESS</b></li><li>● <b>SUMMARY_FAILED</b></li></ul>

Parameter	Mandatory	Type	Description
sync_key	No	Array	Enumeration values: <ul style="list-style-type: none"><li>• <b>BUSINESS_ASSET</b></li><li>• <b>DATA_QUALITY</b></li><li>• <b>TECHNICAL_ASSET</b></li><li>• <b>META_DATA_LINK</b></li><li>• <b>PHYSICAL_TABLE</b></li><li>• <b>DLF_TASK</b></li><li>• <b>MATERIALIZATION</b></li></ul>
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>
model_id	Yes	String	Model ID
biz_catalog_id	No	String	Business catalog ID

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-634** Response body parameters

Parameter	Type	Description
id	Long	ID
model_id	Long	Model ID
parent_table_id	Long	Parent table ID
parent_table_name	String	Parent table name
parent_table_code	String	Parent table code
model	<a href="#">WorkspaceV O</a> object	Model
data_format	String	Data format Maximum: <b>100</b>
obs_bucket	String	OBS bucket Maximum: <b>200</b>
obs_location	String	OBS path Maximum: <b>2000</b>
configs	String	Other configurations Maximum: <b>2000</b>
table_type	String	Table type
owner	String	Maximum: <b>600</b>
tb_name	String	Table name Maximum: <b>400</b>
dw_id	String	Data connection ID
db_name	String	Database name
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.
schema	String	Schema, which is required for DWS
extend_info	String	Extended information
tb_guid	String	GUID of the materialized table
tb_id	String	Data table ID
logic_tb_name	String	Logical entity name Maximum: <b>200</b>

Parameter	Type	Description
logic_tb_guid	String	Logical entity GUID
description	String	Description Maximum: <b>200</b>
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
logic_tb_id	Long	Logical entity ID
biz_catalog_id	Long	Business catalog ID
catalog_path	String	Catalog path. The value can be <b>l1Id</b> , <b>l2Id</b> , or <b>l3Id</b> .
create_by	String	Creator
update_by	String	User who updated the table model
create_time	String	Creation time
update_time	String	Update time
tags	Array of <b>TagVO</b> objects	Table tags
approval_info	<b>ApprovalVO</b> object	Approval information
new_biz	<b>BizVersionManagementVO</b> object	Business version management
attributes	Array of <b>TableModelAttributeVO</b> objects	Table model attributes
mappings	Array of <b>TableMappingVO</b> objects	Table model mappings
relations	Array of <b>RelationVO</b> objects	Relationships

Parameter	Type	Description
dw_type	String	Data connection type
dw_name	String	Data connection name
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object ID
partition_conf	String	Partition expression
dlf_task_id	String	Data development job ID
use_recently_partition	Boolean	Whether to use the latest partition Default: <b>false</b>
reversed	Boolean	Whether the table model is reversed Default: <b>false</b>
dirty_out_switch	Boolean	Whether to export dirty data Default: <b>false</b>
dirty_out_database	String	Database to which dirty data will be exported
dirty_out_prefix	String	Prefix of the table with dirty data
dirty_out_suffix	String	Suffix of the table with dirty data
quality_owner	String	Quality owner
quality_id	Long	Quality ID
distribute	String	DISTRIBUTE BY [HASH(column) REPLICATION] Enumeration values: <ul style="list-style-type: none"><li>• <b>HASH</b></li><li>• <b>REPLICATION</b></li></ul>
distribute_column	String	DISTRIBUTE BY HASH column
is_partition	Boolean	Whether the table is a partitioned table Default: <b>false</b>

Parameter	Type	Description
physical_table	String	Table creation status Enumeration values: <ul style="list-style-type: none"> <li>● NO_NEED</li> <li>● CREATE_SUCCESS</li> <li>● CREATE_FAILED</li> <li>● UPDATE_SUCCESS</li> <li>● UPDATE_FAILED</li> <li>● SUMMARY_SUCCESS</li> <li>● SUMMARY_FAILED</li> <li>● RUNNING</li> <li>● OFFLINE</li> </ul>
technical_asset	String	Technical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>● NO_NEED</li> <li>● CREATE_SUCCESS</li> <li>● CREATE_FAILED</li> <li>● UPDATE_SUCCESS</li> <li>● UPDATE_FAILED</li> <li>● SUMMARY_SUCCESS</li> <li>● SUMMARY_FAILED</li> <li>● RUNNING</li> <li>● OFFLINE</li> </ul>
business_asset	String	Logical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>● NO_NEED</li> <li>● CREATE_SUCCESS</li> <li>● CREATE_FAILED</li> <li>● UPDATE_SUCCESS</li> <li>● UPDATE_FAILED</li> <li>● SUMMARY_SUCCESS</li> <li>● SUMMARY_FAILED</li> <li>● RUNNING</li> <li>● OFFLINE</li> </ul>

Parameter	Type	Description
meta_data_link	String	Asset association status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
data_quality	String	Quality job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
summary_status	String	Overall synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-635** WorkspaceVO

Parameter	Type	Description
id	Long	ID
name	String	Workspace name Maximum: <b>250</b>
description	String	Maximum: <b>600</b>
is_physical	Boolean	Whether the table is a physical table Default: <b>true</b>
frequent	Boolean	Whether the workspace is frequently used Default: <b>true</b>
top	Boolean	Hierarchical governance Default: <b>true</b>
level	String	Data governance level Enumeration values: <ul style="list-style-type: none"><li>• <b>SDI</b></li><li>• <b>DWI</b></li><li>• <b>DWR</b></li><li>• <b>DM</b></li></ul>
dw_type	String	Data connection type
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the workspace
type	String	Workspace types Enumeration values: <ul style="list-style-type: none"><li>• <b>THIRD_NF</b></li><li>• <b>DIMENSION</b></li></ul>
biz_catalog_ids	String	IDs of business catalogs, including <b>l1ids</b> , <b>l2ids</b> , and <b>l3ids</b>
databases	Array of strings	Array of database names



**Table 7-636** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information

Parameter	Type	Description
biz_info_obj	Object	Business information object
biz_version	Integer	Business version
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-637** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-638** TableModelAttributeVO

Parameter	Type	Description
id	Long	ID
name_en	String	Table model attribute name in English Maximum: <b>600</b>
name_ch	String	Table model attribute name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
obs_location	String	OBS path and subpath Maximum: <b>600</b>
create_by	String	Creator
update_by	String	User who updated the table model attribute
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>● <b>NUMBER</b></li><li>● <b>STRING</b></li><li>● <b>DATETIME</b></li><li>● <b>BLOB</b></li><li>● <b>OTHER</b></li></ul>

Parameter	Type	Description
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
is_foreign_key	Boolean	Whether the attribute is a foreign key Default: <b>false</b>
extend_field	Boolean	Whether the attribute is an inherited attribute Default: <b>false</b>
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>
ordinal	Integer	Ordinal
table_model_id	Long	Table model ID
create_time	String	Creation time
update_time	String	Update time
tags	Array of <b>TagVO</b> objects	Table tags
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <b>QualityInfoVO</b> objects	Quality information
alias	String	Alias
self_defined_fields	Array of <b>SelfDefinedFieldVO</b> objects	Custom fields

**Table 7-639** TagVO

Parameter	Type	Description
id	Long	ID

Parameter	Type	Description
name	String	Tag name Maximum: <b>250</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
update_by	String	User who updated the tag
create_time	String	Creation time
update_time	String	Update time
new_biz	<b>BizVersionManagementVO</b> object	Business version management

**Table 7-640** QualityInfoVO

Parameter	Type	Description
id	Long	ID
table_id	Long	Table ID
attr_id	Long	Attribute ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
data_quality_id	Long	Quality ID
show_control	Integer	Whether to display the regular expression
data_quality_name	String	Quality name
alert_conf	String	Alarm configuration
expression	String	Regular expression in verification rules

Parameter	Type	Description
extend_info	String	Extended information
from_standard	Boolean	Whether the quality information is from data standard quality configuration Default: <b>false</b>
result_description	String	Result description
create_by	String	Creator
update_by	String	User who updated the quality information
create_time	String	Creation time
update_time	String	Update time

**Table 7-641** TableMappingVO

Parameter	Type	Description
id	Long	ID
name	String	Name
description	String	Maximum: <b>600</b>
target_table_id	Long	Destination table ID
src_model_id	Long	Model ID for the source table
src_model_name	String	Source model name
view_text	String	Source view. The DWS view is used reversely.
target_table_name	String	Destination table name
details	Array of <a href="#">TableMappingDetailVO</a> objects	Details
source_tables	Array of <a href="#">MappingSourceTableVO</a> objects	Source tables



Parameter	Type	Description
source_fields	Array of <a href="#">MappingSourceFieldVO</a> objects	Source fields
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the table mapping

**Table 7-642** TableMappingDetailVO

Parameter	Type	Description
id	Long	ID
mapping_id	String	Mapping ID
target_attr_id	Long	Destination field ID
target_attr_name	String	Target attribute name
src_table_ids	String	ID of a source table
src_table_names	Array of strings	Source table names
src_table_db_names	Array of strings	Database names in the source table
src_table_model_ids	Array of integers	IDs of source table models
src_table_id_list	Array of integers	IDs of source tables
src_attr_ids	String	ID of a source table attribute
src_attr_names	Array of strings	Names of source table attributes
src_attr_id_list	Array of integers	IDs of source table attributes
remark	String	Remarks
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator

Parameter	Type	Description
update_by	String	User who updated the table mapping details
target_attr	Object	Target attribute

**Table 7-643** MappingSourceTableVO

Parameter	Type	Description
table1_id	Long	Table ID
table2_id	Long	Table ID Default: <b>0</b>
table1_name	String	Table 1 name
table2_name	String	Table 2 name
join_type	String	Association type Default: <b>LEFT</b> Enumeration values: <ul style="list-style-type: none"> <li>• <b>LEFT</b></li> <li>• <b>RIGHT</b></li> <li>• <b>INNER</b></li> <li>• <b>FULL</b></li> </ul>
join_fields	Array of <a href="#">MappingJoinFieldVO</a> objects	ON clause

**Table 7-644** MappingJoinFieldVO

Parameter	Type	Description
field1_id	Long	Attribute ID
field2_id	Long	Attribute ID
field1_name	String	Name of join field 1
field2_name	String	Name of join field 2

**Table 7-645** MappingSourceFieldVO

Parameter	Type	Description
target_field_id	Long	Target field ID. The target field is a field in the current table.
target_field_name	String	Target field name
field_ids	String	IDs of source fields. Multiple IDs are separated by commas (,).
transform_expression	String	Conversion expression
field_names	Array of strings	Names of source fields
changed	Boolean	Whether the field has changed

**Table 7-646** RelationVO

Parameter	Type	Description
id	Long	ID
source_table_id	Long	Source table ID
target_table_id	Long	Destination table ID
name	String	Relationship name
source_table_name	String	Source table name
target_table_name	String	Destination table name
role	String	Role
tenant_id	String	Tenant ID
source_type	String	Relationship type Enumeration values: <ul style="list-style-type: none"><li>● ONE</li><li>● ZERO_OR_ONE</li><li>● ZERO_OR_N</li><li>● ONE_OR_N</li></ul>

Parameter	Type	Description
target_type	String	Relationship type Enumeration values: <ul style="list-style-type: none"><li>• ONE</li><li>• ZERO_OR_ONE</li><li>• ZERO_OR_N</li><li>• ONE_OR_N</li></ul>
create_by	String	Creator
update_by	String	User who updated the relationship
create_time	String	Creation time
update_time	String	Update time
mappings	Array of <a href="#">RelationMappingVO</a> objects	Relationship mappings

**Table 7-647** RelationMappingVO

Parameter	Type	Description
id	Long	ID
relation_id	Long	Relationship ID
source_field_id	Long	Source field ID
target_field_id	Long	Destination field ID
source_field_name	String	Source field name
target_field_name	String	Destination field name
create_by	String	Creator
update_by	String	User who updated the mapping
create_time	String	Creation time
update_time	String	Update time

**Table 7-648** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400****Table 7-649** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-650** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-651** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

### Status code: 200

The operation succeeds. The **TableModelVO** array and the total number of model entities are returned.

```
{
  "id": "1012314146584301568",
  "model_id": "873242752312385536",
  "parent_table_id": null,
  "parent_table_name": null,
  "parent_table_code": null,
  "model": null,
  "data_format": "Parquet",
  "obs_bucket": null,
  "obs_location": null,
  "configs": "{}",
  "table_type": "MANAGED",
  "owner": "",
  "tb_name": "staff_info",
  "dw_id": "2c9080f07b03db8d017b198a4a20002f",
  "db_name": "ctz_test",
  "queue_name": "default",
  "schema": "",
  "extend_info": "{\"dirtyOutDatabase\":\"\",\"dirtyOutPrefix\":\"\",\"dirtyOutSuffix\":\"\",\"dirtyOutSwitch\":\
false\"}",
  "tb_guid": null,
  "tb_id": "NativeTable-2c9080f07b03db8d017b198a4a20002f-ctz_test-staff_info",
  "logic_tb_name": "staff_info",
  "logic_tb_guid": "1ab1a58b-9412-4901-bb80-4ccaaa0580e4",
  "description": "None",
  "status": "PUBLISHED",
  "logic_tb_id": null,
  "biz_catalog_id": "1012306178602041344",
  "catalog_path": "Factory/Personnel management/Personnel archive",
  "create_by": "abc",
  "update_by": "abc",
  "create_time": "2022-08-25T10:55:00+08:00",
  "update_time": "2022-08-25T10:55:45+08:00",
  "tags": [],
  "approval_info": {
    "id": "1012314318533988352",
    "tenant_id": null,
    "name_ch": null,
    "name_en": null,
    "biz_id": "1012314146584301568",
```

```
"biz_type" : null,
"biz_info" : null,
"biz_info_obj" : null,
"biz_version" : 0,
"biz_status" : "PUBLISHED",
"approval_status" : "APPROVED",
"approval_type" : null,
"submit_time" : "2022-08-25T10:55:41+08:00",
"create_by" : null,
"l1" : null,
"l2" : null,
"l3" : null,
"approval_time" : "2022-08-25T10:55:41+08:00",
"approver" : "abc",
"email" : null,
"msg" : "Fast Approval OK.",
"directory_path" : null
},
"new_biz" : null,
"attributes" : [ {
  "id" : "1012314146626244608",
  "name_en" : "id",
  "name_ch" : "Primary key",
  "description" : "",
  "obs_location" : null,
  "create_by" : "abc",
  "update_by" : "abc",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : "",
  "is_primary_key" : true,
  "is_partition_key" : false,
  "is_foreign_key" : false,
  "extend_field" : false,
  "not_null" : true,
  "ordinal" : 1,
  "table_model_id" : null,
  "create_time" : "2022-08-25T10:55:00+08:00",
  "update_time" : "2022-08-25T10:55:00+08:00",
  "tags" : [ ],
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : [ ]
}, {
  "id" : "1012314146626244609",
  "name_en" : "name",
  "name_ch" : "Name",
  "description" : "",
  "obs_location" : null,
  "create_by" : "abc",
  "update_by" : "abc",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : "",
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : false,
  "extend_field" : false,
  "not_null" : false,
  "ordinal" : 2,
  "table_model_id" : null,
  "create_time" : "2022-08-25T10:55:00+08:00",
  "update_time" : "2022-08-25T10:55:00+08:00",
  "tags" : [ ],
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
```

```
"alias" : "",
"self_defined_fields" : [ ]
}, {
  "id" : "1012314146592690176",
  "name_en" : "age",
  "name_ch" : "Age",
  "description" : "",
  "obs_location" : null,
  "create_by" : "abc",
  "update_by" : "abc",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : "",
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : false,
  "extend_field" : false,
  "not_null" : false,
  "ordinal" : 3,
  "table_model_id" : null,
  "create_time" : "2022-08-25T10:55:00+08:00",
  "update_time" : "2022-08-25T10:55:00+08:00",
  "tags" : [ ],
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : [ ]
} ],
"mappings" : null,
"relations" : [ ],
"dw_type" : "DLI",
"dw_name" : null,
"l1" : "Factory",
"l2" : "Personnel management",
"l3" : "Personnel archive",
"l1_id" : "1012305751919689728",
"l2_id" : "1012306048792526848",
"l3_id" : "1012306178602041344",
"partition_conf" : null,
"dlf_task_id" : null,
"use_recently_partition" : false,
"reversed" : null,
"dirty_out_switch" : false,
"dirty_out_database" : "",
"dirty_out_prefix" : "",
"dirty_out_suffix" : "",
"quality_owner" : null,
"quality_id" : "1012314332484304897",
"distribute" : null,
"distribute_column" : null,
"is_partition" : false,
"physical_table" : "CREATE_SUCCESS",
"technical_asset" : "CREATE_FAILED",
"business_asset" : "UPDATE_SUCCESS",
"meta_data_link" : "UPDATE_FAILED",
"data_quality" : "CREATE_SUCCESS",
"summary_status" : "SUMMARY_FAILED",
"alias" : null,
"self_defined_fields" : null
}
```



## Status Codes

Status Code	Description
200	The operation succeeds. The <b>TableModelVO</b> array and the total number of model entities are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.18.2 Querying Relationships

### Function

This API is used to query relationships.

### URI

GET /v2/{project\_id}/design/relation

Table 7-652 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

Table 7-653 Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-654** Response body parameters

Parameter	Type	Description
id	Long	ID
source_table_id	Long	Source table ID
target_table_id	Long	Destination table ID
name	String	Relationship name
source_table_name	String	Source table name
target_table_name	String	Destination table name
role	String	Role
tenant_id	String	Tenant ID

Parameter	Type	Description
source_type	String	Relationship type Enumeration values: <ul style="list-style-type: none"> <li>• ONE</li> <li>• ZERO_OR_ONE</li> <li>• ZERO_OR_N</li> <li>• ONE_OR_N</li> </ul>
target_type	String	Relationship type Enumeration values: <ul style="list-style-type: none"> <li>• ONE</li> <li>• ZERO_OR_ONE</li> <li>• ZERO_OR_N</li> <li>• ONE_OR_N</li> </ul>
create_by	String	Creator
update_by	String	User who updated the relationship
create_time	String	Creation time
update_time	String	Update time
mappings	Array of <a href="#">RelationMappingVO</a> objects	Relationship mappings

**Table 7-655** RelationMappingVO

Parameter	Type	Description
id	Long	ID
relation_id	Long	Relationship ID
source_field_id	Long	Source field ID
target_field_id	Long	Destination field ID
source_field_name	String	Source field name
target_field_name	String	Destination field name
create_by	String	Creator
update_by	String	User who updated the mapping

Parameter	Type	Description
create_time	String	Creation time
update_time	String	Update time

**Status code: 400****Table 7-656** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-657** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-658** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. The **RelationVO** array and the total number of relationships are returned.

```
{
  "id": "1000068927784710144",
  "source_table_id": "873243083737899008",
  "target_table_id": "888462883313393664",
  "name": "sdi_taxi_trip_data_wang_1",
  "source_table_name": "demo_sdi_db.sdi_taxi_trip_data",
  "target_table_name": "default.wang",
  "role": null,
  "tenant_id": "0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-f7eee36e67e541a59679f9b1b7f4eab0",
  "source_type": "ONE_OR_N",
  "target_type": "ONE_OR_N",
  "create_by": "abc",
  "update_by": "abc",
  "create_time": "2022-07-22T15:56:53+08:00",
  "update_time": "2022-07-22T15:57:28+08:00",
  "mappings": [ {
    "id": "1000068927818264576",
    "relation_id": "1000068927784710144",
    "source_field_id": "873243083737899013",
    "target_field_id": "888462883317587968",
    "source_field_name": "trip_distance",
    "target_field_name": "id",
    "create_by": "abc",
    "update_by": "abc",
    "create_time": "2022-07-22T15:56:53+08:00",
    "update_time": "2022-07-22T15:57:28+08:00"
  } ]
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>RelationVO</b> array and the total number of relationships are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.18.3 Querying Relationship Details

### Function

This API is used to query the details of a relationship with a specified ID.

## URI

GET /v2/{project\_id}/design/relation/{id}

**Table 7-659** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

**Table 7-660** Query Parameters

Parameter	Mandatory	Type	Description
latest	No	Boolean	Whether to query the latest data

## Request Parameters

None

## Response Parameters

**Status code: 200**

**Table 7-661** Response body parameters

Parameter	Type	Description
id	Long	ID
source_table_id	Long	Source table ID
target_table_id	Long	Destination table ID
name	String	Relationship name
source_table_name	String	Source table name
target_table_name	String	Destination table name
role	String	Role
tenant_id	String	Tenant ID

Parameter	Type	Description
source_type	String	Relationship type Enumeration values: <ul style="list-style-type: none"> <li>• ONE</li> <li>• ZERO_OR_ONE</li> <li>• ZERO_OR_N</li> <li>• ONE_OR_N</li> </ul>
target_type	String	Relationship type Enumeration values: <ul style="list-style-type: none"> <li>• ONE</li> <li>• ZERO_OR_ONE</li> <li>• ZERO_OR_N</li> <li>• ONE_OR_N</li> </ul>
create_by	String	Creator
update_by	String	User who updated the relationship
create_time	String	Creation time
update_time	String	Update time
mappings	Array of <a href="#">RelationMappingVO</a> objects	Relationship mappings

**Table 7-662** RelationMappingVO

Parameter	Type	Description
id	Long	ID
relation_id	Long	Relationship ID
source_field_id	Long	Source field ID
target_field_id	Long	Destination field ID
source_field_name	String	Source field name
target_field_name	String	Destination field name
create_by	String	Creator
update_by	String	User who updated the mapping

Parameter	Type	Description
create_time	String	Creation time
update_time	String	Update time

**Status code: 400****Table 7-663** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-664** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-665** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data



## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **RelationVO** is returned.

```
{
  "id": "1000068927784710144",
  "source_table_id": "873243083737899008",
  "target_table_id": "888462883313393664",
  "name": "sdi_taxi_trip_data_wang_1",
  "source_table_name": "demo_sdi_db.sdi_taxi_trip_data",
  "target_table_name": "default.wang",
  "role": null,
  "tenant_id": "0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-f7eee36e67e541a59679f9b1b7f4eab0",
  "source_type": "ONE_OR_N",
  "target_type": "ONE_OR_N",
  "create_by": "abc",
  "update_by": "abc",
  "create_time": "2022-07-22T15:56:53+08:00",
  "update_time": "2022-07-22T15:57:28+08:00",
  "mappings": [ {
    "id": "1000068927818264576",
    "relation_id": "1000068927784710144",
    "source_field_id": "873243083737899013",
    "target_field_id": "888462883317587968",
    "source_field_name": "trip_distance",
    "target_field_name": "id",
    "create_by": "abc",
    "update_by": "abc",
    "create_time": "2022-07-22T15:56:53+08:00",
    "update_time": "2022-07-22T15:57:28+08:00"
  } ]
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>RelationVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.18.4 Querying All Relationships in a Model

### Function

This API is used to query all the relationships in a model.

## URI

GET /v2/{project\_id}/design/{model\_id}/table-model/relation

**Table 7-666** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
model_id	Yes	String	Parameters for querying workspaces by ID

**Table 7-667** Query Parameters

Parameter	Mandatory	Type	Description
table_ids	No	String	IDs of table models
biz_type	No	String	Table type Default: <b>TABLE_MODEL</b> Enumeration values: <ul style="list-style-type: none"><li>• <b>TABLE_MODEL</b></li><li>• <b>FACT_LOGIC_TABLE</b></li></ul>
limit	No	Integer	Number of records to be queried, that is, Y records. The value ranges from 1 to 100. The default value is <b>50</b> . Maximum: <b>100</b> Default: <b>50</b>
offset	No	Integer	Query offset, that is, X data records are skipped. The value must be <b>0</b> or an integer multiple of <b>limit</b> . If the value does not meet the requirements, it will be rounded down. The default value is <b>0</b> . Default: <b>0</b>

## Request Parameters

None

## Response Parameters

Status code: **200**

**Table 7-668** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 400****Table 7-669** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-670** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-671** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **RelationVO** is returned.

```
{
  "data" : {
    "value" : ""
  }
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>RelationVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.18.5 Obtaining Details of a Table Model

### Function

This API is used to obtain the details of a table model with a specified ID.

### URI

GET /v2/{project\_id}/design/table-model/{id}

**Table 7-672** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
id	Yes	String	Entity ID

**Table 7-673** Query Parameters

Parameter	Mandatory	Type	Description
latest	No	Boolean	Whether to query the latest data

## Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-674** Response body parameters

Parameter	Type	Description
id	Long	ID
model_id	Long	Model ID
parent_table_id	Long	Parent table ID
parent_table_name	String	Parent table name
parent_table_code	String	Parent table code
model	<a href="#">WorkspaceV O</a> object	Model
data_format	String	Data format Maximum: <b>100</b>
obs_bucket	String	OBS bucket Maximum: <b>200</b>
obs_location	String	OBS path Maximum: <b>2000</b>
configs	String	Other configurations Maximum: <b>2000</b>
table_type	String	Table type
owner	String	Maximum: <b>600</b>
tb_name	String	Table name Maximum: <b>400</b>

Parameter	Type	Description
dw_id	String	Data connection ID
db_name	String	Database name
queue_name	String	Queue required for a DLI data connection to execute SQL statements. This parameter is mandatory for DLI data connections.
schema	String	Schema, which is required for DWS
extend_info	String	Extended information
tb_guid	String	GUID of the materialized table
tb_id	String	Data table ID
logic_tb_name	String	Logical entity name Maximum: <b>200</b>
logic_tb_guid	String	Logical entity GUID
description	String	Description Maximum: <b>200</b>
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
logic_tb_id	Long	Logical entity ID
biz_catalog_id	Long	Business catalog ID
catalog_path	String	Catalog path. The value can be <b>l1Id</b> , <b>l2Id</b> , or <b>l3Id</b> .
create_by	String	Creator
update_by	String	User who updated the table model
create_time	String	Creation time
update_time	String	Update time
tags	Array of <b>TagVO</b> objects	Table tags

Parameter	Type	Description
approval_info	<a href="#">ApprovalVO</a> object	Approval information
new_biz	<a href="#">BizVersionManagementVO</a> object	Business version management
attributes	Array of <a href="#">TableModelAttributeVO</a> objects	Table model attributes
mappings	Array of <a href="#">TableMappingVO</a> objects	Table model mappings
relations	Array of <a href="#">RelationVO</a> objects	Relationships
dw_type	String	Data connection type
dw_name	String	Data connection name
l1	String	Chinese name of the subject area group
l2	String	Chinese name of the subject area
l3	String	Chinese name of the business object
l1_id	Long	Subject area group ID
l2_id	String	Subject area ID
l3_id	Long	Business object ID
partition_conf	String	Partition expression
dlf_task_id	String	Data development job ID
use_recently_partition	Boolean	Whether to use the latest partition Default: <b>false</b>
reversed	Boolean	Whether the table model is reversed Default: <b>false</b>
dirty_out_switch	Boolean	Whether to export dirty data Default: <b>false</b>
dirty_out_database	String	Database to which dirty data will be exported
dirty_out_prefix	String	Prefix of the table with dirty data

Parameter	Type	Description
dirty_out_suffix	String	Suffix of the table with dirty data
quality_owner	String	Quality owner
quality_id	Long	Quality ID
distribute	String	DISTRIBUTE BY [HASH(column)] REPLICATION Enumeration values: <ul style="list-style-type: none"> <li>● <b>HASH</b></li> <li>● <b>REPLICATION</b></li> </ul>
distribute_column	String	DISTRIBUTE BY HASH column
is_partition	Boolean	Whether the table is a partitioned table Default: <b>false</b>
physical_table	String	Table creation status Enumeration values: <ul style="list-style-type: none"> <li>● <b>NO_NEED</b></li> <li>● <b>CREATE_SUCCESS</b></li> <li>● <b>CREATE_FAILED</b></li> <li>● <b>UPDATE_SUCCESS</b></li> <li>● <b>UPDATE_FAILED</b></li> <li>● <b>SUMMARY_SUCCESS</b></li> <li>● <b>SUMMARY_FAILED</b></li> <li>● <b>RUNNING</b></li> <li>● <b>OFFLINE</b></li> </ul>
technical_asset	String	Technical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>● <b>NO_NEED</b></li> <li>● <b>CREATE_SUCCESS</b></li> <li>● <b>CREATE_FAILED</b></li> <li>● <b>UPDATE_SUCCESS</b></li> <li>● <b>UPDATE_FAILED</b></li> <li>● <b>SUMMARY_SUCCESS</b></li> <li>● <b>SUMMARY_FAILED</b></li> <li>● <b>RUNNING</b></li> <li>● <b>OFFLINE</b></li> </ul>



Parameter	Type	Description
business_asset	String	Logical asset synchronization status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>
meta_data_link	String	Asset association status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>
data_quality	String	Quality job status Enumeration values: <ul style="list-style-type: none"><li>• NO_NEED</li><li>• CREATE_SUCCESS</li><li>• CREATE_FAILED</li><li>• UPDATE_SUCCESS</li><li>• UPDATE_FAILED</li><li>• SUMMARY_SUCCESS</li><li>• SUMMARY_FAILED</li><li>• RUNNING</li><li>• OFFLINE</li></ul>

Parameter	Type	Description
summary_status	String	Overall synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
alias	String	Alias
self_defined_fields	Array of <a href="#">SelfDefinedFieldVO</a> objects	Custom fields

**Table 7-675** WorkspaceVO

Parameter	Type	Description
id	Long	ID
name	String	Workspace name Maximum: <b>250</b>
description	String	Maximum: <b>600</b>
is_physical	Boolean	Whether the table is a physical table Default: <b>true</b>
frequent	Boolean	Whether the workspace is frequently used Default: <b>true</b>
top	Boolean	Hierarchical governance Default: <b>true</b>
level	String	Data governance level Enumeration values: <ul style="list-style-type: none"> <li>• SDI</li> <li>• DWI</li> <li>• DWR</li> <li>• DM</li> </ul>
dw_type	String	Data connection type

Parameter	Type	Description
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the workspace
type	String	Workspace types Enumeration values: <ul style="list-style-type: none"><li>• <b>THIRD_NF</b></li><li>• <b>DIMENSION</b></li></ul>
biz_catalog_ids	String	IDs of business catalogs, including <b>l1ids</b> , <b>l2ids</b> , and <b>l3ids</b>
databases	Array of strings	Array of database names

**Table 7-676** ApprovalVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
name_ch	String	Approval name in Chinese
name_en	String	Approval name in English
biz_id	Long	Business ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_obj	Object	Business information object
biz_version	Integer	Business version

Parameter	Type	Description
biz_status	String	Business statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DRAFT</b></li> <li>● <b>PUBLISH_DEVELOPING</b></li> <li>● <b>PUBLISHED</b></li> <li>● <b>OFFLINE_DEVELOPING</b></li> <li>● <b>OFFLINE</b></li> <li>● <b>REJECT</b></li> </ul>
approval_status	String	Approval statuses Enumeration values: <ul style="list-style-type: none"> <li>● <b>DEVELOPING</b></li> <li>● <b>APPROVED</b></li> <li>● <b>REJECT</b></li> <li>● <b>WITHDREW</b></li> </ul>
approval_type	String	Approval types Enumeration values: <ul style="list-style-type: none"> <li>● <b>PUBLISH</b></li> <li>● <b>OFFLINE</b></li> </ul>
submit_time	String	Submission time
create_by	String	Creator
l1	String	Subject area group
l2	String	Subject area
l3	String	Business object
approval_time	String	Approval time
approver	String	Approver
email	String	Approver email address
msg	String	Approval message
directory_path	String	Directory tree

**Table 7-677** BizVersionManageVO

Parameter	Type	Description
id	Long	ID information

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"><li>• <b>ATOMIC_INDEX</b></li><li>• <b>DERIVATIVE_INDEX</b></li><li>• <b>DIMENSION</b></li><li>• <b>DIMENSION_ATTRIBUTE</b></li><li>• <b>DIMENSION_HIERARCHIES</b></li><li>• <b>CONDITION_GROUP</b></li><li>• <b>TIME_CONDITION</b></li><li>• <b>COMMON_CONDITION</b></li><li>• <b>FACT_LOGIC_TABLE</b></li><li>• <b>TABLE_MODEL</b></li><li>• <b>DIMENSION_LOGIC_TABLE</b></li><li>• <b>STANDARD_ELEMENT</b></li><li>• <b>AGGREGATION_LOGIC_TABLE</b></li><li>• <b>TAG</b></li><li>• <b>CODE_TABLE</b></li><li>• <b>TABLE_MODEL_ATTRIBUTE</b></li><li>• <b>FACT_DIMENSION</b></li><li>• <b>FACT_ATTRIBUTE</b></li><li>• <b>FACT_MEASURE</b></li><li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li><li>• <b>SUMMARY_TIME</b></li><li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li><li>• <b>QUALITY_RULE</b></li><li>• <b>BIZ_METRIC</b></li><li>• <b>COMPOUND_METRIC</b></li><li>• <b>INFO_ARCH</b></li><li>• <b>DEGENERATE_DIMENSION</b></li><li>• <b>TABLE_MODEL_LOGIC</b></li></ul>
biz_id	Long	Business ID
biz_info	String	Business object information

Parameter	Type	Description
status	String	Business statuses Enumeration values: <ul style="list-style-type: none"><li>● <b>DRAFT</b></li><li>● <b>PUBLISH_DEVELOPING</b></li><li>● <b>PUBLISHED</b></li><li>● <b>OFFLINE_DEVELOPING</b></li><li>● <b>OFFLINE</b></li><li>● <b>REJECT</b></li></ul>
biz_version	Integer	Business version
create_time	String	Creation time
update_time	String	Update time

**Table 7-678** TableModelAttributeVO

Parameter	Type	Description
id	Long	ID
name_en	String	Table model attribute name in English Maximum: <b>600</b>
name_ch	String	Table model attribute name in Chinese Maximum: <b>200</b>
description	String	Maximum: <b>600</b>
obs_location	String	OBS path and subpath Maximum: <b>600</b>
create_by	String	Creator
update_by	String	User who updated the table model attribute
data_type	String	Data type
domain_type	String	Data type domains Enumeration values: <ul style="list-style-type: none"><li>● <b>NUMBER</b></li><li>● <b>STRING</b></li><li>● <b>DATETIME</b></li><li>● <b>BLOB</b></li><li>● <b>OTHER</b></li></ul>

Parameter	Type	Description
data_type_ext_end	String	Data type extended field Maximum: <b>50</b>
is_primary_key	Boolean	Whether the attribute is a primary key Default: <b>false</b>
is_partition_key	Boolean	Whether the attribute is a partition key Default: <b>false</b>
is_foreign_key	Boolean	Whether the attribute is a foreign key Default: <b>false</b>
extend_field	Boolean	Whether the attribute is an inherited attribute Default: <b>false</b>
not_null	Boolean	Whether the attribute is not null Default: <b>false</b>
ordinal	Integer	Ordinal
table_model_id	Long	Table model ID
create_time	String	Creation time
update_time	String	Update time
tags	Array of <b>TagVO</b> objects	Table tags
stand_row_id	Long	ID of the associated data standard
stand_row_name	String	Maximum: <b>600</b>
quality_infos	Array of <b>QualityInfoVO</b> objects	Quality information
alias	String	Alias
self_defined_fields	Array of <b>SelfDefinedFieldVO</b> objects	Custom fields

**Table 7-679** TagVO

Parameter	Type	Description
id	Long	ID



Parameter	Type	Description
name	String	Tag name Maximum: <b>250</b>
description	String	Maximum: <b>600</b>
create_by	String	Creator
update_by	String	User who updated the tag
create_time	String	Creation time
update_time	String	Update time
new_biz	<b>BizVersionManagementVO</b> object	Business version management

**Table 7-680** QualityInfoVO

Parameter	Type	Description
id	Long	ID
table_id	Long	Table ID
attr_id	Long	Attribute ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
data_quality_id	Long	Quality ID
show_control	Integer	Whether to display the regular expression
data_quality_name	String	Quality name
alert_conf	String	Alarm configuration
expression	String	Regular expression in verification rules

Parameter	Type	Description
extend_info	String	Extended information
from_standard	Boolean	Whether the quality information is from data standard quality configuration Default: <b>false</b>
result_description	String	Result description
create_by	String	Creator
update_by	String	User who updated the quality information
create_time	String	Creation time
update_time	String	Update time

**Table 7-681** TableMappingVO

Parameter	Type	Description
id	Long	ID
name	String	Name
description	String	Maximum: <b>600</b>
target_table_id	Long	Destination table ID
src_model_id	Long	Model ID for the source table
src_model_name	String	Source model name
view_text	String	Source view. The DWS view is used reversely.
target_table_name	String	Destination table name
details	Array of <a href="#">TableMappingDetailVO</a> objects	Details
source_tables	Array of <a href="#">MappingSourceTableVO</a> objects	Source tables

Parameter	Type	Description
source_fields	Array of <a href="#">MappingSourceFieldVO</a> objects	Source fields
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the table mapping

**Table 7-682** TableMappingDetailVO

Parameter	Type	Description
id	Long	ID
mapping_id	String	Mapping ID
target_attr_id	Long	Destination field ID
target_attr_name	String	Target attribute name
src_table_ids	String	ID of a source table
src_table_names	Array of strings	Source table names
src_table_db_names	Array of strings	Database names in the source table
src_table_model_ids	Array of integers	IDs of source table models
src_table_id_list	Array of integers	IDs of source tables
src_attr_ids	String	ID of a source table attribute
src_attr_names	Array of strings	Names of source table attributes
src_attr_id_list	Array of integers	IDs of source table attributes
remark	String	Remarks
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator

Parameter	Type	Description
update_by	String	User who updated the table mapping details
target_attr	Object	Target attribute

**Table 7-683** MappingSourceTableVO

Parameter	Type	Description
table1_id	Long	Table ID
table2_id	Long	Table ID Default: <b>0</b>
table1_name	String	Table 1 name
table2_name	String	Table 2 name
join_type	String	Association type Default: <b>LEFT</b> Enumeration values: <ul style="list-style-type: none"> <li>• <b>LEFT</b></li> <li>• <b>RIGHT</b></li> <li>• <b>INNER</b></li> <li>• <b>FULL</b></li> </ul>
join_fields	Array of <a href="#">MappingJoinFieldVO</a> objects	ON clause

**Table 7-684** MappingJoinFieldVO

Parameter	Type	Description
field1_id	Long	Attribute ID
field2_id	Long	Attribute ID
field1_name	String	Name of join field 1
field2_name	String	Name of join field 2

**Table 7-685** MappingSourceFieldVO

Parameter	Type	Description
target_field_id	Long	Target field ID. The target field is a field in the current table.
target_field_name	String	Target field name
field_ids	String	IDs of source fields. Multiple IDs are separated by commas (,).
transform_expression	String	Conversion expression
field_names	Array of strings	Names of source fields
changed	Boolean	Whether the field has changed

**Table 7-686** RelationVO

Parameter	Type	Description
id	Long	ID
source_table_id	Long	Source table ID
target_table_id	Long	Destination table ID
name	String	Relationship name
source_table_name	String	Source table name
target_table_name	String	Destination table name
role	String	Role
tenant_id	String	Tenant ID
source_type	String	Relationship type Enumeration values: <ul style="list-style-type: none"><li>● ONE</li><li>● ZERO_OR_ONE</li><li>● ZERO_OR_N</li><li>● ONE_OR_N</li></ul>

Parameter	Type	Description
target_type	String	Relationship type Enumeration values: <ul style="list-style-type: none"><li>• ONE</li><li>• ZERO_OR_ONE</li><li>• ZERO_OR_N</li><li>• ONE_OR_N</li></ul>
create_by	String	Creator
update_by	String	User who updated the relationship
create_time	String	Creation time
update_time	String	Update time
mappings	Array of <a href="#">RelationMappingVO</a> objects	Relationship mappings

**Table 7-687** RelationMappingVO

Parameter	Type	Description
id	Long	ID
relation_id	Long	Relationship ID
source_field_id	Long	Source field ID
target_field_id	Long	Destination field ID
source_field_name	String	Source field name
target_field_name	String	Destination field name
create_by	String	Creator
update_by	String	User who updated the mapping
create_time	String	Creation time
update_time	String	Update time

**Table 7-688** SelfDefinedFieldVO

Parameter	Type	Description
fd_name_ch	String	Custom field name in Chinese Maximum: <b>200</b>
fd_name_en	String	Custom field name in English Maximum: <b>200</b>
not_null	Boolean	Whether the field is mandatory
fd_value	String	Field value

**Status code: 400****Table 7-689** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-690** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**



**Table 7-691** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **TableModelVO** is returned.

```
{
  "id": "1012314146584301568",
  "model_id": "873242752312385536",
  "parent_table_id": null,
  "parent_table_name": null,
  "parent_table_code": null,
  "model": null,
  "data_format": "Parquet",
  "obs_bucket": null,
  "obs_location": null,
  "configs": "{}",
  "table_type": "MANAGED",
  "owner": "",
  "tb_name": "staff_info",
  "dw_id": "2c9080f07b03db8d017b198a4a20002f",
  "db_name": "ctz_test",
  "queue_name": "default",
  "schema": "",
  "extend_info": "{\"dirtyOutDatabase\":\"\",\"dirtyOutPrefix\":\"\",\"dirtyOutSuffix\":\"\",\"dirtyOutSwitch\":\
false\"}",
  "tb_guid": null,
  "tb_id": "NativeTable-2c9080f07b03db8d017b198a4a20002f-ctz_test-staff_info",
  "logic_tb_name": "staff_info",
  "logic_tb_guid": "1ab1a58b-9412-4901-bb80-4ccaaa0580e4",
  "description": "None",
  "status": "PUBLISHED",
  "logic_tb_id": null,
  "biz_catalog_id": "1012306178602041344",
  "catalog_path": "Factory/Personnel management/Personnel archive",
  "create_by": "abc",
  "update_by": "abc",
  "create_time": "2022-08-25T10:55:00+08:00",
  "update_time": "2022-08-25T10:55:45+08:00",
  "tags": [],
  "approval_info": {
    "id": "1012314318533988352",
    "tenant_id": null,
    "name_ch": null,
    "name_en": null,
    "biz_id": "1012314146584301568",
    "biz_type": null,
  }
}
```

```
"biz_info" : null,
"biz_info_obj" : null,
"biz_version" : 0,
"biz_status" : "PUBLISHED",
"approval_status" : "APPROVED",
"approval_type" : null,
"submit_time" : "2022-08-25T10:55:41+08:00",
"create_by" : null,
"l1" : null,
"l2" : null,
"l3" : null,
"approval_time" : "2022-08-25T10:55:41+08:00",
"approver" : "abc",
"email" : null,
"msg" : "Fast Approval OK.",
"directory_path" : null
},
"new_biz" : null,
"attributes" : [ {
  "id" : "1012314146626244608",
  "name_en" : "id",
  "name_ch" : "Primary key",
  "description" : "",
  "obs_location" : null,
  "create_by" : "abc",
  "update_by" : "abc",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : "",
  "is_primary_key" : true,
  "is_partition_key" : false,
  "is_foreign_key" : false,
  "extend_field" : false,
  "not_null" : true,
  "ordinal" : 1,
  "table_model_id" : null,
  "create_time" : "2022-08-25T10:55:00+08:00",
  "update_time" : "2022-08-25T10:55:00+08:00",
  "tags" : [ ],
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : [ ]
}, {
  "id" : "1012314146626244609",
  "name_en" : "name",
  "name_ch" : "Name",
  "description" : "",
  "obs_location" : null,
  "create_by" : "abc",
  "update_by" : "abc",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : "",
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : false,
  "extend_field" : false,
  "not_null" : false,
  "ordinal" : 2,
  "table_model_id" : null,
  "create_time" : "2022-08-25T10:55:00+08:00",
  "update_time" : "2022-08-25T10:55:00+08:00",
  "tags" : [ ],
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : ""
```

```
"self_defined_fields" : [ ]
}, {
  "id" : "1012314146592690176",
  "name_en" : "age",
  "name_ch" : "Age",
  "description" : "",
  "obs_location" : null,
  "create_by" : "abc",
  "update_by" : "abc",
  "data_type" : "STRING",
  "domain_type" : "STRING",
  "data_type_extend" : "",
  "is_primary_key" : false,
  "is_partition_key" : false,
  "is_foreign_key" : false,
  "extend_field" : false,
  "not_null" : false,
  "ordinal" : 3,
  "table_model_id" : null,
  "create_time" : "2022-08-25T10:55:00+08:00",
  "update_time" : "2022-08-25T10:55:00+08:00",
  "tags" : [ ],
  "stand_row_id" : null,
  "stand_row_name" : null,
  "quality_infos" : null,
  "alias" : "",
  "self_defined_fields" : [ ]
} ],
"mappings" : null,
"relations" : [ ],
"dw_type" : "DLI",
"dw_name" : null,
"l1" : "Factory",
"l2" : "Personnel management",
"l3" : "Personnel archive",
"l1_id" : "1012305751919689728",
"l2_id" : "1012306048792526848",
"l3_id" : "1012306178602041344",
"partition_conf" : null,
"dlf_task_id" : null,
"use_recently_partition" : false,
"reversed" : null,
"dirty_out_switch" : false,
"dirty_out_database" : "",
"dirty_out_prefix" : "",
"dirty_out_suffix" : "",
"quality_owner" : null,
"quality_id" : "1012314332484304897",
"distribute" : null,
"distribute_column" : null,
"is_partition" : false,
"physical_table" : "CREATE_SUCCESS",
"technical_asset" : "CREATE_FAILED",
"business_asset" : "UPDATE_SUCCESS",
"meta_data_link" : "UPDATE_FAILED",
"data_quality" : "CREATE_SUCCESS",
"summary_status" : "SUMMARY_FAILED",
"alias" : null,
"self_defined_fields" : null
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>TableModelVO</b> is returned.

Status Code	Description
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.18.6 Querying the Model List

### Function

This API is used to query the list of physical and logical models based on the business category ID.

### URI

GET /v2/{project\_id}/design/workspaces

**Table 7-692** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-693** Query Parameters

Parameter	Mandatory	Type	Description
workspace_type	No	String	Enumeration values: <ul style="list-style-type: none"><li>• <b>THIRD_NF</b></li><li>• <b>DIMENSION</b></li></ul>
dw_type	No	String	Data connection type

### Request Parameters

None

### Response Parameters

Status code: 200

**Table 7-694** Response body parameters

Parameter	Type	Description
id	Long	ID
name	String	Workspace name Maximum: <b>250</b>
description	String	Maximum: <b>600</b>
is_physical	Boolean	Whether the table is a physical table Default: <b>true</b>
frequent	Boolean	Whether the workspace is frequently used Default: <b>true</b>
top	Boolean	Hierarchical governance Default: <b>true</b>
level	String	Data governance level Enumeration values: <ul style="list-style-type: none"><li>• <b>SDI</b></li><li>• <b>DWI</b></li><li>• <b>DWR</b></li><li>• <b>DM</b></li></ul>
dw_type	String	Data connection type
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the workspace
type	String	Workspace types Enumeration values: <ul style="list-style-type: none"><li>• <b>THIRD_NF</b></li><li>• <b>DIMENSION</b></li></ul>
biz_catalog_ids	String	IDs of business catalogs, including <b>l1ids</b> , <b>l2ids</b> , and <b>l3ids</b>
databases	Array of strings	Array of database names

**Status code: 400**

**Table 7-695** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-696** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-697** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. The **WorkspaceVO** array and the total number of models are returned.

```
{
  "id" : "1014218815216717824",
  "name" : "test",
  "description" : "abc",
  "is_physical" : true,
  "frequent" : false,
  "top" : true,
  "level" : "SDI",
  "dw_type" : "DLI",
  "create_time" : "2022-08-30T17:03:28.822+08:00",
  "update_time" : "2022-08-30T17:03:28.822+08:00",
  "create_by" : "abc",
  "update_by" : "abc",
  "type" : "THIRD_NF",
  "biz_catalog_ids" : null,
  "databases" : null
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>WorkspaceVO</b> array and the total number of models are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.18.7 Creating Workspaces

### Function

This API is used to create workspaces.

### URI

POST /v2/{project\_id}/design/workspaces

**Table 7-698** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 7-699** Request body parameters

Parameter	Mandatory	Type	Description
id	No	Long	ID
name	Yes	String	Workspace name Maximum: <b>250</b>
description	No	String	Maximum: <b>600</b>
is_physical	No	Boolean	Whether the table is a physical table Default: <b>true</b>
frequent	No	Boolean	Whether the workspace is frequently used Default: <b>true</b>
top	No	Boolean	Hierarchical governance Default: <b>true</b>
level	No	String	Data governance level Enumeration values: <ul style="list-style-type: none"> <li>• <b>SDI</b></li> <li>• <b>DWI</b></li> <li>• <b>DWR</b></li> <li>• <b>DM</b></li> </ul>
dw_type	No	String	Data connection type
create_time	No	String	Creation time
update_time	No	String	Update time
create_by	No	String	Creator
update_by	No	String	User who updated the workspace
type	Yes	String	Workspace types Enumeration values: <ul style="list-style-type: none"> <li>• <b>THIRD_NF</b></li> <li>• <b>DIMENSION</b></li> </ul>
biz_catalog_ids	No	String	IDs of business catalogs, including <b>l1Ids</b> , <b>l2Ids</b> , and <b>l3Ids</b>
databases	No	Array of strings	Array of database names



## Response Parameters

Status code: 200

Table 7-700 Response body parameters

Parameter	Type	Description
id	Long	ID
name	String	Workspace name Maximum: <b>250</b>
description	String	Maximum: <b>600</b>
is_physical	Boolean	Whether the table is a physical table Default: <b>true</b>
frequent	Boolean	Whether the workspace is frequently used Default: <b>true</b>
top	Boolean	Hierarchical governance Default: <b>true</b>
level	String	Data governance level Enumeration values: <ul style="list-style-type: none"><li>• <b>SDI</b></li><li>• <b>DWI</b></li><li>• <b>DWR</b></li><li>• <b>DM</b></li></ul>
dw_type	String	Data connection type
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the workspace
type	String	Workspace types Enumeration values: <ul style="list-style-type: none"><li>• <b>THIRD_NF</b></li><li>• <b>DIMENSION</b></li></ul>
biz_catalog_ids	String	IDs of business catalogs, including <b>l1Ids</b> , <b>l2Ids</b> , and <b>l3Ids</b>
databases	Array of strings	Array of database names

**Status code: 400****Table 7-701** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-702** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-703** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Example Requests**

```
{
  "id" : "953670725619867648",
  "name" : "test",
  "description" : "this is an example.",
  "is_physical" : false,
  "frequent" : false,
  "top" : true,
  "level" : null,
}
```

```

"dw_type" : "UNSPECIFIED",
"create_time" : "2022-03-16T15:06:59.333+08:00",
"update_time" : "2022-03-16T15:06:59.333+08:00",
"create_by" : "ei_dgc",
"update_by" : "ei_dgc",
"type" : "THIRD_NF",
"biz_catalog_ids" : null,
"databases" : null
}

```

## Example Responses

**Status code: 200**

The operation succeeds. **WorkspaceVO** is returned.

```

{
  "data" : {
    "value" : {
      "id" : "1014218815216717824",
      "name" : "test",
      "description" : "abc",
      "is_physical" : true,
      "frequent" : false,
      "top" : true,
      "level" : "SDI",
      "dw_type" : "DLI",
      "create_time" : "2022-08-30T17:03:28.822+08:00",
      "update_time" : "2022-08-30T17:03:28.822+08:00",
      "create_by" : "abc",
      "update_by" : "abc",
      "type" : "THIRD_NF",
      "biz_catalog_ids" : null,
      "databases" : null
    }
  }
}

```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>WorkspaceVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.18.8 Updating Workspaces

### Function

This API is used to update workspaces.

### URI

PUT /v2/{project\_id}/design/workspaces

**Table 7-704** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 7-705** Request body parameters

Parameter	Mandatory	Type	Description
id	No	Long	ID
name	Yes	String	Workspace name Maximum: <b>250</b>
description	No	String	Maximum: <b>600</b>
is_physical	No	Boolean	Whether the table is a physical table Default: <b>true</b>
frequent	No	Boolean	Whether the workspace is frequently used Default: <b>true</b>
top	No	Boolean	Hierarchical governance Default: <b>true</b>
level	No	String	Data governance level Enumeration values: <ul style="list-style-type: none"> <li>• <b>SDI</b></li> <li>• <b>DWI</b></li> <li>• <b>DWR</b></li> <li>• <b>DM</b></li> </ul>
dw_type	No	String	Data connection type
create_time	No	String	Creation time
update_time	No	String	Update time
create_by	No	String	Creator
update_by	No	String	User who updated the workspace

Parameter	Mandatory	Type	Description
type	Yes	String	Workspace types Enumeration values: <ul style="list-style-type: none"> <li>• <b>THIRD_NF</b></li> <li>• <b>DIMENSION</b></li> </ul>
biz_catalog_ids	No	String	IDs of business catalogs, including <b>l1Ids</b> , <b>l2Ids</b> , and <b>l3Ids</b>
databases	No	Array of strings	Array of database names

## Response Parameters

Status code: 200

**Table 7-706** Response body parameters

Parameter	Type	Description
id	Long	ID
name	String	Workspace name Maximum: <b>250</b>
description	String	Maximum: <b>600</b>
is_physical	Boolean	Whether the table is a physical table Default: <b>true</b>
frequent	Boolean	Whether the workspace is frequently used Default: <b>true</b>
top	Boolean	Hierarchical governance Default: <b>true</b>
level	String	Data governance level Enumeration values: <ul style="list-style-type: none"> <li>• <b>SDI</b></li> <li>• <b>DWI</b></li> <li>• <b>DWR</b></li> <li>• <b>DM</b></li> </ul>
dw_type	String	Data connection type
create_time	String	Creation time
update_time	String	Update time

Parameter	Type	Description
create_by	String	Creator
update_by	String	User who updated the workspace
type	String	Workspace types Enumeration values: <ul style="list-style-type: none"><li>• <b>THIRD_NF</b></li><li>• <b>DIMENSION</b></li></ul>
biz_catalog_ids	String	IDs of business catalogs, including <b>l1ids</b> , <b>l2ids</b> , and <b>l3ids</b>
databases	Array of strings	Array of database names

**Status code: 400****Table 7-707** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-708** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-709** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

```
{
  "id" : "953670725619867648",
  "name" : "test",
  "description" : "this is an example.",
  "is_physical" : false,
  "frequent" : false,
  "top" : true,
  "level" : null,
  "dw_type" : "UNSPECIFIED",
  "create_time" : "2022-03-16T15:06:59.333+08:00",
  "update_time" : "2022-03-16T15:06:59.333+08:00",
  "create_by" : "ei_dgc",
  "update_by" : "ei_dgc",
  "type" : "THIRD_NF",
  "biz_catalog_ids" : null,
  "databases" : null
}
```

## Example Responses

**Status code: 200**

The operation succeeds. **WorkspaceVO** is returned.

```
{
  "data" : {
    "value" : {
      "id" : "1014218815216717824",
      "name" : "test",
      "description" : "abc123",
      "is_physical" : true,
      "frequent" : false,
      "top" : true,
      "level" : "SDI",
      "dw_type" : "DLI",
      "create_time" : "2022-08-30T17:03:29+08:00",
      "update_time" : "2022-08-30T17:05:08.773+08:00",
      "create_by" : "abc",
      "update_by" : "abc",
      "type" : "THIRD_NF",
      "biz_catalog_ids" : null,
      "databases" : null
    }
  }
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>WorkspaceVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.18.9 Deleting Workspaces

### Function

This API is used to delete workspaces.

### URI

DELETE /v2/{project\_id}/design/workspaces

**Table 7-710** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-711** Query Parameters

Parameter	Mandatory	Type	Description
ids	Yes	Array	Array of entity IDs

### Request Parameters

None

### Response Parameters

Status code: 200

**Table 7-712** Response body parameters

Parameter	Type	Description
data	Object	Returned data



**Status code: 400****Table 7-713** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-714** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-715** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Example Requests**

None

**Example Responses**

None

## Status Codes

Status Code	Description
200	The operation succeeds, and the number of deleted workspaces is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.18.10 Querying Details About a Model

### Function

This API is used to query the workspace details of a physical or logical model.

### URI

GET /v2/{project\_id}/design/workspaces/{model\_id}

**Table 7-716** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
model_id	Yes	String	Parameters for querying workspaces by ID

### Request Parameters

None

### Response Parameters

**Status code: 200**

**Table 7-717** Response body parameters

Parameter	Type	Description
id	Long	ID
name	String	Workspace name Maximum: <b>250</b>

Parameter	Type	Description
description	String	Maximum: <b>600</b>
is_physical	Boolean	Whether the table is a physical table Default: <b>true</b>
frequent	Boolean	Whether the workspace is frequently used Default: <b>true</b>
top	Boolean	Hierarchical governance Default: <b>true</b>
level	String	Data governance level Enumeration values: <ul style="list-style-type: none"> <li>• <b>SDI</b></li> <li>• <b>DWI</b></li> <li>• <b>DWR</b></li> <li>• <b>DM</b></li> </ul>
dw_type	String	Data connection type
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the workspace
type	String	Workspace types Enumeration values: <ul style="list-style-type: none"> <li>• <b>THIRD_NF</b></li> <li>• <b>DIMENSION</b></li> </ul>
biz_catalog_ids	String	IDs of business catalogs, including <b>l1Ids</b> , <b>l2Ids</b> , and <b>l3Ids</b>
databases	Array of strings	Array of database names

**Status code: 400**

**Table 7-718** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.

Parameter	Type	Description
error_msg	String	Error message
data	Object	Returned data

**Status code: 401****Table 7-719** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403****Table 7-720** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. **WorkspaceVO** is returned.

```
{
  "id" : "1014218815216717824",
  "name" : "test",
  "description" : "abc123",
  "is_physical" : true,
  "frequent" : false,
  "top" : true,
  "level" : "SDI",
```

```

"dw_type": "DLI",
"create_time": "2022-08-30T17:03:29+08:00",
"update_time": "2022-08-30T17:05:08.773+08:00",
"create_by": "abc",
"update_by": "abc",
"type": "THIRD_NF",
"biz_catalog_ids": null,
"databases": null
}
    
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>WorkspaceVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.19 Import/Export APIs

### 7.19.1 Querying the Import Result

#### Function

This API is used to query the result of data import to an Excel file.

#### URI

GET /v2/{project\_id}/design/catalogs/process-import

**Table 7-721** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	tenant id

**Table 7-722** Query Parameters

Parameter	Mandatory	Type	Description
uuid	Yes	String	Import result to be queried

#### Request Parameters

None

## Response Parameters

Status code: 200

**Table 7-723** Response body parameters

Parameter	Type	Description
status	String	Status used to query the import result Enumeration values: <ul style="list-style-type: none"> <li>• <b>importing</b></li> <li>• <b>fail</b></li> <li>• <b>success</b></li> </ul>
group	<a href="#">BatchOperationVO</a> object	Group
rate	String	Progress Default: <b>0</b>

**Table 7-724** BatchOperationVO

Parameter	Type	Description
id	Long	ID
tenant_id	String	tenant id
group_id	Long	group id
biz_name	String	Business name
biz_id	Long	Business ID
operation_status	String	Enumeration values: <ul style="list-style-type: none"> <li>• <b>RUNNING</b></li> <li>• <b>SUCCESS</b></li> <li>• <b>FAILED</b></li> </ul>
operation_type	String	Operation type
biz_info	String	Business information
create_by	String	Creator
remark	String	Remarks
total	Integer	Total number of operations Default: <b>0</b>

Parameter	Type	Description
success	Integer	Number of successful operations Default: <b>0</b>
failed	Integer	Number of failed operations Default: <b>0</b>
rate	String	Progress Default: <b>0</b>
logs	String	Logs
groups	Array of <a href="#">BatchOperationVO</a> objects	Groups

**Status code: 400****Table 7-725** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 401****Table 7-726** Response body parameters

Parameter	Type	Description
data	Object	Returned data

**Status code: 403****Table 7-727** Response body parameters

Parameter	Type	Description
data	Object	Returned data

## Example Requests

None

## Example Responses

### Status code: 200

The operation succeeds. **DsProcessImportResultVO** is returned.

```
{
  "status": "success",
  "group": {
    "id": null,
    "tenant_id": "0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-f7eee36e67e541a59679f9b1b7f4eab0",
    "group_id": "1014919548664713216",
    "biz_name": null,
    "biz_id": null,
    "operation_status": "SUCCESS",
    "operation_type": "IMPORT_CODETABLE",
    "biz_info": null,
    "create_by": "abc",
    "remark": null,
    "total": 2,
    "success": 2,
    "failed": 0,
    "rate": "1.00",
    "logs": null,
    "groups": [ {
      "id": "1014919548861845504",
      "tenant_id": "0cf68da0ba80f2962ff7c01ba8c0b7f7-workspace-f7eee36e67e541a59679f9b1b7f4eab0",
      "group_id": "1014919548664713216",
      "biz_name": "test",
      "biz_id": null,
      "operation_status": "SUCCESS",
      "operation_type": "IMPORT_CODETABLE",
      "biz_info": "{\"op_name\":\"test\",\"op_number\":0}",
      "create_by": "abc",
      "remark": "SKIP",
      "total": 0,
      "success": 0,
      "failed": 0,
      "rate": null,
      "logs": null,
      "groups": null
    } ]
  },
  "rate": "1.00"
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. <b>DsProcessImportResultVO</b> is returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.20 Catalog Management APIs



## 7.20.1 Obtaining All Directories

### Function

This API is used to obtain all directories.

### URI

GET /v2/{project\_id}/design/directories

**Table 7-728** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-729** Query Parameters

Parameter	Mandatory	Type	Description
type	Yes	String	Obtains the data in the directory and the data in all subdirectories (if there are any). Enumeration values: <ul style="list-style-type: none"><li>• CODE</li><li>• STANDARD_ELEMENT</li></ul>

### Request Parameters

None

### Response Parameters

**Status code: 200**

**Table 7-730** Response body parameters

Parameter	Type	Description
name	String	Name
description	String	Description

Parameter	Type	Description
type	String	Directory type Enumeration values: <ul style="list-style-type: none"> <li>● <b>STANDARD_ELEMENT</b></li> <li>● <b>TAG</b></li> <li>● <b>CODE</b></li> </ul>
id	Long	ID
parent_id	Long	Parent directory ID. The root node does not have this ID.
prev_id	Long	ID of the previous node. The first node does not have this ID.
root_id	Long	Root node ID
qualified_name	String	Directory
create_time	String	Creation time
update_time	String	Update time
create_by	String	Creator
update_by	String	User who updated the directory
children	Array of <b>DirectoryVO</b> objects	Subdirectory

**Status code: 400**

**Table 7-731** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-732** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 403**

**Table 7-733** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. Catalogs with subcatalogs are returned.

```
[ {
  "name" : "db",
  "description" : "db",
  "type" : "db",
  "id" : "db",
  "parent_id" : "db",
  "prev_id" : "db",
  "root_id" : "db",
  "qualified_name" : "qname",
  "tenant_id" : "tid",
  "create_time" : 1111,
  "update_time" : 2222,
  "create_by" : "test",
  "update_by" : "test",
  "children" : [ {
    "name" : "child",
    "description" : "db",
    "xxxx" : "Other attributes",
    "children" : [ {
      "name" : "child_of_child",
      "xxxx" : "Other attributes"
```

```
    }  
  }  
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. Catalogs with subcatalogs are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

## 7.21 Version Information APIs

### 7.21.1 Querying Versions

#### Function

This API is used to query versions based on the name, creator, and modification time.

#### URI

GET /v2/{project\_id}/design/versions

**Table 7-734** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 7-735** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Fuzzy query by name or code
create_by	No	String	Creator
biz_id	No	Long	Business ID
biz_type	No	String	Business types

Parameter	Mandatory	Type	Description
begin_time	No	String	Left boundary for a time filter. This parameter must be used together with <b>end_time</b> .
end_time	No	String	Right boundary for a time filter. This parameter must be used together with <b>begin_time</b> .

## Request Parameters

None

## Response Parameters

Status code: 200

Table 7-736 Response body parameters

Parameter	Type	Description
id	Long	Version ID
version_name	String	Version name
version_tag	String	Version tag
description	String	Version description
biz_id	Long	Business object ID

Parameter	Type	Description
biz_type	String	Business types Enumeration values: <ul style="list-style-type: none"> <li>• <b>ATOMIC_INDEX</b></li> <li>• <b>DERIVATIVE_INDEX</b></li> <li>• <b>DIMENSION</b></li> <li>• <b>DIMENSION_ATTRIBUTE</b></li> <li>• <b>DIMENSION_HIERARCHIES</b></li> <li>• <b>CONDITION_GROUP</b></li> <li>• <b>TIME_CONDITION</b></li> <li>• <b>COMMON_CONDITION</b></li> <li>• <b>FACT_LOGIC_TABLE</b></li> <li>• <b>TABLE_MODEL</b></li> <li>• <b>DIMENSION_LOGIC_TABLE</b></li> <li>• <b>STANDARD_ELEMENT</b></li> <li>• <b>AGGREGATION_LOGIC_TABLE</b></li> <li>• <b>TAG</b></li> <li>• <b>CODE_TABLE</b></li> <li>• <b>TABLE_MODEL_ATTRIBUTE</b></li> <li>• <b>FACT_DIMENSION</b></li> <li>• <b>FACT_ATTRIBUTE</b></li> <li>• <b>FACT_MEASURE</b></li> <li>• <b>SUMMARY_DIMENSION_ATTRIBUTE</b></li> <li>• <b>SUMMARY_TIME</b></li> <li>• <b>DIMENSION_TABLE_ATTRIBUTE</b></li> <li>• <b>QUALITY_RULE</b></li> <li>• <b>BIZ_METRIC</b></li> <li>• <b>COMPOUND_METRIC</b></li> <li>• <b>INFO_ARCH</b></li> <li>• <b>DEGENERATE_DIMENSION</b></li> <li>• <b>TABLE_MODEL_LOGIC</b></li> </ul>
biz_info	String	Business information
biz_info_vo	Object	Business object
effect_objs	String	Impact information
change_props	String	Change information
sql_ddl	String	SQL script

Parameter	Type	Description
physical_table	String	Table creation status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
technical_asset	String	Technical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
business_asset	String	Logical asset synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>

Parameter	Type	Description
meta_data_link	String	Asset association status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
data_quality	String	Quality job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
dlf_task	String	Data development job status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>



Parameter	Type	Description
materialization	String	Storage status of the lookup table value Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
publish_to_dlm	String	DLM API generation status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
biz_metric	String	Business metric synchronization status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>

Parameter	Type	Description
summary_status	String	Summary status Enumeration values: <ul style="list-style-type: none"> <li>• NO_NEED</li> <li>• CREATE_SUCCESS</li> <li>• CREATE_FAILED</li> <li>• UPDATE_SUCCESS</li> <li>• UPDATE_FAILED</li> <li>• SUMMARY_SUCCESS</li> <li>• SUMMARY_FAILED</li> <li>• RUNNING</li> <li>• OFFLINE</li> </ul>
is_current_version	Boolean	Whether the version is the current version Default: <b>false</b>
create_time	String	Creation time
create_by	String	Creator

**Status code: 400**

**Table 7-737** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

**Status code: 401**

**Table 7-738** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

Parameter	Type	Description
data	Object	Returned data

**Status code: 403**

**Table 7-739** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DS.000</b> which indicates that the request was successfully processed.
error_msg	String	Error message
data	Object	Returned data

## Example Requests

None

## Example Responses

**Status code: 200**

The operation succeeds. The **PublishVersionVO** array and the total number of versions are returned.

```
{
  "id": "1012308140932370432",
  "version_name": "Gender_2022-08-25_10-31-08_575",
  "version_tag": "Gender_2022-08-25_10-31-08_575",
  "description": null,
  "biz_id": "1012307352952635392",
  "biz_type": "CODE_TABLE",
  "biz_info": null,
  "biz_info_vo": null,
  "effect_objs": null,
  "change_props": null,
  "sql_ddl": null,
  "physical_table": null,
  "technical_asset": null,
  "business_asset": null,
  "meta_data_link": null,
  "data_quality": null,
  "dlf_task": null,
  "materialization": null,
  "publish_to_dlm": null,
  "biz_metric": null,
  "summary_status": "SUMMARY_SUCCESS",
  "is_current_version": true,
  "create_time": "2022-08-25T10:31:09+08:00",
  "create_by": "abc"
}
```

## Status Codes

Status Code	Description
200	The operation succeeds. The <b>PublishVersionVO</b> array and the total number of versions are returned.
400	BadRequest
401	Unauthorized
403	Forbidden

# 8 DataArts Quality APIs

## 8.1 Catalog APIs

### 8.1.1 Obtaining the Catalog List

#### Function

This API is used to obtain the catalog list.

#### URI

GET /v2/{project\_id}/quality/categories

**Table 8-1** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	project id

#### Request Parameters

**Table 8-2** Request header parameters

Parameter	Mandatory	Type	Description
workspace	Yes	String	Workspace information
accept	Yes	String	application/json
X-Auth-Token	Yes	String	token

## Response Parameters

**Status code: 200**

**Table 8-3** Response body parameters

Parameter	Type	Description
id	Long	Catalog ID. The ID of the root catalog is <b>0</b> .
name	String	Name
type	String	Type. The value can be <b>built_in</b> or <b>user-defined</b> .
pid	String	Parent catalog ID
sub_categories	Array of <b>SubCategoryDetailVO</b> objects	Sub-catalog

**Table 8-4** SubCategoryDetailVO

Parameter	Type	Description
id	Long	Catalog ID. The ID of the root catalog is <b>0</b> .
name	String	Name
type	String	Type. The value can be <b>built_in</b> or <b>user-defined</b> .
pid	String	Parent catalog ID
sub_categories	Object	Sub-catalog

**Status code: 400**

**Table 8-5** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

**Status code: 500**

**Table 8-6** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

## Example Requests

None

## Example Responses

None

## Status Codes

Status Code	Description
200	Success
400	BadRequest
500	INTERNAL SERVER ERROR

# 8.2 Rule Template APIs

## 8.2.1 Obtaining the Rule Template List

### Function

This API is used to obtain the rule template list.

### URI

GET /v2/{project\_id}/quality/rule-templates

**Table 8-7** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	project id

**Table 8-8** Query Parameters

Parameter	Mandatory	Type	Description
category_id	No	Long	category id Default: <b>0</b>
name	No	String	name
system_template	No	Boolean	Whether to query only system templates Default: <b>false</b>
creator	No	String	Creator
limit	No	Integer	Pagination limit. The maximum value is <b>100</b> . Default: <b>10</b>
offset	No	Integer	Pagination offset Default: <b>0</b>

## Request Parameters

**Table 8-9** Request header parameters

Parameter	Mandatory	Type	Description
workspace	Yes	String	Workspace information
X-Auth-Token	Yes	String	token

## Response Parameters

**Status code: 200**

**Table 8-10** Response body parameters

Parameter	Type	Description
count	Long	Total number of records
resources	Array of <a href="#">RuleTemplateDetailVO</a> objects	Number of records on each page



**Table 8-11** RuleTemplateDetailVO

Parameter	Type	Description
id	Long	id
name	String	name
category_id	Long	Catalog ID
dimension	String	Dimension. The value can be <b>Completeness, Uniqueness, Timelines, Validity, Accuracy, or Consistency</b> .
type	String	Rule type. The options are as follows: <b>Field</b> : field-level rule; <b>Table</b> : table-level rule; <b>Database</b> : database-level rule; <b>Cross-field</b> : cross-field rule; <b>Customize</b> : custom rule.
system_template	Boolean	Whether the template is a system template
sql_info	String	SQL information
result_description	String	Result description
create_time	Long	Creation time. The value is a 13-digit timestamp accurate to millisecond.
creator	String	Creator. Value <b>System</b> indicates that the creator is provided by the system.

**Status code: 400****Table 8-12** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

**Status code: 500**

**Table 8-13** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

## Example Requests

None

## Example Responses

None

## Status Codes

Status Code	Description
200	Success
400	BadRequest
500	INTERNAL SERVER ERROR

## 8.2.2 Obtaining Rule Template Details

### Function

This API is used to obtain the details of a rule template.

### URI

GET /v2/{project\_id}/quality/rule-templates/{id}

**Table 8-14** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	project id
id	Yes	Long	id

## Request Parameters

**Table 8-15** Request header parameters

Parameter	Mandatory	Type	Description
workspace	Yes	String	Workspace information
X-Auth-Token	Yes	String	token

## Response Parameters

**Status code: 200**

**Table 8-16** Response body parameters

Parameter	Type	Description
id	String	id
name	String	name
category_id	Long	Catalog ID
dimension	String	Dimension. The value can be <b>Completeness, Uniqueness, Timelines, Validity, Accuracy, or Consistency</b> .
type	String	Rule type. The options are as follows: <b>Field</b> : field-level rule; <b>Table</b> : table-level rule; <b>Database</b> : database-level rule; <b>Cross-field</b> : cross-field rule; <b>Customize</b> : custom rule.
system_template	Boolean	Whether the template is a system template
sql_info	String	SQL information
result_description	String	Result description
create_time	Long	Creation time. The value is a 13-digit timestamp accurate to millisecond.
creator	String	Creator. Value <b>System</b> indicates that the creator is provided by the system.

**Status code: 400**

**Table 8-17** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

**Status code: 500****Table 8-18** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

## Example Requests

None

## Example Responses

None

## Status Codes

Status Code	Description
200	Success
400	BadRequest
500	INTERNAL SERVER ERROR

## 8.3 Quality Job APIs

### 8.3.1 Obtaining the Quality Job List

#### Function

This API is used to obtain the list of quality jobs.

## URI

GET /v2/{project\_id}/quality/quality-tasks

**Table 8-19** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. Execution results of only the tasks that belong to this project can be obtained.

**Table 8-20** Query Parameters

Parameter	Mandatory	Type	Description
category_id	No	Long	Catalog ID
name	No	String	name
schedule_status	No	String	Scheduling status. The value can be <b>UNKNOWN</b> (unknown), <b>NOT_START</b> (not started), <b>SCHEDULING</b> (scheduling), <b>FINISH_SUCCESS</b> (completed properly), <b>KILL</b> (manually stopped), or <b>RUNNING_EXCEPTION</b> (scheduling failed). Enumeration values: <ul style="list-style-type: none"> <li>• <b>UNKNOWN</b></li> <li>• <b>NOT_START</b></li> <li>• <b>SCHEDULING</b></li> <li>• <b>FINISH_SUCCESS</b></li> <li>• <b>KILL</b></li> <li>• <b>RUNNING_EXCEPTION</b></li> </ul>
start_time	No	Long	Start time of the last query period. The value is a 13-digit timestamp accurate to millisecond.
end_time	No	Long	End time of the last query period. The value is a 13-digit timestamp accurate to millisecond.
creator	No	String	Creator

Parameter	Mandatory	Type	Description
limit	No	Long	Pagination limit. The maximum value is <b>100</b> . Minimum: <b>0</b> Maximum: <b>100</b> Default: <b>10</b>
offset	No	Long	Pagination offset. The minimum value is <b>0</b> . Minimum: <b>0</b> Default: <b>0</b>

## Request Parameters

Table 8-21 Request header parameters

Parameter	Mandatory	Type	Description
workspace	Yes	String	Workspace information
X-Auth-Token	Yes	String	token

## Response Parameters

Status code: 200

Table 8-22 Response body parameters

Parameter	Type	Description
count	Long	Total number of records
resources	Array of <a href="#">QualityTaskOverviewVO</a> objects	Number of records on each page

Table 8-23 QualityTaskOverviewVO

Parameter	Type	Description
id	Long	id
name	String	name
category_id	Long	Catalog ID

Parameter	Type	Description
schedule_status	String	Scheduling status. The value can be <b>UNKNOWN</b> (unknown), <b>NOT_START</b> (not started), <b>SCHEDULING</b> (scheduling), <b>FINISH_SUCCESS</b> (completed properly), <b>KILL</b> (manually stopped), or <b>RUNNING_EXCEPTION</b> (scheduling failed).
schedule_period	String	Scheduling period. The value can be <b>MINUTE</b> , <b>HOUR</b> , <b>DAY</b> , or <b>WEEK</b> .
schedule_interval	String	Scheduling interval. When the scheduling period is minute, hour, or day, a numeric string is returned. When the scheduling period is week, certain days of a week such as <b>MONDAY,THURSDAY</b> are returned.
create_time	Long	Creation time. The value is a 13-digit timestamp accurate to millisecond.
last_run_time	Long	Last running time. The value is a 13-digit timestamp accurate to millisecond.
creator	String	Creator

**Status code: 400**

**Table 8-24** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

**Status code: 500**

**Table 8-25** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

## Example Requests

None

## Example Responses

None

## Status Codes

Status Code	Description
200	Response. If the operation is successful, <b>InstanceVO</b> is returned.
400	BadRequest
500	INTERNAL SERVER ERROR

## 8.3.2 Obtaining Quality Job Details

### Function

This API is used to obtain the details of a quality job.

### URI

GET /v2/{project\_id}/quality/quality-tasks/{id}

**Table 8-26** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. Execution results of only the tasks that belong to this project can be obtained.
id	Yes	String	Quality job ID

### Request Parameters

**Table 8-27** Request header parameters

Parameter	Mandatory	Type	Description
workspace	Yes	String	Workspace information
X-Auth-Token	Yes	String	token



## Response Parameters

Status code: 200

Table 8-28 Response body parameters

Parameter	Type	Description
id	Long	ID
name	String	Job name
description	String	Job description
category_id	String	Catalog ID
level	String	Level. The value can be <b>SUGGEST</b> , <b>MINOR</b> , <b>MAJOR</b> , or <b>FATAL</b> .
alarm_condition	String	Unified alarm condition
alarm_notify	Boolean	Whether to enable alarm notifications
alarm_notify_type	String	Notification type. <b>TRIGGER_ALARM</b> indicates that an alarm is triggered; <b>RUN_SUCCESS</b> indicates that the execution is successful; <b>TRIGGER_ALARM_AND_RUNNING_SUCCESS</b> indicates that an alarm is triggered and the execution is successful.
alarm_notify_topic	String	Notification topic name
schedule_type	String	Scheduling type. The value can be <b>ONCE</b> (one-time scheduling) or <b>PERIODIC</b> (periodic scheduling).
schedule_start_date	String	Scheduling start date
schedule_end_date	String	Scheduling end date
schedule_period	String	Scheduling period. The value can be <b>MINUTE</b> , <b>HOURLY</b> , <b>DAY</b> , or <b>WEEK</b> .
schedule_interval	String	Scheduling interval. When the scheduling period is minute, hour, or day, the scheduling interval is a number. When the scheduling period is week, the scheduling interval is days in a week, for example, <b>MONDAY,TUESDAY</b> .
schedule_start_time	String	Scheduling start time
schedule_end_time	String	Scheduling end time

Parameter	Type	Description
create_time	Long	Creation time. The value is a 13-digit timestamp accurate to millisecond.
last_run_time	Long	Last running time. The value is a 13-digit timestamp accurate to millisecond.
sub_rules	Array of <a href="#">QualityTaskRuleDetailForOpenApi</a> objects	Sub-rules
schedule_cron	String	Scheduling cron expression

**Table 8-29** QualityTaskRuleDetailForOpenApi

Parameter	Type	Description
id	Long	Sub-rule ID
sub_rule_name	String	Sub-rule name
type	String	Rule type. <b>SingleDatabase</b> indicates a database-level rule; <b>SingleTable</b> indicates a table-level rule; <b>SingleColumn</b> indicates a field-level rule; <b>CrossColumn</b> indicates a cross-field rule; <b>Customize</b> indicates a custom rule.
template_id	Long	Rule template ID
connection	String	Data connection ID
connection_type	String	Data connection type
databases	String	Database name. Use commas (,) to separate multiple values.
sql	String	SQL script in a custom rule, which is returned for a system rule
tables	String	Table names. Use commas (,) to separate multiple values.
reference_tables	String	Reference table names in a cross-field rule. Use commas (,) to separate multiple values.
columns	String	Field name. Use commas (,) to separate multiple values.
reference_columns	String	Reference field names in a cross-field rule. Use commas (,) to separate multiple values.

Parameter	Type	Description
ignore_error	String	Whether to ignore rule errors
dimension	String	Dimension
queue	String	DLI queue
regular_expression	String	Regular expression as the rule template
template_arguments	String	Template parameters
weight	Integer	Rule weight
calculation_range	String	Calculation range
calculation_range_sql	String	Calculation range SQL
alarm_condition	String	Alarm expression
export_abnormal_table	Boolean	Whether to export abnormal data
abnormal_table_database	String	Database where the abnormal table is located
abnormal_table_schema	String	Schema of an abnormal table
abnormal_table	String	Table where the abnormal field is located
abnormal_table_prefix	String	Prefix of an abnormal table
abnormal_table_suffix	String	Suffix of an abnormal table
abnormal_table_columns	String	Name of the abnormal field. Use commas (,) to separate multiple values.
abnormal_table_sql	String	Abnormal table SQL
abnormal_table_out_config	String	Whether the abnormal table outputs rule configuration
abnormal_table_include_null_value	String	Whether the abnormal table contains null values

Parameter	Type	Description
abnormal_table_out_data_number	String	Number of rows output from the abnormal table. Value <b>0</b> indicates that all rows are output.
score_switch	String	Whether to enable quality scoring
score_schema	String	Schema where the quality scoring table is located
score_table	String	Name of the quality scoring table
score_expression	String	Quality scoring expression

**Status code: 400**

**Table 8-30** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

**Status code: 500**

**Table 8-31** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

## Example Requests

None

## Example Responses

None

## Status Codes

Status Code	Description
200	Response. If the operation is successful, <b>InstanceVO</b> is returned.
400	BadRequest
500	INTERNAL SERVER ERROR

## 8.4 Comparison Job APIs

### 8.4.1 Obtaining the Comparison Job List

#### Function

This API is used to obtain the list of comparison jobs.

#### URI

GET /v2/{project\_id}/quality/consistency-tasks

**Table 8-32** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. Execution results of only the tasks that belong to this project can be obtained.

**Table 8-33** Query Parameters

Parameter	Mandatory	Type	Description
category_id	No	Long	Catalog ID
name	No	String	name

Parameter	Mandatory	Type	Description
schedule_status	No	String	Scheduling status. The value can be <b>UNKNOWN</b> (unknown), <b>NOT_START</b> (not started), <b>SCHEDULING</b> (scheduling), <b>FINISH_SUCCESS</b> (completed properly), <b>KILL</b> (manually stopped), or <b>RUNNING_EXCEPTION</b> (scheduling failed). Enumeration values: <ul style="list-style-type: none"> <li>• <b>UNKNOWN</b></li> <li>• <b>NOT_START</b></li> <li>• <b>SCHEDULING</b></li> <li>• <b>FINISH_SUCCESS</b></li> <li>• <b>KILL</b></li> <li>• <b>RUNNING_EXCEPTION</b></li> </ul>
start_time	No	Long	Start time of the last query period. The value is a 13-digit timestamp accurate to millisecond.
end_time	No	Long	End time of the last query period. The value is a 13-digit timestamp accurate to millisecond.
creator	No	String	Creator
limit	No	Long	Pagination limit. The maximum value is <b>100</b> . Minimum: <b>0</b> Maximum: <b>100</b> Default: <b>10</b>
offset	No	Long	Pagination offset. The minimum value is <b>0</b> . Minimum: <b>0</b> Default: <b>0</b>

## Request Parameters

**Table 8-34** Request header parameters

Parameter	Mandatory	Type	Description
workspace	Yes	String	Workspace information
X-Auth-Token	Yes	String	token

## Response Parameters

Status code: 200

**Table 8-35** Response body parameters

Parameter	Type	Description
count	Long	Total number of records
resources	Array of <a href="#">QualityTaskOverviewVO_2</a> objects	Number of records on each page

**Table 8-36** QualityTaskOverviewVO\_2

Parameter	Type	Description
id	Long	id
name	String	name
category_id	Long	Catalog ID
schedule_status	String	Scheduling status. The value can be <b>UNKNOWN</b> (unknown), <b>NOT_START</b> (not started), <b>SCHEDULING</b> (scheduling), <b>FINISH_SUCCESS</b> (completed properly), <b>KILL</b> (manually stopped), or <b>RUNNING_EXCEPTION</b> (scheduling failed).
schedule_period	String	Scheduling period. The value can be <b>MINUTE</b> , <b>HOUR</b> , <b>DAY</b> , or <b>WEEK</b> .
schedule_interval	String	Scheduling interval. When the scheduling period is minute, hour, or day, a numeric string is returned. When the scheduling period is week, certain days of a week such as <b>MONDAY</b> , <b>THURSDAY</b> are returned.

Parameter	Type	Description
create_time	Long	Creation time. The value is a 13-digit timestamp accurate to millisecond.
last_run_time	Long	Last running time. The value is a 13-digit timestamp accurate to millisecond.
creator	String	Creator

**Status code: 400**

**Table 8-37** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

**Status code: 500**

**Table 8-38** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

## Example Requests

None

## Example Responses

None

## Status Codes

Status Code	Description
200	Response. If the operation is successful, <b>InstanceVO</b> is returned.



Status Code	Description
400	BadRequest
500	INTERNAL SERVER ERROR

## 8.4.2 Obtaining Comparison Job Details

### Function

This API is used to obtain the details of a comparison job.

### URI

GET /v2/{project\_id}/quality/consistency-tasks/{id}

**Table 8-39** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	projectId
id	Yes	String	Comparison job ID

### Request Parameters

**Table 8-40** Request header parameters

Parameter	Mandatory	Type	Description
workspace	Yes	String	Workspace information
X-Auth-Token	Yes	String	token

### Response Parameters

**Status code: 200**

**Table 8-41** Response body parameters

Parameter	Type	Description
id	Long	ID
name	String	Job name
description	String	Job description

Parameter	Type	Description
category_id	Long	Catalog ID
level	String	Level. The value can be <b>SUGGEST</b> , <b>MINOR</b> , <b>MAJOR</b> , or <b>FATAL</b> .
alarm_condition	String	Unified alarm condition
alarm_notify	Boolean	Whether to enable alarm notifications
alarm_notify_type	String	Notification type. <b>TRIGGER_ALARM</b> indicates that an alarm is triggered; <b>RUN_SUCCESS</b> indicates that the execution is successful; <b>TRIGGER_ALARM_AND_RUNNING_SUCCESS</b> indicates that an alarm is triggered and the execution is successful.
alarm_notify_topic	String	Notification topic name
schedule_type	String	Scheduling type. The value can be <b>ONCE</b> (one-time scheduling) or <b>PERIODIC</b> (periodic scheduling).
schedule_period	String	Scheduling period. The value can be <b>MINUTE</b> , <b>HOUR</b> , <b>DAY</b> , or <b>WEEK</b> .
schedule_interval	String	Scheduling interval. When the scheduling period is minute, hour, or day, the scheduling interval is a number. When the scheduling period is week, the scheduling interval is days in a week, for example, <b>MONDAY,TUESDAY</b> .
schedule_start_time	String	Start time of the scheduling.
schedule_end_time	String	End time of the scheduling
create_time	Long	Creation time. The value is a 13-digit timestamp accurate to millisecond.
last_run_time	Long	Last run time. The value is a 13-digit timestamp accurate to millisecond.
sub_rules	Array of <a href="#">ConsistencyRuleDetailForOpenApi</a> objects	Sub-rules

**Table 8-42** ConsistencyRuleDetailForOpenApi

Parameter	Type	Description
id	Long	Sub-rule ID
sub_rule_name	String	Sub-rule name
type	String	Rule type. <b>SingleDatabase</b> indicates a database-level rule; <b>SingleTable</b> indicates a table-level rule; <b>SingleColumn</b> indicates a field-level rule; <b>CrossColumn</b> indicates a cross-field rule; <b>Customize</b> indicates a custom rule.
template_id	Long	Rule template ID
connection	String	Data connection ID
connection_type	String	Data connection type
databases	String	Database name. Use commas (,) to separate multiple values.
sql	String	SQL script in the custom rule
tables	String	Table name. Use commas (,) to separate multiple values.
reference_tables	String	Reference table name. Use commas (,) to separate multiple values.
columns	String	Field name. Use commas (,) to separate multiple values.
reference_columns	String	Reference column name. Use commas (,) to separate multiple values.
dimension	String	Dimension
queue	String	DLI queue
regular_expression	String	Regular expression as the rule template
template_arguments	String	Template parameters
weight	Integer	Rule weight
calculation_range	String	Calculation range
calculation_range_sql	String	Calculation range SQL
alarm_condition	String	Alarm expression

**Status code: 400****Table 8-43** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

**Status code: 500****Table 8-44** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

**Example Requests**

None

**Example Responses**

None

**Status Codes**

Status Code	Description
200	Response. If the operation is successful, <b>InstanceVO</b> is returned.
400	BadRequest
500	INTERNAL SERVER ERROR

**8.5 O&M APIs**

## 8.5.1 Obtaining the Task Execution Result List

### Function

This API is used to obtain the list of task execution results.

### URI

GET /v2/{project\_id}/quality/instances

**Table 8-45** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. Execution results of only the tasks that belong to this project can be obtained.

**Table 8-46** Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Rule name
task_type	No	String	Task instance type. The value can be <b>QUALITY_TASK</b> (quality job) or <b>CONSISTENCY_TASK</b> (comparison job). Enumeration values: <ul style="list-style-type: none"><li>• <b>QUALITY_TASK</b></li><li>• <b>CONSISTENCY_TASK</b></li></ul>
run_status	No	String	Status. The value can be <b>RUNNING, FAILED, ALARMING, SUCCESS, SUSPENDING, or UNKNOWN</b> . Enumeration values: <ul style="list-style-type: none"><li>• <b>SUCCESS</b></li><li>• <b>FAILED</b></li><li>• <b>RUNNING</b></li><li>• <b>ALARMING</b></li></ul>

Parameter	Mandatory	Type	Description
notify_status	No	String	Notification status. The value can be <b>NOT_TRIGGERED</b> , <b>SUCCESS</b> , or <b>FAILED</b> . Enumeration values: <ul style="list-style-type: none"> <li>• <b>SUCCESS</b></li> <li>• <b>FAILED</b></li> <li>• <b>NOT_TRIGGERED</b></li> </ul>
start_time	No	Long	Start time of the last query period. The value is a 13-digit timestamp accurate to millisecond.
end_time	No	Long	End time of the last query period. The value is a 13-digit timestamp accurate to millisecond.
limit	No	Integer	Number of records displayed on each page. The maximum value is <b>100</b> .
offset	No	Integer	Pagination offset

## Request Parameters

**Table 8-47** Request header parameters

Parameter	Mandatory	Type	Description
workspace	Yes	String	Workspace information
X-Auth-Token	Yes	String	token

## Response Parameters

**Status code: 200**

**Table 8-48** Response body parameters

Parameter	Type	Description
count	Integer	Quantity

Parameter	Type	Description
resources	Array of <b>InstanceOverviewVo</b> objects	resources

**Table 8-49** InstanceOverviewVo

Parameter	Type	Description
id	Long	id
name	String	Name
task_id	Long	task id
task_type	String	Task type. The value can be <b>QUALITY_TASK</b> (quality job) or <b>CONSISTENCY_TASK</b> (comparison job).
run_status	String	Running status. The value can be <b>RUNNING</b> , <b>FAILED</b> , <b>ALARMING</b> , or <b>SUCCESS</b> .
notity_status	String	Notification status. The value can be <b>NOT_TRIGGERED</b> , <b>SUCCESS</b> , or <b>FAILED</b> .
start_time	Long	Start time
end_time	Long	End time

**Status code: 400**

**Table 8-50** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

**Status code: 500**

**Table 8-51** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.
error_msg	String	Error message

## Example Requests

None

## Example Responses

None

## Status Codes

Status Code	Description
200	Success
400	BadRequest
500	INTERNAL SERVER ERROR

## 8.5.2 Obtaining the Instance Result

### Function

This API is used to obtain the instance result.

### URI

GET /v2/{project\_id}/quality/instances/{instance\_id}/result

**Table 8-52** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	projectId
instance_id	Yes	String	projectId



## Request Parameters

**Table 8-53** Request header parameters

Parameter	Mandatory	Type	Description
workspace	Yes	String	Workspace information
X-Auth-Token	Yes	String	token

## Response Parameters

**Status code: 200**

**Table 8-54** Response body parameters

Parameter	Type	Description
count	Integer	Quantity
resources	Array of <b>SubInstanceResult</b> objects	resources

**Table 8-55** SubInstanceResult

Parameter	Type	Description
sub_rule_id	String	Sub-rule ID
sub_instance_id	String	Sub-rule instance ID
abnormal_table_status	String	Abnormal table task status. The options are as follows: <b>UNSUPPORTED</b> : not supported; <b>READY</b> : being prepared; <b>RUNNING</b> : running; <b>FAILED</b> : failed; <b>SUCCESS</b> : succeeded.
results	Object	Result set

**Status code: 500**

**Table 8-56** Response body parameters

Parameter	Type	Description
error_code	String	Error code, for example, <b>DQC.0000</b> which indicates that the request was successfully processed.

Parameter	Type	Description
error_msg	String	Error message

## Example Requests

None

## Example Responses

None

## Status Codes

Status Code	Description
200	Success
500	INTERNAL SERVER ERROR

# 9 DataArts Catalog APIs

## 9.1 Logical Asset APIs

### 9.1.1 Querying Logical Assets

#### Function

This API is used to query logical assets.

#### URI

POST /v3/{project\_id}/asset/business-assets/search

**Table 9-1** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

#### Request Parameters

**Table 9-2** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
workspace	Yes	String	DGC workspace ID

**Table 9-3** Request body parameters

Parameter	Mandatory	Type	Description
search_all_attributes	Yes	Boolean	Whether to query all attributes by keyword. Value <b>true</b> means to query all attributes, and value <b>false</b> means to query only the name description.
tags	No	Object	Tag information
limit	Yes	Integer	Maximum number of assets to be returned
offset	Yes	Integer	Query offset
guid	No	String	GUID of the node on which you are to perform a query
query	Yes	String	Keyword used for the query
type	Yes	String	Query type Enumeration values: <ul style="list-style-type: none"> <li>• <b>BUSINESS</b></li> <li>• <b>LOGICENTITY</b></li> </ul>

## Response Parameters

Status code: 200

**Table 9-4** Response body parameters

Parameter	Type	Description
count	Integer	Number of logical assets
assets	Array of <b>OpenEntity</b> objects	List of logical assets

**Table 9-5** OpenEntity

Parameter	Type	Description
attributes	Object	Attributes (which can be obtained using Map<String, Object>)
connection	<b>Connection</b> object	Data connection

Parameter	Type	Description
create_time	String	Creation time
created_by	String	Created by
display_text	String	Asset name
guid	String	Asset GUID
relationship_attributes	Object	Related attributes (which can be obtained using Map<String, Object>)
type_name	String	Asset type
updated_by	String	Updated by
update_time	String	Update time
tags	Array of <a href="#">TagHeader</a> objects	Tags
classification_names	Array of strings	Classification names (which can be obtained using List classificationNames)

**Table 9-6** Connection

Parameter	Type	Description
guid	String	Associated GUID
display_text	String	Displayed content
type_name	String	Type name
connection_type	String	Connection type
qualified_name	String	Qualified name

**Table 9-7** TagHeader

Parameter	Type	Description
name	String	Asset name
description	Object	Tag description
display_text	String	Tag name
relation_guid	String	Associated GUID

Parameter	Type	Description
tag_guid	String	GUID associated with the tag

**Status code: 400****Table 9-8** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 401****Table 9-9** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 403****Table 9-10** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 404****Table 9-11** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

```
{
  "search_all_attributes" : false,
  "limit" : 10,
  "offset" : 0,
  "query" : "dli_table",
  "type" : "LOGICENTITY"
}
```

## Example Responses

**Status code: 200**

Business assets

```
{
  "assets" : [ {
    "attributes" : {
      "owner" : "",
      "code" : "53f31e71-512a-41d8-81d8-7c49ce68d7b3",
      "description" : "None",
      "updateTime" : 1661908856018,
      "dataClassify" : "BASE_DATA",
      "securityLevel" : null,
      "nameEng" : "dli_table",
      "tables" : [ {
        "uniqueAttributes" : {
          "qualifiedName" : "cbu_training.dli_table@dli.0833a5737480d53b2f25c010dc1a7b88-workspace-61aa10df45e54431a1901cb3527adab8"
        },
        "type_name" : "dli_table_managed",
        "name" : "dli_table",
        "guid" : "d99a8270-63b5-4252-ad37-8cebe7530a73"
      } ],
      "selfDefinedFields" : null,
      "qualified_name" : "subject_area_group.subject_area.object.dli_table@Business.0833a5737480d53b2f25c010dc1a7b88-workspace-61aa10df45e54431a1901cb3527adab8",
      "createTime" : 1661908856018,
      "name" : "dli_table",
      "alias" : null,
      "fields" : [ {
        "type_name" : "BusinessLogicEntityColumn",
        "guid" : "d05187d0-adb0-4953-8239-eedb88c21b30"
      }, {
        "type_name" : "BusinessLogicEntityColumn",
        "guid" : "d75821b5-ef73-4650-ac4e-340b255db412"
      }, {
        "type_name" : "BusinessLogicEntityColumn",
        "guid" : "cd7e8939-50f7-4096-b4e4-9f7b73167a97"
      } ],
      "parameters" : null,
      "publishStatus" : null,
      "workspaceId" : "61aa10df45e54431a1901cb3527adab8"
    },
    "classification_names" : null,
    "connection" : null,
    "create_time" : 1661908450270,
    "created_by" : "ei_dayu_y00321344_01",
    "display_text" : "dli_table",
    "guid" : "a970c4fb-ac97-4339-95e6-944912c58a2b",
    "relationship_attributes" : {
      "tables" : [ {
        "display_text" : null,
        "guid" : "d99a8270-63b5-4252-ad37-8cebe7530a73",
        "relationship_attributes" : null,
        "relationship_guid" : null,
        "type_name" : null
      } ],
    }
  } ],
}
```

```

"catalog" : {
  "display_text" : null,
  "guid" : "7fbed9da-331d-4695-b8fa-5587605f37e4",
  "relationship_attributes" : null,
  "relationship_guid" : null,
  "type_name" : null
},
"fields" : [ {
  "display_text" : null,
  "guid" : "d05187d0-adb0-4953-8239-eedb88c21b30",
  "relationship_attributes" : null,
  "relationship_guid" : null,
  "type_name" : null
}, {
  "display_text" : null,
  "guid" : "d75821b5-ef73-4650-ac4e-340b255db412",
  "relationship_attributes" : null,
  "relationship_guid" : null,
  "type_name" : null
}, {
  "display_text" : null,
  "guid" : "cd7e8939-50f7-4096-b4e4-9f7b73167a97",
  "relationship_attributes" : null,
  "relationship_guid" : null,
  "type_name" : null
} ],
"tags" : [ ]
},
"tags" : null,
"type_name" : "BusinessLogicEntity",
"update_time" : 1661908450270,
"updated_by" : "ei_dayu_y00321344_01"
} ],
"count" : 1
}

```

## Status Codes

Status Code	Description
200	Business assets
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## 9.2 Metric Asset APIs

### 9.2.1 Querying the Metric Asset Directory Tree

#### Function

This API is used to query the metric asset directory tree.



## URI

GET /v3/{project\_id}/asset/metric-tree

**Table 9-12** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 9-13** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
workspace	Yes	String	DGC workspace ID

## Response Parameters

Status code: 200

**Table 9-14** Response body parameters

Parameter	Type	Description
architecture	Array of <a href="#">ArchitectureStatistic</a> objects	Architecture

**Table 9-15** ArchitectureStatistic

Parameter	Type	Description
children	Array of <a href="#">ArchitectureStatistic</a> objects	Submetric
count	Integer	Number of submetrics
guid	String	guid
name	String	Name

**Status code: 401**

**Table 9-16** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 403**

**Table 9-17** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 404**

**Table 9-18** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

None

## Example Responses

**Status code: 200**

metric assets

```
{
  "architecture": [ {
    "children": [ {
      "children": null,
      "count": 1,
      "guid": "f31ad3b7-5c54-45e3-8afe-369c43d45438",
      "name": "process_name_second"
    } ],
    "count": 0,
    "guid": "64db45a2-38d1-453d-bb13-404dde03fedc",
    "name": "process_name_first"
  } ]
}
```

## Status Codes

Status Code	Description
200	metric assets
401	Unauthorized
403	Forbidden
404	Not Found

## 9.2.2 Querying Metric Assets

### Function

This API is used to query metric assets.

### URI

POST /v3/{project\_id}/asset/metric-assets/search

**Table 9-19** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

### Request Parameters

**Table 9-20** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
workspace	Yes	String	DGC workspace ID

**Table 9-21** Request body parameters

Parameter	Mandatory	Type	Description
architecture_guid	No	String	Metric asset ID
query	Yes	String	Query condition

Parameter	Mandatory	Type	Description
limit	No	Integer	Maximum number of requests at a time
offset	No	Integer	Offset
search_name_description	No	Boolean	Whether to query assets by name and description
include_sub_architecture	No	Boolean	Whether to query submetrics

## Response Parameters

Status code: 200

Table 9-22 Response body parameters

Parameter	Type	Description
count	Integer	Number of metric assets
entities	Array of <b>OpenEntityHeader</b> objects	List of metric assets
scroll_id	String	scroll_id

Table 9-23 OpenEntityHeader

Parameter	Type	Description
attributes	Object	Attributes
connection	Array of <b>Connection</b> objects	Data connection
display_text	String	Displayed text
guid	String	Asset GUID
type_name	String	Type name
tags	String	Tags
classification_names	Array of strings	Classification names

**Table 9-24** Connection

Parameter	Type	Description
guid	String	Associated GUID
dispaly_text	String	Displayed content
type_name	String	Type name
connection_type	String	Connection type
qualified_name	String	Qualified name

**Status code: 401****Table 9-25** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 403****Table 9-26** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 404****Table 9-27** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

```
{
  "query": "indicator"
}
```

## Example Responses

**Status code: 200**

metric assets

```
{
  "count": 1,
  "entities": [ {
    "attributes": {
      "owner": "ei_dayu_y00321344_01",
      "path": "/process_name_first/process_name_second",
      "create_time": 1661910746000,
      "qualified_name": "1014471843710640128.1014471946009714688.1014472726615900160@Business.0833a5737480d53b2f25c010dc1a7b88-workspace-61aa10df45e54431a1901cb3527adab8",
      "name": "indicator",
      "description": null,
      "definition": "Indicator Example",
      "security_level": null
    },
    "classification_names": [ ],
    "connection": null,
    "display_text": "indicator",
    "guid": "2fd90dc8-f130-47c2-b6a6-141761c4f9f4",
    "tags": [ ],
    "type_name": "BusinessMetric"
  } ],
  "scroll_id": null
}
```

## Status Codes

Status Code	Description
200	metric assets
401	Unauthorized
403	Forbidden
404	Not Found

## 9.3 Asset Statistics APIs

### 9.3.1 Obtaining Technical Asset Statistics

#### Function

This API is used to obtain technical asset statistics.

## URI

GET /v3/{project\_id}/asset/statistic/assets/technical-assets

**Table 9-28** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 9-29** Query Parameters

Parameter	Mandatory	Type	Description
tag	No	String	Tag name of the technical assets

## Request Parameters

**Table 9-30** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
workspace	Yes	String	DGC workspace ID

## Response Parameters

**Status code: 200**

**Table 9-31** Response body parameters

Parameter	Type	Description
count	Integer	Number of data connections
datasource_statistics	Array of <b>DataSource</b> objects	Data connection statistics

**Table 9-32** DataSource

Parameter	Type	Description
datasource_name	String	Data connection name
datasource_type	String	Data connection type
datasource_guid	String	Data connection GUID
datasource_qualified_name	String	Name that uniquely identifies the data connection
obs_folder_count	Integer	Number of OBS directories
obs_file_count	Integer	Number of OBS files
css_index_count	Integer	Number of CSS indexes
css_index_field_count	Integer	Number of CSS index fields
namespace_count	Integer	Number of namespaces
ges_vertex_count	Integer	Number of GES vertexes
ges_edge_count	Integer	Number of GES edges
database_count	Integer	Number of databases
stream_count	Integer	Number of streams
table_count	Integer	Number of tables
data_size	Integer	Data size
databases	Array of <a href="#">Database</a> objects	Database statistics
folders	Array of <a href="#">ObsFolder</a> objects	Folder statistics
css_indices	Array of <a href="#">CssIndex</a> objects	CSS index statistics



Parameter	Type	Description
namespaces	Array of <a href="#">Namespace</a> objects	Namespace statistics
dis_streams	Array of <a href="#">DisStream</a> objects	Stream statistics

**Table 9-33** Database

Parameter	Type	Description
database_name	String	Database name
database_guid	String	Database GUID
database_qualified_name	String	Name that uniquely identifies the database
table_count	Integer	Number of tables in the database
data_size	Integer	Data size

**Table 9-34** ObsFolder

Parameter	Type	Description
folder_name	String	Folder name
folder_guid	String	Folder GUID
folder_qualified_name	String	Name that uniquely identifies the folder
object_count	Integer	Number of objects
data_size	Integer	Data size

**Table 9-35** CssIndex

Parameter	Type	Description
index_name	String	Index name
index_guid	String	Index GUID

Parameter	Type	Description
index_qualified_name	String	Name that uniquely identifies the index
index_doc_count	Integer	Number of documents in the index
index_data_size	Integer	Index data size

**Table 9-36** Namespace

Parameter	Type	Description
namespace_name	String	Namespace name
namespace_guid	String	Namespace GUID
namespace_qualified_name	String	Name that uniquely identifies the namespace
table_count	Integer	Number of tables in the namespace

**Table 9-37** DisStream

Parameter	Type	Description
stream_name	String	Stream name
stream_guid	String	Stream GUID
stream_qualified_name	String	Name that uniquely identifies the stream
partition_count	Integer	Number of partitions
app_count	Integer	Number of DIS apps
task_count	Integer	Number of dump tasks

**Status code: 400**

**Table 9-38** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 401****Table 9-39** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 403****Table 9-40** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 404****Table 9-41** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

None

## Example Responses

**Status code: 200**

Technical assets statistic

```
{  
  "count" : 1,  
}
```

```
"datasource_statistics" : [ {
  "datasource_name" : "dli",
  "datasource_type" : "dli",
  "datasource_guid" : "0fff4057-c206-4dc3-a4ac-73ffc332bc9a",
  "datasource_qualified_name" : "dli@0833a5737480d53b2f25c010dc1a7b88-
workspace-61aa10df45e54431a1901cb3527adab8",
  "obs_folder_count" : 0,
  "obs_file_count" : 0,
  "css_index_count" : 0,
  "css_index_field_count" : 0,
  "namespace_count" : 0,
  "ges_vertex_count" : 0,
  "ges_edge_count" : 0,
  "database_count" : 1,
  "stream_count" : 0,
  "table_count" : 1,
  "data_size" : 5478,
  "databases" : [ {
    "data_size" : 5478,
    "database_guid" : "e2b12c35-48ee-441f-a357-e338a85f5d00",
    "database_name" : "cbu_training",
    "database_qualified_name" : "cbu_training@dli.0833a5737480d53b2f25c010dc1a7b88-
workspace-61aa10df45e54431a1901cb3527adab8",
    "table_count" : 1
  } ],
  "folders" : null,
  "css_indices" : null,
  "namespaces" : null,
  "dis_streams" : null
} ]
}
```

## Status Codes

Status Code	Description
200	Technical assets statistic
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 9.3.2 Obtaining Logical Asset Statistics

### Function

This API is used to obtain logical asset statistics.

### URI

GET /v3/{project\_id}/asset/statistic/assets/business-assets

**Table 9-42** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 9-43** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
workspace	Yes	String	DGC workspace ID

## Response Parameters

**Status code: 200**

**Table 9-44** Response body parameters

Parameter	Type	Description
count	Integer	Number of subject area groups
subject_area_group_statistics	Array of <a href="#">L1Statistic</a> objects	Statistics of subject area groups

**Table 9-45** L1Statistic

Parameter	Type	Description
subject_area_group_name	String	Name of the subject area group
subject_area_group_name_en	String	English name of the subject area group
subject_area_group_guid	String	GUID of the subject area group
ordinal	Integer	Ordinal of the subject area group
subject_area_count	Integer	Number of subject areas

Parameter	Type	Description
business_object_count	Integer	Number of business objects
logic_entity_count	Integer	Number of logical entities
subject_area_statistics	Array of <b>L2Statistic</b> objects	Subject area statistics

**Table 9-46** L2Statistic

Parameter	Type	Description
subject_area_name	String	Subject area name
subject_area_guid	String	Subject area GUID
ordinal	Integer	Subject area ordinal
business_object_count	Integer	Number of business objects
logic_entity_count	Integer	Number of logical entities

**Status code: 400****Table 9-47** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 401****Table 9-48** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 403**

**Table 9-49** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 404**

**Table 9-50** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

None

## Example Responses

**Status code: 200**

Business assets statistic

```
{
  "count" : 1,
  "subject_area_group_statistics" : [ {
    "subject_area_group_name" : "subject_area_group",
    "subject_area_group_name_en" : "subject_area_group",
    "subject_area_group_guid" : "ea60986c-7de3-4743-9ae3-2b3d8b030366",
    "ordinal" : 1,
    "subject_area_count" : 1,
    "business_object_count" : 1,
    "logic_entity_count" : 1,
    "subject_area_statistics" : [ {
      "subject_area_name" : "subject_area",
      "subject_area_guid" : "e80d6b75-83a9-40aa-b621-59188690d28a",
      "business_object_count" : 1,
      "logic_entity_count" : 1,
      "ordinal" : 1
    } ]
  } ]
}
```

## Status Codes

Status Code	Description
200	Business assets statistic
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 9.4 Asset Management APIs

### 9.4.1 Querying Technical Assets

#### Function

This API is used to query technical assets.

#### URI

POST /v3/{project\_id}/asset/entities/search

**Table 9-51** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

#### Request Parameters

**Table 9-52** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
workspace	Yes	String	DGC workspace ID



**Table 9-53** Request body parameters

Parameter	Mandatory	Type	Description
query	Yes	String	Keyword used for the query Maximum: <b>100</b>
type_names	Yes	Array of strings	Classification names, which can be obtained using List
connection_names	No	Array of strings	Connection names, which can be obtained using List
search_all_attributes	No	Boolean	Whether to query assets by matching all attributes. Value <b>true</b> means to match all attributes, and value <b>false</b> means to match only the name and description.
tags	No	Array of strings	Tags, which can be obtained using List
limit	Yes	Integer	Number of results displayed on each page. The default value is <b>10</b> .
offset	No	Integer	Offset. The default value is <b>0</b> .
attributes	No	Object	The key can be a table, and the value can be <b>rowCounts</b> , <b>tableSize</b> , <b>database</b> , <b>schema</b> , <b>namespace</b> , <b>ddlUpdateTime</b> , <b>dataUpdateTime</b> , or <b>ddlCreateTime</b> , or a combination of some of these values.
filter_criteria	No	<b>FilterCriteria</b> object	Filter criteria
time_range	No	<b>TimeRange</b> object	Time criteria for filtering assets
scroll_id	No	String	scroll_id
security_levels	No	Array of strings	Security levels, which can be obtained using List
is_import	No	Boolean	Whether the asset is imported
classifications	No	Array of strings	Classifications, which can be obtained using List

Parameter	Mandatory	Type	Description
description	No	String	Description Minimum: 2 Maximum: 512

**Table 9-54** FilterCriteria

Parameter	Mandatory	Type	Description
name	Yes	String	Name. The value can only be <b>database</b> .
value	Yes	String	Database name
operator	Yes	String	Operator

**Table 9-55** TimeRange

Parameter	Mandatory	Type	Description
time_type	Yes	String	Time type. The value can be <b>ddlUpdateTime</b> , <b>dataUpdateTime</b> , or <b>ddlCreateTime</b> .
start	Yes	String	Start time
end	Yes	String	End time

## Response Parameters

Status code: 200

**Table 9-56** Response body parameters

Parameter	Type	Description
count	Integer	Number of technical assets
entities	Array of <b>OpenEntityHeader</b> objects	List of technical assets
scroll_Id	String	scroll_Id

**Table 9-57** OpenEntityHeader

Parameter	Type	Description
attributes	Object	Attributes
connection	Array of <a href="#">Connection</a> objects	Data connection
display_text	String	Displayed text
guid	String	Asset GUID
type_name	String	Type name
tags	String	Tags
classification_names	Array of strings	Classification names

**Table 9-58** Connection

Parameter	Type	Description
guid	String	Associated GUID
display_text	String	Displayed content
type_name	String	Type name
connection_type	String	Connection type
qualified_name	String	Qualified name

**Status code: 400****Table 9-59** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 401**

**Table 9-60** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 403****Table 9-61** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 404****Table 9-62** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 500****Table 9-63** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

```
{
  "offset" : 0,
  "limit" : 10,
  "type_names" : [ "Database" ],
  "query" : "cbu_training"
}
```

## Example Responses

**Status code: 200**

OK

```
{
  "count" : 1,
  "entities" : [ {
    "attributes" : {
      "owner" : "wangyongjie",
      "create_time" : null,
      "qualified_name" : "cbu_training@dli.0833a5737480d53b2f25c010dc1a7b88-
workspace-61aa10df45e54431a1901cb3527adab8",
      "name" : "cbu_training",
      "description" : "",
      "security_level" : null
    },
    "classification_names" : [ ],
    "connection" : {
      "connection_type" : "dli",
      "display_text" : "dli",
      "guid" : "0fff4057-c206-4dc3-a4ac-73ffc332bc9a",
      "qualified_name" : "dli@0833a5737480d53b2f25c010dc1a7b88-
workspace-61aa10df45e54431a1901cb3527adab8",
      "type_name" : "Connection"
    },
    "display_text" : "cbu_training",
    "guid" : "e2b12c35-48ee-441f-a357-e338a85f5d00",
    "tags" : [ ],
    "type_name" : "dli_database"
  } ],
  "scroll_id" : null
}
```

## Status Codes

Status Code	Description
200	OK
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found
500	InternalServerError

## 9.4.2 Obtaining Asset Details by GUID

### Function

This API is used to obtain the details of an asset (table) based on its GUID. The table details include the column information. You can also obtain the column information based on the column GUID.

### URI

GET /v3/{project\_id}/asset/entities/{guid}

**Table 9-64** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
guid	Yes	String	Asset GUID

## Request Parameters

**Table 9-65** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
workspace	Yes	String	DGC workspace ID

## Response Parameters

**Status code: 200**

**Table 9-66** Response body parameters

Parameter	Type	Description
entity	<b>entity</b> object	Asset details entity
referred_entities	Object	Referenced entity

**Table 9-67** entity

Parameter	Type	Description
attributes	Object	Attributes (which can be obtained using Map<String, Object>)
connection	<b>Connection</b> object	Data connection
create_time	String	Creation time
created_by	String	Creator
display_text	String	Asset name
guid	String	Asset GUID

Parameter	Type	Description
relationship_attributes	Object	Related attributes (which can be obtained using Map<String, Object>)
type_name	String	Asset type
updated_by	String	Updated by
update_time	String	Update time
tags	Array of <b>TagHeader</b> objects	Tags, which can be obtained using List
classification_names	Array of strings	Classification names, which can be obtained using List

**Table 9-68** Connection

Parameter	Type	Description
guid	String	Associated GUID
display_text	String	Displayed content
type_name	String	Type name
connection_type	String	Connection type
qualified_name	String	Qualified name

**Table 9-69** TagHeader

Parameter	Type	Description
name	String	Asset name
description	Object	Tag description
display_text	String	Tag name
relation_guid	String	Associated GUID
tag_guid	String	GUID associated with the tag

**Status code: 400**

**Table 9-70** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 401****Table 9-71** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 403****Table 9-72** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 404****Table 9-73** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

None

## Example Responses

**Status code: 200**

ok

```
{  
  "entity" : {
```



```
"attributes" : {
  "code" : "d96c8f4e-7f59-4313-bed2-b68ef60e31b9",
  "standardClassify" : null,
  "description" : "",
  "rule" : null,
  "type" : "STRING",
  "standardCode" : null,
  "securityLevel" : null,
  "propertyType" : "DIM",
  "alias" : "",
  "definition" : null,
  "workspaceId" : "61aa10df45e54431a1901cb3527adab8",
  "owner" : "",
  "synonyms" : null,
  "length" : 0,
  "updateTime" : 1661908856022,
  "dataMaintainOwner" : null,
  "hasValueList" : false,
  "nameEng" : "name",
  "linkedStandardType" : null,
  "selfDefinedFields" : null,
  "dataMonitorOwner" : null,
  "qualified_name" : "subject_area_group.subject_area.object.dli_table.name@Business.
0833a5737480d53b2f25c010dc1a7b88-workspace-61aa10df45e54431a1901cb3527adab8",
  "createTime" : 1661908856022,
  "name" : "Name",
  "ruleOwner" : null,
  "valueExample" : null,
  "valueScope" : null,
  "parameters" : null
},
"classification_names" : null,
"connection" : null,
"create_time" : 1661908450270,
"created_by" : "ei_dayu_y00321344_01",
"display_text" : "Name",
"guid" : "d05187d0-adb0-4953-8239-eedb88c21b30",
"relationship_attributes" : {
  "tableColumn" : {
    "display_text" : null,
    "guid" : "6e02fcf2-7e66-4a32-bded-1d98790a4397",
    "relationship_attributes" : null,
    "relationship_guid" : null,
    "type_name" : null
  },
  "entity" : {
    "display_text" : null,
    "guid" : "a970c4fb-ac97-4339-95e6-944912c58a2b",
    "relationship_attributes" : null,
    "relationship_guid" : null,
    "type_name" : null
  },
  "tags" : [ ]
},
"tags" : [ ],
"type_name" : "BusinessLogicEntityColumn",
"update_time" : 1661908450270,
"updated_by" : "ei_dayu_y00321344_01"
},
"referred_entities" : { }
```

## Status Codes

Status Code	Description
200	ok
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 9.5 Asset Classification APIs

### 9.5.1 Associating a Classification with Assets

#### Function

This API is used to associate a classification with multiple assets, including columns in data tables and OBS objects.

#### URI

POST /v3/{project\_id}/asset/entities/classification

**Table 9-74** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

#### Request Parameters

**Table 9-75** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
workspace	Yes	String	DGC workspace ID

**Table 9-76** Request body parameters

Parameter	Mandatory	Type	Description
guids	Yes	Array of strings	List of data assets
classification	Yes	<a href="#">OpenClassification</a> object	Classification

**Table 9-77** OpenClassification

Parameter	Mandatory	Type	Description
name	Yes	String	Classification name
description	No	String	Classification description
create_user	No	String	User who created the classification
create_time	No	Number	Classification creation time
update_time	No	Number	Classification update time
update_user	No	String	User who updated the classification
guid	No	String	Classification GUID

## Response Parameters

**Status code: 400**

**Table 9-78** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 401**

**Table 9-79** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 403**

**Table 9-80** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 404**

**Table 9-81** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Example Requests**

```
{
  "guids" : [ "0aa90b11-5064-4c6a-9c00-a35267a85aab", "348f0dc5-e03f-487e-a967-3e1abaccce8" ],
  "classification" : {
    "name" : "hive_common"
  }
}
```

**Example Responses**

None

**Status Codes**

Status Code	Description
200	OK
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 9.5.2 Associating a Classification with One or More Assets

### Function

This API is used to associate a classification with one or more assets with a specified GUID.

### URI

POST /v3/{project\_id}/asset/entities/guid/{guid}/classification

**Table 9-82** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
guid	Yes	String	Asset GUID

### Request Parameters

**Table 9-83** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
workspace	Yes	String	DGC workspace ID

**Table 9-84** Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Classification name
description	No	String	Classification description
create_user	No	String	User who created the classification
create_time	No	Number	Classification creation time
update_time	No	Number	Classification update time
update_user	No	String	User who updated the classification
guid	No	String	Classification GUID

## Response Parameters

### Status code: 400

Table 9-85 Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

### Status code: 401

Table 9-86 Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

### Status code: 403

Table 9-87 Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

### Status code: 404

Table 9-88 Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

```
{  
  "name" : "Sensitive personal data"  
}
```

## Example Responses

None

## Status Codes

Status Code	Description
200	OK
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 9.5.3 Dissociating a Classification from an Asset

### Function

This API is used to dissociate a classification from an asset.

### URI

PUT /v3/{project\_id}/asset/entities/guid/{guid}/classification

**Table 9-89** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
guid	Yes	String	Asset GUID

### Request Parameters

**Table 9-90** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
workspace	Yes	String	DGC workspace ID

**Table 9-91** Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Classification name
description	No	String	Classification description
create_user	No	String	User who created the classification
create_time	No	Number	Classification creation time
update_time	No	Number	Classification update time
update_user	No	String	User who updated the classification
guid	No	String	Classification GUID

## Response Parameters

**Status code: 400**

**Table 9-92** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 401**

**Table 9-93** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 403**

**Table 9-94** Response body parameters

Parameter	Type	Description
error_code	String	Error code



Parameter	Type	Description
error_msg	String	Error message

**Status code: 404**

**Table 9-95** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

```
{  
  "name" : "Sensitive personal data"  
}
```

## Example Responses

None

## Status Codes

Status Code	Description
200	OK
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 9.6 Asset Security Level APIs

### 9.6.1 Associating a Security Level with Assets

#### Function

This API is used to associate a security level with multiple assets.

## URI

PUT /v3/{project\_id}/asset/entities/security-level

**Table 9-96** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 9-97** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
workspace	Yes	String	DGC workspace ID

**Table 9-98** Request body parameters

Parameter	Mandatory	Type	Description
guids	Yes	Array of strings	Asset GUID
security_level	Yes	String	Security level

## Response Parameters

**Status code: 400**

**Table 9-99** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 401**

**Table 9-100** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 403****Table 9-101** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 404****Table 9-102** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

```
{  
  "guids" : [ "a0a555e8-0e52-48ef-a067-bd0a7e255a29", "6a9862e2-62d3-481c-8486-a4c609bca740" ],  
  "security_level" : "l1"  
}
```

## Example Responses

None

## Status Codes

Status Code	Description
200	OK
400	BadRequest
401	Unauthorized

Status Code	Description
403	Forbidden
404	Not Found

## 9.6.2 Associating a Security Level with an Asset

### Function

This API is used to associate a specified security level with an asset.

### URI

PUT /v3/{project\_id}/asset/entities/guid/{guid}/security-level

**Table 9-103** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
guid	Yes	String	Asset ID

**Table 9-104** Query Parameters

Parameter	Mandatory	Type	Description
security-level	Yes	String	Asset security level

### Request Parameters

**Table 9-105** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
workspace	Yes	String	DGC workspace ID

### Response Parameters

**Status code: 400**

**Table 9-106** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 401****Table 9-107** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 403****Table 9-108** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 404****Table 9-109** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Example Requests**

None

**Example Responses**

None

## Status Codes

Status Code	Description
200	OK
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found

## 9.6.3 Dissociate a Security Level from an Asset

### Function

This API is used to dissociate a security level from an asset.

### URI

DELETE /v3/{project\_id}/asset/entities/guid/{guid}/security-level

**Table 9-110** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
guid	Yes	String	Asset ID

### Request Parameters

**Table 9-111** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
workspace	Yes	String	DGC workspace ID

### Response Parameters

**Status code: 400**

**Table 9-112** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 401****Table 9-113** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 403****Table 9-114** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Status code: 404****Table 9-115** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

**Example Requests**

None

**Example Responses**

None

## Status Codes

Status Code	Description
200	OK
400	BadRequest
401	Unauthorized
403	Forbidden
404	Not Found



# 10 Data Lake Mall APIs

## 10.1 API Management

### 10.1.1 Creating an API

#### Description

This API is used to create an API.

#### URI

- URI format  
POST /v1/{project\_id}/service/apis
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
api	No	Dictionary	API

- api parameter description

Parameter	Mandatory	Type	Description
catalog_id	Yes	String	Catalog ID. The ID of the root catalog is 0.

Parameter	Mandatory	Type	Description
name	Yes	String	API name, which can contain 3 to 64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
description	Yes	String	API description, which contains no more than 255 characters
log_flag	Yes	Boolean	Whether to enable the log function. Value <b>true</b> means to enable the function, and <b>false</b> means the opposite.
api_type	Yes	String	API type. Available values include: <b>API_SPECIFIC_TYPE_CONFIGURATION</b> : The API obtains data through configuration. <b>API_SPECIFIC_TYPE_SCRIPT</b> : The API obtains data through a script.
auth_type	Yes	String	Authentication mode. Available values include: The value can be <b>APP</b> (app authentication), <b>IAM</b> (IAM authentication), or <b>NONE</b> (no authentication).
manager	Yes	String	API reviewer name
path	Yes	String	API path The request path can contain request parameters enclosed in braces ({}), for example, <b>/getUserInfo/{userId}</b> , and special characters <b>*%+-. _</b> are not allowed.
protocol	Yes	String	API access protocol. Available values include: <b>PROTOCOL_TYPE_HTTP</b> : HTTP <b>PROTOCOL_TYPE_HTTPS</b> : HTTPS
request_type	Yes	String	API request type. Available values include: <b>REQUEST_TYPE_POST</b> : POST type <b>REQUEST_TYPE_GET</b> : GET type
request_paras	No	Dictionary	API request parameters

Parameter	Mandatory	Type	Description
datasource_config	No	Dictionary	API data source configuration (required for API creation, but not for API registration)
data_mask_switch	No	Boolean	Whether to enable data masking This parameter is available only in DLM Exclusive.
data_mask_params	No	Dictionary	Data masking parameters

- request\_params parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name The value can contain 1 to 32 characters, including letters, digits, periods (.), hyphens (-), and underscores (_), and must start with a letter. If the parameter is in the header, the parameter name cannot contain underscores (_). The parameter name is case-insensitive and cannot start with <b>x-apig-</b> or <b>x-sdk-</b> . It cannot be <b>x-stage</b> , <b>x-api-id</b> , <b>x-app-id</b> , or <b>x-request-id</b> . If the parameter is in the header, the parameter name cannot be <b>Authorization</b> or <b>X-Auth-Token</b> .
position	Yes	String	Parameter position. Available values include: The value can be <b>REQUEST_PARAMETER_POSITION_PATH</b> , <b>REQUEST_PARAMETER_POSITION_HEADER</b> , or <b>REQUEST_PARAMETER_POSITION_QUERY</b> .
type	Yes	String	Parameter type. The value can be <b>REQUEST_PARAMETER_TYPE_NUMBER</b> or <b>REQUEST_PARAMETER_TYPE_STRING</b> .
description	Yes	String	Parameter description, which contains no more than 255 characters
necessary	Yes	Boolean	Mandatory

Parameter	Mandatory	Type	Description
example_value	No	String	Example value
support_null	No	Boolean	Whether null is allowed
default_value	No	String	Default value

- datasource\_config parameter description

Parameter	Mandatory	Type	Description
type	Yes	String	Data source type The value can be <b>DWS</b> , <b>MYSQL</b> , or <b>DLI</b> .
connection_id	Yes	String	Data connection ID
connection_name	Yes	String	Connection name
database	Yes	String	Database name
datatable	No	String	Data table name. This parameter is not required when the data obtaining method is script.
table_id	No	String	Data table ID. This parameter is not required when the data obtaining method is script.
queue	No	String	Data queue. When the data source is DLI, you need to select a data connection. For other types of data sources, you do not need to set this parameter.

Parameter	Mandatory	Type	Description
access_mode	Yes	String	Mode of obtaining data <b>SQL:</b> Data is obtained using SQL statements. The public cloud only supports this mode. <b>ROW_KEY:</b> Data is obtained through the row key. This mode applies only to the HBase data source. <b>PREFIX_FILTER:</b> Data is obtained through the prefix filter. This mode applies only to the HBase data source.
pagination	Yes	String	Pagination mode The value can be <b>DEFAULT</b> or <b>CUSTOM</b> .
sql	Yes	String	SQL statement (Base64 encoded)
total_size_switch	No	Boolean	Whether to return the total number of records
total_size_sql	No	Boolean	SQL script for calculating the total number of records in the dataset in the script mode This parameter is mandatory if the API uses a script to obtain data and return of the total number of records is enabled.
backend_paras	Yes	Dictionary	Request parameters
response_paras	Yes	Dictionary	Response parameters
order_paras	Yes	Dictionary	Sorting parameters

- data\_mask\_paras parameter description

Parameter	Mandatory	Type	Description
column_name	Yes	String	Field name (subject to the field name in the returned result)

Parameter	Mandatory	Type	Description
algorithm_name	Yes	String	Algorithm name. For details, see Data Security APIs.
algorithm_type	Yes	String	Algorithm type. For details, see Data Security APIs.
en_name	Yes	String	Algorithm name in English. For details, see Data Security APIs.
algorithm_parameters	Yes	String	Algorithm parameters. For details, see Data Security APIs.
failure_policy	Yes	String	Failure policy to be applied when an exception occurs during data masking. Available values include: 1. <b>INTERRUPT_AND_EXCEPTION</b> 2. <b>DEFAULT_VALUE</b> 3. <b>SKIP</b> 4. <b>SET_NULL</b>
default_value	No	String	Default value to be obtained when a failure occurs. This parameter is required only when <b>failure_policy</b> is <b>DEFAULT_VALUE</b> .

- backend\_paras parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Request parameter name The name must be one that has been defined in <b>requestParas</b> .

Parameter	M a n d a t o r y	Type	Description
mapping	N o	String	Binding field. This parameter is required by APIs that obtain data through configuration, and not required by APIs that obtain data using a script.
condition	N o	String	Operator. Available values include: <b>CONDITION_TYPE_EQ</b> : equal to <b>CONDITION_TYPE_NE</b> : not equal to <b>CONDITION_TYPE_GT</b> : greater than <b>CONDITION_TYPE_GE</b> : greater than or equal to <b>CONDITION_TYPE_LT</b> : less than <b>CONDITION_TYPE_LE</b> : less than or equal to <b>CONDITION_TYPE_LIKE</b> : %parameter% <b>CONDITION_TYPE_LIKE_L</b> : %parameter <b>CONDITION_TYPE_LIKE_R</b> : parameter%

- response\_paras parameter description

Parameter	M a n d a t o r y	Type	Description
name	Y e s	String	Request parameter name The name must be one that has been defined in <b>requestParas</b> .
field	Y e s	String	Binding field. This parameter is required by APIs that obtain data through configuration, and not required by APIs that obtain data using a script.

Parameter	Mandatory	Type	Description
type	Yes	String	Parameter type. The value can be <b>REQUEST_PARAMETER_TYPE_NUMBER</b> or <b>REQUEST_PARAMETER_TYPE_STRING</b> .
description	No	String	Parameter description
example_value	No	String	Example value

- order\_paras parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Sorting parameter name
field	Yes	String	Sorting field (field in the database table)
description	Yes	String	Parameter description, which contains no more than 255 characters
optional	Yes	Boolean	Mandatory or optional
sort	Yes	String	Sorting order. The value can be <b>ASC</b> (ascending order), <b>DESC</b> (descending order), or <b>CUSTOM</b> (user-defined order).
order	Yes	Integer	Sequence of sorting parameters

## Request Message

- Example request

```
{
  "catalog_id": "0",
  "name": "testOpenApi_create_configuration",
  "description": "configuration",
  "log_flag": false,
  "api_type": "API_SPECIFIC_TYPE_CONFIGURATION",
  "auth_type": "APP",
  "publish_type": "PUBLISH_TYPE_PRIVATE",
  "manager": "test",
  "path": "/testOpenApi_configuration/{p}",
  "protocol": "PROTOCOL_TYPE_HTTP",
}
```



```
"request_type": "REQUEST_TYPE_GET",
"request_paras": [
  {
    "name": "p",
    "position": "REQUEST_PARAMETER_POSITION_PATH",
    "type": "REQUEST_PARAMETER_TYPE_NUMBER",
    "description": "test",
    "necessary": true,
    "example_value": null,
    "support_null": true,
    "default_value": null
  },
  {
    "name": "h",
    "position": "REQUEST_PARAMETER_POSITION_HEADER",
    "type": "REQUEST_PARAMETER_TYPE_STRING",
    "description": "",
    "necessary": false,
    "example_value": "",
    "support_null": false,
    "default_value": ""
  },
  {
    "name": "q",
    "position": "REQUEST_PARAMETER_POSITION_QUERY",
    "type": "REQUEST_PARAMETER_TYPE_NUMBER",
    "description": "",
    "necessary": true,
    "example_value": null,
    "support_null": false,
    "default_value": null
  }
],
"datasource_config": {
  "type": "DLI",
  "connection_id": "8a94809a70fa181e0130fd2cbb6e0007",
  "database": "default",
  "queue": "default",
  "access_type": "CONFIGURATION",
  "access_mode": "SQL",
  "pagination": "DEFAULT",
  "table_name": "testTable",
  "backend_paras": [
    {
      "name": "p",
      "mapping": "a1",
      "condition": "CONDITION_TYPE_EQ"
    },
    {
      "name": "h",
      "mapping": "a2",
      "condition": "CONDITION_TYPE_EQ"
    },
    {
      "name": "q",
      "mapping": "a3",
      "condition": "CONDITION_TYPE_EQ"
    }
  ]
},
"response_paras": [
  {
    "name": "a1",
    "type": "REQUEST_PARAMETER_TYPE_STRING",
    "field": "a1",
    "description": "",
    "example_value": ""
  },
  {
    "name": "a2",
```

```

    "type": "REQUEST_PARAMETER_TYPE_STRING",
    "field": "a2",
    "description": "",
    "example_value": ""
  },
  {
    "name": "a3",
    "type": "REQUEST_PARAMETER_TYPE_NUMBER",
    "field": "a3",
    "description": "",
    "example_value": "1"
  }
],
"order_paras": [
  {
    "field": "a1",
    "name": "o1",
    "description": "1",
    "optional": false,
    "sort": "ASC",
    "order": 1
  },
  {
    "field": "a2",
    "name": "o2",
    "description": "",
    "optional": true,
    "sort": "CUSTOM",
    "order": 2
  }
]
},
"data_mask_switch": true,
"data_mask_paras": [
  {
    "column_name": "id",
    "algorithm_name": "Retain first N and last M.",
    "algorithm_type": "MASK",
    "en_name": "KeepBeforeNAfterM",
    "algorithm_parameters": "{\"m\":0,\"n\":1}",
    "failure_policy": "SKIP",
    "default_value": ""
  }
]
}

```

## Response

- Example response

```

{
  "id": "6b9e682fd6d0ef7c0f67470124b20762"
}

```

- Response parameter description

Parameter	Type	Description
id	String	ID of the created API

## Status Code

Status Code	Description
200	The API is registered successfully.

For details about status codes, see [Status Codes](#).

## 10.1.2 Debugging an API

### Description

This API is used to debug an API.

### URI

- URI format  
POST /v1/{project\_id}/service/apis/{api\_id}/instances/{instance\_id}/test
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
api_id	Yes	String	api id
instance_id	Yes	String	Instance ID. For DLM Shared, the instance ID is <b>APIG</b> . For DLM Exclusive, the instance ID is the cluster ID.
body	Yes	JSON	Body of the debugging API (depending on the API definition). For example, if parameter <b>a</b> is defined in the API and its value is <b>1</b> , the body is <b>{"a":1}</b> .

### Request Message

- Example request

```
{
  "paras": {
    "page_size": "10",
    "page_num": "1"
  }
}
```

## Response

- Example response

```
{
  "request_header": {
    "path": "GET /testApi/1 HTTP",
    "user_agent": "DLMDebugClient/1.0",
    "x_apig_mode": "DEBUG",
    "x_app_identity": 1
  },
  "request_id": "704742365000242752",
  "response_header": {
    "cache_control": "private",
    "connection": "keep-alive",
    "content_length": 2,
    "content_type": "application/json;charset=UTF-8",
    "date": "Tue Apr 28 17:14:37 GMT+08:00 2020",
    "result_status": "HTTP 200 Success",
    "x_request_id": "704742365000242752"
  },
  "result": "[]",
  "success": true,
  "timecost": 3826,
  "url": "/testApi/1"
}
```

- Response parameter description

Parameter	Type	Description
request_id	String	Request ID
url	String	Request URL
result	String	Debugging result
timecost	Long	Debugging duration in milliseconds
success	Boolean	Whether the debugging is successful
request_header	Dictionary	Request header
response_header	Dictionary	Response header

- request\_header parameters

Parameter	Type	Description
path	String	Request path
user_agent	String	Proxy (fixed value)
x_apig_mode	String	Request mode (fixed value)

Parameter	Type	Description
x_app_identity	Integer	Identification No. (fixed value)

- response\_header parameters

Parameter	Type	Description
result_status	String	Whether the operation succeeded
content_length	Integer	Content length
connection	String	Connection status
cache_control	String	Cache control (fixed value)
content_type	String	Content type (fixed value)
date	String	Date
x_request_id	String	Request ID

## Status Code

Status Code	Description
200	The status code 200 is returned regardless of whether the operation succeeds or fails. The status code only indicates that the debugging request is submitted successfully. For details about whether the debugging is successful, see the corresponding structure.

For details about status codes, see [Status Codes](#).

## 10.1.3 Querying the API List

### Description

This API is used to query the API list.

### URI

- URI format  
GET /v1/{project\_id}/service/apis
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
limit	No	Integer	Start coordinate of the query, that is, X pieces of data are skipped. The value can only be <b>0</b> or an integer multiple of the limit. If the value does not meet the requirement, it is rounded down.
offset	No	Integer	Number of records to be queried, that is, Y records

### Request Message

- Example request  
None

### Response

- Example response

```
{
  "total": 1,
  "records": [
    {
      "id": "fd0beac79418d65e3b3ed24a6e53b24b",
      "name": "testApi",
      "catalog_id": "677942eeca42bc5d82fcef909d8345f4",
      "create_time": 1579162215000,
      "status": "API_STATUS_CREATED",
      "manager": "admin",
      "type": "API_SPECIFIC_TYPE_REGISTER",
      "debug_status": "API_DEBUG_WAITING",
      "description": "api description"
    }
  ]
}
```

- Response parameter description

Parameter	Type	Description
total	Integer	Total number of APIs
records	Dictionary	API result set

- records parameter description

Parameter	Type	Description
id	String	API Id
name	String	API name
catalog_id	String	API catalog ID
description	String	API description
status	String	<p>API status. Available values include:</p> <p><b>API_STATUS_CREATED:</b> The API has been created.</p> <p><b>API_STATUS_PUBLISH_WAIT_REVIEW:</b> The API has been published and is waiting to be reviewed.</p> <p><b>API_STATUS_PUBLISH_REJECT:</b> The request to publish the API has been rejected.</p> <p><b>API_STATUS_PUBLISHED:</b> The API has been published.</p> <p><b>API_STATUS_WAITING_STOP:</b> The API is to be suspended.</p> <p><b>API_STATUS_STOPPED:</b> The API has been suspended.</p> <p><b>API_STATUS_RECOVER_WAIT_REVIEW:</b> The request to recover the API waits to be reviewed.</p> <p><b>API_STATUS_WAITING_OFFLINE:</b> The API is pending offline.</p> <p><b>API_STATUS_OFFLINE:</b> The API is offline.</p> <p><b>API_STATUS_OFFLINE_WAIT_REVIEW:</b> The API offline request is waiting to be reviewed.</p> <p>This parameter is unavailable for DLM Exclusive.</p>

Parameter	Type	Description
debug_status	String	<b>API_DEBUG_WAITING:</b> The API is waiting to be debugged. <b>API_DEBUG_FAILED:</b> API debugging fails. <b>API_DEBUG_SUCCESS:</b> API debugging is successful. This parameter is unavailable for DLM Exclusive.
type	String	API type. Available values include: The value can be <b>API_SPECIFIC_TYPE_CONFIGURATION</b> , <b>API_SPECIFIC_TYPE_SCRIPT</b> , or <b>API_SPECIFIC_TYPE_REGISTER</b> .
manger	String	Reviewer name
create_time	Long	Creation time (a 13-digit timestamp)

## Status Code

Status Code	Description
200	The API list is obtained.

For details about status codes, see [Status Codes](#).

## 10.1.4 Updating an API

### Description

This API is used to update an API.

### URI

- URI format  
PUT /v1/{project\_id}/service/apis/{api\_id}
- Parameter description



Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
api_id	Yes	String	API ID
api	Yes	Dictionary	API

- api parameter description

Parameter	Mandatory	Type	Description
catalog_id	Yes	String	Catalog ID. The ID of the root catalog is 0.
name	Yes	String	API name, which can contain 3 to 64 characters, starting with a letter. Only letters, digits, and underscores (_) are allowed.
description	Yes	String	API description, which contains no more than 255 characters
log_flag	Yes	Boolean	Whether to enable the log function. Value <b>true</b> means to enable the function, and <b>false</b> means the opposite.
api_type	Yes	String	API type. Available values include: <b>API_TYPE_CREATE</b> : API for creation <b>API_TYPE_REGISTER</b> : API for registration
auth_type	Yes	String	Authentication mode. Available values include: The value can be <b>APP</b> (app authentication), <b>IAM</b> (IAM authentication), or <b>NONE</b> (no authentication).

Parameter	Mandatory	Type	Description
publish_type	Yes	String	API publish type. Available values include: <b>PUBLISH_TYPE_PUBLIC</b> : The API is available to all tenants. <b>PUBLISH_TYPE_PRIVATE</b> : The API is private and available only to tenants in the same project.
manager	Yes	String	API reviewer name
path	Yes	String	API path The request path can contain request parameters enclosed in braces ({}), for example, / <b>getUserInfo/{userId}</b> , and special characters *%+-. are not allowed.
protocol	Yes	String	API access protocol. Available values include: <b>PROTOCOL_TYPE_HTTP</b> : HTTP <b>PROTOCOL_TYPE_HTTPS</b> : HTTPS
request_type	Yes	String	API request type. Available values include: <b>REQUEST_TYPE_POST</b> : POST type <b>REQUEST_TYPE_GET</b> : GET type
request_paras	No	Dictionary	API request parameters
datasource_config	No	Dictionary	API data source configuration (required for API creation, but not for API registration)
data_mask_switch	No	Boolean	Whether to enable data masking This parameter is available only in DLM Exclusive.
data_mask_params	No	Dictionary	Data masking parameters

- request\_paras parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Parameter name The value can contain 1 to 32 characters, including letters, digits, periods (.), hyphens (-), and underscores (_), and must start with a letter. If the parameter is in the header, the parameter name cannot contain underscores (_). The parameter name is case-insensitive and cannot start with <b>x-apig-</b> or <b>x-sdk-</b> . It cannot be <b>x-stage</b> , <b>x-api-id</b> , <b>x-app-id</b> , or <b>x-request-id</b> . If the parameter is in the header, the parameter name cannot be <b>Authorization</b> or <b>X-Auth-Token</b> .
position	Yes	String	Parameter position. Available values include: The value can be <b>REQUEST_PARAMETER_POSITION_PATH</b> , <b>REQUEST_PARAMETER_POSITION_HEADER</b> , or <b>REQUEST_PARAMETER_POSITION_QUERY</b> .
type	Yes	String	Parameter type. The value can be <b>REQUEST_PARAMETER_TYPE_NUMBER</b> or <b>REQUEST_PARAMETER_TYPE_STRING</b> .
description	Yes	String	Parameter description, which contains no more than 255 characters
necessary	Yes	Boolean	Mandatory
example_value	No	String	Example value
support_null	No	Boolean	Whether null is allowed
default_value	No	String	Default value

- datasource\_config parameter description

Parameter	Mandatory	Type	Description
type	Yes	String	Data source type The value can be <b>DWS</b> , <b>MYSQL</b> , or <b>DLI</b> .
connection_id	Yes	String	Data connection ID
connection_name	Yes	String	Data connection name
database	Yes	String	Database name
queue	No	String	Data queue (If the data source is DLI, you need to select a data connection.)
access_mode	Yes	String	Mode of obtaining data <b>SQL</b> : Data is obtained using SQL statements. The public cloud only supports this mode. <b>ROW_KEY</b> : Data is obtained through the row key. This mode applies only to the HBase data source. <b>PREFIX_FILTER</b> : Data is obtained through the prefix filter. This mode applies only to the HBase data source.
pagination	Yes	String	Pagination mode The value can be <b>DEFAULT</b> or <b>CUSTOM</b> .
sql	Yes	String	SQL statement (Base64 encoded)
total_size_switch	No	Boolean	Whether to return the total number of records

Parameter	Mandatory	Type	Description
total_size_sql	No	Boolean	SQL script for calculating the total number of records in the dataset in the script mode  This parameter is mandatory if the API uses a script to obtain data and return of the total number of records is enabled.
backend_paras	Yes	Dictionary	Request parameters
response_paras	Yes	Dictionary	Response parameters
order_paras	Yes	Dictionary	Sorting parameters

- data\_mask\_paras parameter description

Parameter	Mandatory	Type	Description
column_name	Yes	String	Field name (subject to the field name in the returned result)
algorithm_name	Yes	String	Algorithm name. For details, see Data Security APIs.
algorithm_type	Yes	String	Algorithm type. For details, see Data Security APIs.
en_name	Yes	String	Algorithm name in English. For details, see Data Security APIs.
algorithm_parameters	Yes	String	Algorithm parameters. For details, see Data Security APIs.
failure_policy	Yes	String	Failure policy to be applied when an exception occurs during data masking. Available values include: 1. <b>INTERRUPT_AND_EXCEPTION</b> 2. <b>DEFAULT_VALUE</b> 3. <b>SKIP</b> 4. <b>SET_NULL</b>

Parameter	Mandatory	Type	Description
default_value	No	String	Default value to be obtained when a failure occurs. This parameter is required only when <b>failure_policy</b> is <b>DEFAULT_VALUE</b> .

- backend\_paras parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Request parameter name The name must be one that has been defined in <b>requestParas</b> .
mapping	No	String	Binding field. This parameter is required by APIs that obtain data through configuration, and not required by APIs that obtain data using a script.
condition	No	String	Operator. Available values include: <b>CONDITION_TYPE_EQ</b> : equal to <b>CONDITION_TYPE_NE</b> : not equal to <b>CONDITION_TYPE_GT</b> : greater than <b>CONDITION_TYPE_GE</b> : greater than or equal to <b>CONDITION_TYPE_LT</b> : less than <b>CONDITION_TYPE_LE</b> : less than or equal to <b>CONDITION_TYPE_LIKE</b> : %parameter% <b>CONDITION_TYPE_LIKE_L</b> : %parameter <b>CONDITION_TYPE_LIKE_R</b> : parameter%

- response\_paras parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Request parameter name The name must be one that has been defined in <b>requestParas</b> .
field	Yes	String	Binding field. This parameter is required by APIs that obtain data through configuration, and not required by APIs that obtain data using a script.
type	Yes	String	Parameter type. The value can be <b>REQUEST_PARAMETER_TYPE_NUMBER</b> or <b>REQUEST_PARAMETER_TYPE_STRING</b> .
description	No	String	Parameter description
example_value	No	String	Example value

- order\_paras parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	Sorting parameter name
field	Yes	String	Sorting field (field in the database table)
description	Yes	String	Parameter description, which contains no more than 255 characters
optional	Yes	Boolean	Mandatory or optional
sort	Yes	String	Sorting order. The value can be <b>ASC</b> (ascending order), <b>DESC</b> (descending order), or <b>CUSTOM</b> (user-defined order).
order	Yes	Integer	Sequence of sorting parameters

## Request Message

- Example request for updating an API

```
{
  "catalog_id": "0",
  "name": "testOpenApi_create_configuration",
  "description": "configuration",
  "log_flag": false,
  "api_type": "API_SPECIFIC_TYPE_CONFIGURATION",
  "auth_type": "APP",
  "publish_type": "PUBLISH_TYPE_PRIVATE",
  "manager": "test",
  "path": "/testOpenApi_configuration/{p}",
  "protocol": "PROTOCOL_TYPE_HTTP",
  "request_type": "REQUEST_TYPE_GET",
  "request_paras": [
    {
      "name": "p",
      "position": "REQUEST_PARAMETER_POSITION_PATH",
      "type": "REQUEST_PARAMETER_TYPE_NUMBER",
      "description": "test",
      "necessary": true,
      "example_value": null,
      "support_null": false,
      "default_value": null
    },
    {
      "name": "h",
      "position": "REQUEST_PARAMETER_POSITION_HEADER",
      "type": "REQUEST_PARAMETER_TYPE_STRING",
      "description": "",
      "necessary": false,
      "example_value": "",
      "support_null": false,
      "default_value": ""
    },
    {
      "name": "q",
      "position": "REQUEST_PARAMETER_POSITION_QUERY",
      "type": "REQUEST_PARAMETER_TYPE_NUMBER",
      "description": "",
      "necessary": true,
      "example_value": null,
      "support_null": false,
      "default_value": null
    }
  ],
  "datasource_config": {
    "type": "DLI",
    "connection_id": "8a94809a70fa181e0130fd2cbb6e0007",
    "database": "default",
    "queue": "default",
    "access_type": "CONFIGURATION",
    "access_mode": "SQL",
    "pagination": "DEFAULT",
    "table_name": "testTable",
    "backend_paras": [
      {
        "name": "p",
        "mapping": "a1",
        "condition": "CONDITION_TYPE_EQ"
      },
      {
        "name": "h",
        "mapping": "a2",
        "condition": "CONDITION_TYPE_EQ"
      },
      {
        "name": "q",
```



```
"mapping": "a3",
"condition": "CONDITION_TYPE_EQ"
},
],
"response_paras": [
  {
    "name": "a1",
    "type": "REQUEST_PARAMETER_TYPE_STRING",
    "field": "a1",
    "description": "",
    "example_value": ""
  },
  {
    "name": "a2",
    "type": "REQUEST_PARAMETER_TYPE_STRING",
    "field": "a2",
    "description": "",
    "example_value": ""
  },
  {
    "name": "a3",
    "type": "REQUEST_PARAMETER_TYPE_NUMBER",
    "field": "a3",
    "description": "",
    "example_value": "1"
  }
],
"order_paras": [
  {
    "field": "a1",
    "name": "o1",
    "description": "1",
    "optional": false,
    "sort": "ASC",
    "order": 1
  },
  {
    "field": "a2",
    "name": "o2",
    "description": "",
    "optional": true,
    "sort": "CUSTOM",
    "order": 2
  }
]
},
"data_mask_switch": true,
"data_mask_paras": [
  {
    "column_name": "id",
    "algorithm_name": "Retain first N and last M",
    "algorithm_type": "MASK",
    "en_name": "KeepBeforeNAfterM",
    "algorithm_parameters": "{\"m\":0,\"n\":1}",
    "failure_policy": "SKIP",
    "default_value": ""
  }
]
}
```

## Response

- Example response  
None

## Status Code

Status Code	Description
204	The API is updated successfully.

For details about status codes, see [Status Codes](#).

## 10.1.5 Querying API Information

### Description

This API is used to query information about an API.

### URI

- URI format  
GET /v1/{project\_id}/service/apis/{api\_id}
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
api_id	Yes	String	API Id

### Request Message

- Example request  
None

### Response

- Example response

```
{
  "backend_config": null,
  "catalog_id": "0",
  "create_time": 1589186805000,
  "datasource_config": {
    "access_mode": "SQL",
    "backend_paras": [
      {
        "condition": "CONDITION_TYPE_EQ",
        "mapping": "a1",
        "name": "p"
      },
      {
        "condition": "CONDITION_TYPE_EQ",
        "mapping": "a3",

```

```
    "name": "q"
  },
  {
    "condition": "CONDITION_TYPE_EQ",
    "mapping": "a2",
    "name": "h"
  }
],
"connection_id": "8a94809170fa181e0170fd2cbb610007",
"database": "default",
"order_paras": [
  {
    "description": "1",
    "field": "a1",
    "name": "o1",
    "optional": false,
    "order": 1,
    "sort": "ASC"
  },
  {
    "description": "",
    "field": "a2",
    "name": "o2",
    "optional": true,
    "order": 2,
    "sort": "CUSTOM"
  }
],
"pagination": "DEFAULT",
"queue": "default",
"response_paras": [
  {
    "description": "",
    "example_value": "",
    "field": "a1",
    "name": "a1x",
    "type": "REQUEST_PARAMETER_TYPE_STRING"
  },
  {
    "description": "",
    "example_value": "",
    "field": "a2",
    "name": "a2",
    "type": "REQUEST_PARAMETER_TYPE_STRING"
  },
  {
    "description": "",
    "example_value": "1",
    "field": "a3",
    "name": "a3",
    "type": "REQUEST_PARAMETER_TYPE_NUMBER"
  }
],
"sql": null,
"table_name": "pagesize",
"type": "DLI"
},
"description": "update",
"host": "e7c91cd2d4714e81807b7d4c273f791c.apig.cn-north-7.huaweicloudapis.com",
"id": "f2108870c3867c3080cf5dfcc1f1a66c",
"log_flag": true,
"manager": "test",
"name": "testOpenApi_create_configuration_update",
"path": "/testOpenApi_configuration/{p}",
"protocol": "PROTOCOL_TYPE_HTTP",
"publish_type": "PUBLISH_TYPE_PRIVATE",
"request_paras": [
  {
    "default_value": "",
```

```

    "description": "",
    "example_value": "",
    "support_null": false,
    "name": "h",
    "necessary": false,
    "position": "REQUEST_PARAMETER_POSITION_HEADER",
    "type": "REQUEST_PARAMETER_TYPE_STRING"
  },
  {
    "default_value": null,
    "description": "123",
    "example_value": null,
    "support_null": false,
    "name": "p",
    "necessary": true,
    "position": "REQUEST_PARAMETER_POSITION_PATH",
    "type": "REQUEST_PARAMETER_TYPE_NUMBER"
  },
  {
    "default_value": null,
    "description": "",
    "example_value": null,
    "support_null": false,
    "name": "q",
    "necessary": true,
    "position": "REQUEST_PARAMETER_POSITION_QUERY",
    "type": "REQUEST_PARAMETER_TYPE_NUMBER"
  }
],
"request_type": "REQUEST_TYPE_GET",
"update_time": 1589202148000,
"data_mask_switch": true,
"data_mask_paras": [
  {
    "column_name": "id",
    "algorithm_name": "Retain first N and last M.",
    "algorithm_type": "MASK",
    "en_name": "KeepBeforeNAfterM",
    "algorithm_parameters": "{\"m\":0,\"n\":1}",
    "failure_policy": "SKIP",
    "default_value": ""
  }
]
}

```

- Parameter description

Parameter	Type	Description
id	String	API Id
name	String	API name
manager	String	API reviewer name
catalog_id	String	API catalog ID
description	String	API description
protocol	String	API access protocol. Available values include: <b>PROTOCOL_TYPE_HTTP</b> : HTTP <b>PROTOCOL_TYPE_HTTPS</b> : HTTPS

Parameter	Type	Description
publish_type	String	API publish type. Available values include: PUBLISH_TYPE_PUBLIC The API is available to all tenants. PUBLISH_TYPE_PRIVATE The API is private and available only to tenants in the same project.
path	String	API path
request_type	String	API request type. Available values include: <b>REQUEST_TYPE_POST</b> : POST type <b>REQUEST_TYPE_GET</b> : GET type
create_time	Long	API creation time (a 13-digit timestamp)
update_time	Long	API update time (a 13-digit timestamp)
type	String	API type. Available values include: <b>API_SPECIFIC_TYPE_CONFIGURATION</b> : configuration API <b>API_SPECIFIC_TYPE_SCRIPT</b> : script API <b>API_SPECIFIC_TYPE_REGISTER</b> : registration API
host	String	API group domain name
log_flag	Boolean	Whether to enable logging
request_paras	Dictionary	API request parameters
datasource_configuration	Dictionary	API data source configuration
data_mask_switch	Boolean	Whether to enable data masking This parameter is available only in DLM Exclusive.
data_mask_parameters	Dictionary	Data masking parameters
backend_configuration	Dictionary	API backend configuration

- request\_paras parameter description

Parameter	Type	Description
name	String	Parameter name

Parameter	Type	Description
position	String	Parameter position. Available values include: <b>REQUEST_PARAMETER_POSITION_PATH</b> : The parameter is in the path. <b>REQUEST_PARAMETER_POSITION_HEADER</b> : The parameter is in the header. <b>REQUEST_PARAMETER_POSITION_QUERY</b> : The parameter is in the query.
type	String	Parameter type. <b>REQUEST_PARAMETER_TYPE_NUMBER</b> : number <b>REQUEST_PARAMETER_TYPE_STRING</b> : string
description	String	Parameter description
necessary	Boolean	Mandatory
example_value	String	Example value
support_null	Boolean	Whether null is allowed
default_value	String	Default value

- datasource\_config parameter description

Parameter	Type	Description
type	String	Data source type The value can be <b>MYSQL, DLI, DWS, or Hive.</b>
connection_id	String	Data connection ID
database	String	Database name
table_name	String	Table name
queue	DLI queue name	SQL statement in script mode

Parameter	Type	Description
access_mode	String	Mode of obtaining data <b>SQL:</b> Data is obtained using SQL statements. The public cloud only supports this mode. <b>ROW_KEY:</b> Data is obtained through the row key. This mode applies only to the HBase data source. <b>PREFIX_FILTER:</b> Data is obtained through the prefix filter. This mode applies only to the HBase data source.
pagination	String	Pagination mode The value can be <b>DEFAULT</b> or <b>CUSTOM</b> .
sql	String	SQL statement in script mode
total_size_sql	Boolean	SQL script for calculating the total number of records in the dataset in the script mode
total_size_switch	Boolean	Whether to return the total number of records
backend_parameters	Dictionary	API backend parameters
response_parameters	Dictionary	Response parameters of configuration APIs
order_parameters	Dictionary	Sorting parameters

- data\_mask\_parameters parameter description

Parameter	Mandatory	Type	Description
column_name	Yes	String	Field name (subject to the field name in the returned result)
algorithm_name	Yes	String	Algorithm name. For details, see Data Security APIs.
algorithm_type	Yes	String	Algorithm type. For details, see Data Security APIs.
en_name	Yes	String	Algorithm name in English. For details, see Data Security APIs.

Parameter	Mandatory	Type	Description
algorithm_parameters	Yes	String	Algorithm parameters. For details, see Data Security APIs.
failure_policy	Yes	String	Failure policy to be applied when an exception occurs during data masking. Available values include: 1. <b>INTERRUPT_AND_EXCEPTION</b> 2. <b>DEFAULT_VALUE</b> 3. <b>SKIP</b> 4. <b>SET_NULL</b>
default_value	No	String	Default value to be obtained when a failure occurs. This parameter is required only when <b>failure_policy</b> is <b>DEFAULT_VALUE</b> .

- backend\_paras parameter description

Parameter	Type	Description
name	String	Parameter name
mapping	String	Mapping field
condition	String	Operator. Available values include: <b>CONDITION_TYPE_EQ</b> : equal to <b>CONDITION_TYPE_NE</b> : not equal to <b>CONDITION_TYPE_GT</b> : greater than <b>CONDITION_TYPE_GE</b> : greater than or equal to <b>CONDITION_TYPE_LT</b> : less than <b>CONDITION_TYPE_LE</b> : less than or equal to <b>CONDITION_TYPE_LIKE</b> : %parameter% <b>CONDITION_TYPE_LIKE_L</b> : %parameter <b>CONDITION_TYPE_LIKE_R</b> : parameter%

- response\_paras parameter description

Parameter	Type	Description
name	String	Parameter name



Parameter	Type	Description
field	String	Bound table field
type	String	Parameter type. <b>REQUEST_PARAMETER_TYPE_STRING:</b> string <b>REQUEST_PARAMETER_TYPE_NUMBER:</b> number
description	String	Parameter description
example_value	String	Instance value

- order\_paras parameter description

Parameter	Type	Description
name	String	Parameter name
field	String	Bound table field
optional	Boolean	Mandatory or optional
sort	String	Sorting method. Available values include: <b>ASC:</b> ascending order <b>DESC:</b> descending order <b>CUSTOM:</b> custom order
descriptioni	String	Description
order	Integer	Sorting order

- backend\_config parameter description

Parameter	Type	Description
type	String	Request type. Available values include: <b>REQUEST_TYPE_POST:</b> POST request <b>REQUEST_TYPE_GET:</b> GET request
protocol	String	Request protocol. Available values include: <b>PROTOCOL_TYPE_HTTP:</b> HTTP <b>PROTOCOL_TYPE_HTTPS:</b> HTTPS
host	String	Backend host
timeout	Integer	Timeout duration
path	String	Request path

Parameter	Type	Description
backend_paras	Dictionary	Backend parameters
constant_paras	Dictionary	Backend constant parameters

## - backend\_paras parameter description

Parameter	Type	Description
name	String	Request parameter name
position	String	Parameter position. Available values include: REQUEST_PARAMETER_POSITION_PATH (The parameter is in the path.) REQUEST_PARAMETER_POSITION_HEADER (The parameter is in the header.) REQUEST_PARAMETER_POSITION_QUERY (The parameter is in the query.)
backend_param_name	String	Backend parameter name

## - constant\_paras parameter description

Parameter	Type	Description
name	String	Parameter name
type	String	Parameter type. REQUEST_PARAMETER_TYPE_NUMBER (number) REQUEST_PARAMETER_TYPE_STRING (string)

Parameter	Type	Description
position	String	Parameter position. Available values include: REQUEST_PARAMETER_POSITION_PATH (The parameter is in the path.) REQUEST_PARAMETER_POSITION_HEADER (The parameter is in the header.) REQUEST_PARAMETER_POSITION_QUERY (The parameter is in the query.)
description	String	Parameter description
value	String	Parameter value

## Status Code

Status Code	Description
200	The API information is obtained.

For details about status codes, see [Status Codes](#).

## 10.1.6 Deleting APIs

### Description

This API is used to delete APIs in batches.

### URI

- URI format  
POST /v1/{project\_id}/service/apis/batch-delete
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
ids	Yes	String[]	IDs of the APIs to be deleted

## Request Message

- Example request

```
[
  "6b9e682fd6d0ef7c0f674701adb20762",
  "42505b429b53b42a9b535640617d9b17"
]
```

## Response

- Example response  
None

## Status Code

Status Code	Description
204	Deleting APIs in batches is successful.

For details about status codes, see [Status Codes](#).

## 10.1.7 Publishing an API

### Description

This API is used to publish an API. Only published APIs can be called. You can choose to publish an API to a specified gateway.

- If you are using DLM Shared, you can only publish APIs to the API Gateway Shared edition.
- If you are using DLM Exclusive, you can publish APIs to the API Gateway Dedicated edition or ROMA-APIC, or do not publish APIs to any gateway.

#### NOTE

If you are not the reviewer, your request for publishing an API needs to be reviewed by the API reviewer.

### URL

- URI format  
POST /v1/{project\_id}/service/apis/{api\_id}/instances/{instance\_id}/publish
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
api_id	Yes	String	API ID

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Cluster ID

## Request Message

- Example request

```
{
  "apig_type": "APIG",
  "apig_instance_id": "APIG",
  "group_id_in_apig": "d1a3400bbe04457587bc32293e7b7c80",
  "roma_app_id": null
}
```

- Request parameter description

Parameter	Mandatory	Type	Description
apig_type	No	String	Gateway type. Available values include: <b>APIG</b> : API Gateway Shared edition <b>APIGW</b> : API Gateway Dedicated edition <b>ROMA_APIG</b> : ROMA-APIG gateway <b>None (or null)</b> : no gateway
apig_instance_id	No	String	Gateway instance ID For the API Gateway Shared edition, the instance ID is <b>APIG</b> . If the API is not published to any gateway, this parameter is not required, or is set to null. For the API Gateway Dedicated edition or ROMA gateway, the value of this parameter is the actual gateway instance ID.
group_id_in_apig	No	String	Gateway group ID <b>d1m_default</b> : default group created for DLM on the gateway If the API is not published to any gateway, this parameter is not required, or is set to null. For any other group, the value of this parameter is the corresponding gateway group ID.

Parameter	Mandatory	Type	Description
roma_app_id	No	String	<p>ID of the ROMA gateway integrated app</p> <p>If the API is to be published to the API Gateway Shared or Dedicated edition, or not published to any gateway, this parameter is not required, or is set to null.</p> <p>If the API is to be published to the ROMA gateway, the value of this parameter is the ID of the integrated app.</p>

## Response

- Example response  
None

## Status Code

Status Code	Description
204	The API is published successfully.

For details about status codes, see [Status Codes](#).

## 10.1.8 Unpublishing, Suspending, and Restoring an API

### Description

- Unpublishes an API. After the API is unpublished, its authorization will be canceled and the API cannot be called.
- Suspends a published API temporarily. After the API is suspended, its authorization will be retained. The API cannot be called during the suspension.
- Restores an API that has been suspended. After the API is restored, it can be called again.

#### NOTE

- If you are not the reviewer, your request for restoring an API needs to be reviewed by the API reviewer.
- To unpublish or suspend an API, you must be the API reviewer.
- Before unpublishing or suspending an API, you need to reserve sufficient preparation time for authorized apps. You need to initiate a request at least two days in advance. If you need to unpublish or suspend an API immediately, your requested action will be taken only after all apps finish processing messages.

## URL

- URI format  
POST /v1/{project\_id}/service/apis/{api\_id}/instances/{instance\_id}/action
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
api_id	Yes	String	API ID
instance_id	Yes	String	Cluster ID

## Request Message

- Example request

```
{
  "action": "STOP",
  "time": "2021-01-01T10:00:00.000Z"
}
```
- Request parameter description

Parameter	Mandatory	Type	Description
action	Yes	String	Operation type. Available values include: <b>UNPUBLISH</b> : unpublishing an API <b>STOP</b> : suspending an API <b>RECOVER</b> : restoring an API
time	Yes	String	End time, in ISO format (+0 time zone). This parameter is required only for unpublishing or suspending an API and is accurate to hour.

## Response

- Example response  
None

## Status Code

Status Code	Description
204	The API operation is successful.

For details about status codes, see [Status Codes](#).

## 10.1.9 Authorizing an API to Apps

### Description

An app cannot access any APIs after being created. To enable an app to access an API, authorize the API to the app. After the authorization is successful, the app can access the API within the validity period.

API authorization includes authorization and renewal.

- Authorization: The authorized app can access the API within the validity period.
- Renewal: You can extend the validity period.

### URL

- URI format  
POST /v1/{project\_id}/service/apis/{api\_id}/instances/{instance\_id}/authorize
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
api_id	Yes	String	API ID
instance_id	Yes	String	Cluster ID

### Request Message

- Example request

```
{
  "app_ids":["908489209a320df61607355c57c82882"],
  "time":"2021-01-01T10:00:00.000Z"
}
```
- Request parameter description

Parameter	Mandatory	Type	Description
app_ids	Yes	String[]	App IDs
time	Yes	String	End time, in ISO format (+0 time zone). The app can access the API before the end time. The time is accurate to hour.



## Response

- Example response  
None

## Status Code

Status Code	Description
204	The API is authorized successfully.

For details about status codes, see [Status Codes](#).

## 10.1.10 Performing API Authorization Operations

### Description

- Authorizing an API to an app: The API reviewer can initiate a request to authorize an API. After the authorization is successful, the app can access the API within the validity period. API authorization includes authorization and renewal.
  - Authorization: The authorized app can access the API within the validity period.
  - Renewal: You can extend the validity period.
- Canceling API authorization (by the API reviewer): The API reviewer can initiate a request to cancel API authorization to an app. After the API authorization is canceled, the app can no longer call the API. Before performing this operation, reserve at least two days for the app to make preparations.
- Canceling API authorization (by the app owner): The app owner can initiate a request to cancel API authorization to an app. After the API authorization is canceled, the app can no longer call the API. This operation requires no preparation time.
- Applying for authorization: The app owner can initiate a request to access an API. After the request is approved by the API reviewer, the app can access the API within the validity period.
- Renewing the validity period: The app owner can initiate a renewal request for extending the validity period. After the request is approved by the API reviewer, the validity period will be updated.

#### NOTE

- A request for authorizing or renewing your own API does not need to be reviewed.
- If you want to cancel API authorization to your own app, you are advised to initiate a request from your app, rather than have the API reviewer initiate a request. In this way, you do not need to reserve preparation time.

## URL

- URI format  
POST /v1/{project\_id}/service/apis/authorize/action

- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .

## Request Message

- Example request

```
{
  "api_id": "47046fe7830c1be77cb0dc23bd86afa5",
  "instance_id": "APIG",
  "app_id": "908489209a320df61607355c57c82882",
  "apply_type": "APPLY_TYPE_AUTHORIZE",
  "time": "2021-01-01T10:00:00.000Z"
}
```

- Request parameter description

Parameter	Mandatory	Type	Description
api_id	Yes	String	API ID
instance_id	Yes	String	Cluster ID
app_id	Yes	String	App ID
apply_type	Yes	String	Operation type. Available values include: <b>APPLY_TYPE_AUTHORIZE</b> : authorizing an API to an app <b>APPLY_TYPE_API_CANCEL_AUTHORIZE</b> : canceling API authorization (by the API reviewer) <b>APPLY_TYPE_APP_CANCEL_AUTHORIZE</b> : canceling API authorization (by the app owner) <b>APPLY_TYPE_APPLY</b> : applying for authorization <b>APPLY_TYPE_RENEW</b> : renewing the validity period
time	No	String	End time. The value is in ISO format (+0 time zone) and is accurate to hour. This parameter is not required for canceling API authorization (by the app owner).

## Response

- Example response  
None

## Status Code

Status Code	Description
204	The API operation is successful.

For details about status codes, see [Status Codes](#).

## 10.1.11 Querying API Publishing Messages in DLM Exclusive

### Description

This API is used to query the API publishing messages in different clusters.

After an API operation (such as debugging and registration) is performed in a cluster, API publishing messages are generated.

### URL

- URI format  
GET /v1/{project\_id}/service/apis/{api\_id}/publish-info[?offset,limit]
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
api_id	Yes	String	API ID
offset	No	Integer	Query start coordinate, that is, skipping the first <i>X</i> records. The default value is <b>0</b> . The value range is [0, MAX_INTEGER).
limit	No	Integer	Number of records to be queried, that is, <i>Y</i> records. The default value is <b>10</b> . The value range is [1, 100].

### Request Message

- Example request  
None

## Response

- Example response

```
{
  "total": 1,
  "publish_messages": [
    {
      "id": "343a6d4c0ad108376ebd060c9c33cc33",
      "api_id": "47046fe7830c1be77cb0dc23bd86afa5",
      "instance_id": "c2e27497562ed193583378e052248003",
      "instance_name": "cluster_test_001",
      "api_status": "API_STATUS_CREATED",
      "api_debug": "API_DEBUG_WAITING"
    }
  ]
}
```

- Response parameter description

Parameter	Type	Description
total	Integer	Publishing messages that meet the query conditions
publish_messages	Dictionary	Publishing messages that are returned

- publish\_messages parameter description

Parameter	Type	Description
id	String	Publishing message ID
api_id	String	API ID
instance_id	String	Cluster ID
instance_name	String	Cluster name

Parameter	Type	Description
api_status	String	<p>API status. Available values include:</p> <p><b>API_STATUS_CREATED:</b> The API has been created.</p> <p><b>API_STATUS_PUBLISH_WAIT_REVIEW:</b> The API has been published and is waiting to be reviewed.</p> <p><b>API_STATUS_PUBLISH_REJECT:</b> The request to publish the API has been rejected.</p> <p><b>API_STATUS_PUBLISHED:</b> The API has been published.</p> <p><b>API_STATUS_WAITING_STOP:</b> The API is to be suspended.</p> <p><b>API_STATUS_STOPPED:</b> The API has been suspended.</p> <p><b>API_STATUS_RECOVER_WAIT_REVIEW:</b> The request to recover the API waits to be reviewed.</p> <p><b>API_STATUS_WAITING_OFFLINE:</b> The API is pending offline.</p> <p><b>API_STATUS_OFFLINE:</b> The API is offline.</p>
api_debug	String	<p>API debugging status. Available values include:</p> <p><b>API_DEBUG_WAITING:</b> The API is waiting to be debugged.</p> <p><b>API_DEBUG_FAILED:</b> API debugging fails.</p> <p><b>API_DEBUG_SUCCESS:</b> API debugging is successful.</p>

## Status Code

Status Code	Description
200	success

For details about status codes, see [Status Codes](#).

## 10.1.12 Querying API Debugging Messages in DLM Exclusive

### Description

This API is used to query the API debugging information in different clusters.

### URL

- URI format  
GET /v1/{project\_id}/service/apis/{api\_id}/debug-info[?offset,limit]
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
api_id	Yes	String	API ID
offset	No	Integer	Query start coordinate, that is, skipping the first <i>X</i> records. The default value is <b>0</b> . The value range is [0, MAX_INTEGER).
limit	No	Integer	Number of records to be queried, that is, <i>Y</i> records. The default value is <b>10</b> . The value range is [1, 100].

### Request Message

- Example request  
None

### Response

- Example response

```
{
  "total": 1,
  "publish_messages": [
    {
      "id": "343a6d4c0ad108376ebd060c9c33cc33",
      "api_id": "47046fe7830c1be77cb0dc23bd86afa5",
      "instance_id": "c2e27497562ed193583378e052248003",
      "instance_name": "cluster_test_001",
      "api_status": "API_STATUS_CREATED",
      "api_debug": "API_DEBUG_WAITING"
    }
  ]
}
```

- Response parameter description

Parameter	Type	Description
total	Integer	Debugging messages that meet the query conditions
publish_messages	Dictionary	Debugging messages that are returned

- publish\_messages parameter description

Parameter	Type	Description
id	String	Publishing message ID
api_id	String	API ID
instance_id	String	Cluster ID
instance_name	String	Cluster name
api_status	String	API status. Available values include: <b>API_STATUS_CREATED</b> : The API has been created. <b>API_STATUS_PUBLISH_WAIT_REVIEW</b> : The API has been published and is waiting to be reviewed. <b>API_STATUS_PUBLISH_REJECT</b> : The request to publish the API has been rejected. <b>API_STATUS_PUBLISHED</b> : The API has been published. <b>API_STATUS_WAITING_STOP</b> : The API is to be suspended. <b>API_STATUS_STOPPED</b> : The API has been suspended. <b>API_STATUS_RECOVER_WAIT_REVIEW</b> : The request to recover the API waits to be reviewed. <b>API_STATUS_WAITING_OFFLINE</b> : The API is pending offline. <b>API_STATUS_OFFLINE</b> : The API is offline.

Parameter	Type	Description
api_debug	String	API debugging status. Available values include: <b>API_DEBUG_WAITING</b> : The API is waiting to be debugged. <b>API_DEBUG_FAILED</b> : API debugging fails. <b>API_DEBUG_SUCCESS</b> : API debugging is successful.

## Status Code

Status Code	Description
200	success

For details about status codes, see [Status Codes](#).

## 10.1.13 Querying Instances for API Operations in DLM Exclusive

### Description

This API is used to query instances for API operations (Exclusive Edition).

### URL

- URI format  
GET /v1/{project\_id}/service/apis/{api\_id}/instances[?action, show\_all, check\_status, check\_debug]
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
api_id	Yes	String	API ID
action	Yes	String	Operation on the API. Available values include: <b>PUBLISH</b> : publishing the API <b>UNPUBLISH</b> : unpublishing the API <b>RECOVER</b> : restoring the API



Parameter	Mandatory	Type	Description
show_all	No	Boolean	Whether to show all instances. The default value is <b>false</b> , indicating that only operable instances are displayed.
check_status	No	Boolean	Whether to verify the API status. The default value is <b>true</b> , indicating that the system determines whether the instance can be operated based on the API status.
check_debug	No	Boolean	Whether to verify the API debugging status. The default value is <b>true</b> , indicating that the system determines whether the instance can be operated based on the API debugging status.

## Request Message

- Example request  
None

## Response

- Example response

```
{
  "instances": [
    {
      "instance_id": "c2e27497562ed193583378e052248003",
      "instance_type": "DLM",
      "name": "cluster_test_001",
      "action": "PUBLISH",
      "result": false,
      "cause": "API_STATUS_ERROR",
      "api_status": "API_STATUS_CREATED",
      "api_debug": "API_DEBUG_WAITING"
    }
  ]
}
```

- Response parameter description

Parameter	Type	Description
instances	Dictionary	Instance list

- instances parameters

Parameter	Type	Description
instance_id	String	Cluster ID

Parameter	Type	Description
instance_type	String	Cluster type. Available values include: <b>DLM</b> : no gateway <b>APIG</b> : API Gateway Shared edition <b>APIGW</b> : API Gateway Dedicated edition <b>ROMA_APIG</b> : ROMA-APIC gateway
name	String	Cluster name
action	String	Operation on the API. Available values include: <b>PUBLISH</b> : publishing the API <b>UNPUBLISH</b> : unpublishing the API <b>STOP</b> : suspending the API <b>RECOVER</b> : restoring the API
result	Boolean	Verification result
cause	String	Verification failure cause
api_status	String	API status. Available values include: <b>API_STATUS_CREATED</b> : The API has been created. <b>API_STATUS_PUBLISH_WAIT_REVIEW</b> : The API has been published and is waiting to be reviewed. <b>API_STATUS_PUBLISH_REJECT</b> : The request to publish the API has been rejected. <b>API_STATUS_PUBLISHED</b> : The API has been published. <b>API_STATUS_WAITING_STOP</b> : The API is to be suspended. <b>API_STATUS_STOPPED</b> : The API has been suspended. <b>API_STATUS_RECOVER_WAIT_REVIEW</b> : The request to recover the API waits to be reviewed. <b>API_STATUS_WAITING_OFFLINE</b> : The API is pending offline. <b>API_STATUS_OFFLINE</b> : The API is offline.

Parameter	Type	Description
api_debug	String	API debugging status. Available values include: <b>API_DEBUG_WAITING</b> : The API is waiting to be debugged. <b>API_DEBUG_FAILED</b> : API debugging fails. <b>API_DEBUG_SUCCESS</b> : API debugging is successful.

## Status Code

Status Code	Description
200	success

For details about status codes, see [Status Codes](#).

## 10.2 Authorization Management

### 10.2.1 Querying Apps Bound to an API

#### Description

This API is used to query the list of apps that have been bound to a specified API.

#### URL

- URI format  
GET /v1/{project\_id}/service/authorize/apis/{api\_id}[?offset,limit]
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
api_id	Yes	String	API ID

Parameter	Mandatory	Type	Description
offset	No	Integer	Query start coordinate, that is, skipping the first $X$ records. The value can only be <b>0</b> or an integer multiple of <b>limit</b> . If the requirement is not met, the value is rounded down. The default value is <b>0</b> . The value range is [0, MAX_INTEGER).
limit	No	Integer	Number of records to be queried, that is, $Y$ records. The default value is <b>100</b> . The value range is [1, 100].

## Request Message

- Example request  
None

## Response

- Example response

```
{
  "total": 1,
  "records": [
    {
      "app_id": "908489209a320df61607355c57c82882",
      "app_name": "app_demo",
      "api_using_time": 1580452617000,
      "approval_time": 1578897421000
    }
  ]
}
```

- Response parameter description

Parameter	Type	Description
total	Integer	Number of apps that match the query conditions
records	Dictionary	Apps that are returned

- records parameter description

Parameter	Type	Description
app_id	String	App ID
app_name	String	App name
api_using_time	Long	Expiry time of using the API, which is a 13-digit timestamp

Parameter	Type	Description
approval_time	Long	Authorization time, which is a 13-digit timestamp

## Status Code

Status Code	Description
200	The message list is obtained.

For details about status codes, see [Status Codes](#).

## 10.2.2 Querying Authorized APIs of an App

### Description

This API is used to query the list of APIs that have been authorized to an app.

### URI

- URI format  
GET /v1/{project\_id}/service/authorize/apps/{app\_id}[?offset,limit]
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
app_id	Yes	String	App ID
offset	No	Integer	Query start coordinate, that is, skipping the first $X$ records. The value can only be <b>0</b> or an integer multiple of <b>limit</b> . If the requirement is not met, the value is rounded down. The default value is <b>0</b> . The value range is [0, MAX_INTEGER).
limit	No	Integer	Number of records to be queried, that is, $Y$ records. The default value is <b>100</b> . The value range is [1, 100].

### Request Message

- Example request  
None

## Response

- Example response

```
{
  "total": 1,
  "records": [
    {
      "id": "2342936b7862317d0a81bfcb657f243",
      "name": "testApi",
      "description": "test api",
      "approval_time": 1578897421000,
      "manager": "admin",
      "deadline": 1580452617000
    }
  ]
}
```

- Response parameter description

Parameter	Type	Description
total	Integer	Number of APIs that match the query conditions
records	Dictionary	APIs that are returned

- records parameter description

Parameter	Type	Description
id	String	API ID
name	String	API name
description	String	API description
approval_time	Long	Authorization time, which is a 13-digit timestamp
manager	String	Reviewer
deadline	Long	Expiry time of using the API, which is a 13-digit timestamp

## Status Code

Status Code	Description
200	The APIs that have been authorized to the app are obtained.

For details about status codes, see [Status Codes](#).

## 10.3 Application Management

### 10.3.1 Querying the Application List

#### Description

This API is used to query the list of applications in the review center.

#### URL

- URI format  
GET /v1/{project\_id}/service/applys [?offset,limit,api\_name,query\_type]
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
offset	No	Integer	Query start coordinate, that is, skipping the first <i>X</i> records. The value can only be <b>0</b> or an integer multiple of <b>limit</b> . If the requirement is not met, the value is rounded down. The default value is <b>0</b> . The value range is [0, MAX_INTEGER).
limit	No	Integer	Number of records to be queried, that is, <i>Y</i> records. The default value is <b>100</b> . The value range is [1, 100].
api_name	No	String	API name
query_type	No	Integer	Query type. Available values include: <b>0</b> : an application that is pending review <b>1</b> : an application that has been reviewed <b>2</b> : an application that has been sent for development <b>3</b> : an application that has been sent for invocation Default value: <b>0</b> Value range: [0, 3]

## Request Message

- Example request  
None

## Response

- Example response

```
{
  "total": 1,
  "records": [
    {
      "id": "a1c93c3cb17d9747fc41df0377b6fe0f",
      "api_apply_status": "STATUS_TYPE_PASSED",
      "api_apply_type": "APPLY_TYPE_APPLY",
      "api_id": "47046fe7830c1be77cb0dc23bd86afa5",
      "api_name": "api_demo",
      "api_using_time": 1580452617000,
      "app_id": "908489209a320df61607355c57c82882",
      "app_name": "app_demo",
      "apply_time": 1578875421000,
      "approval_time": 1578897421000,
      "approver_name": "Jack",
      "comment": "Pass",
      "user_name": "Tim"
    }
  ]
}
```

- Response parameter description

Parameter	Type	Description
total	Integer	Number of applications that match the query conditions
records	Dictionary	Applications that are returned

- records parameter description

Parameter	Type	Description
id	String	Application ID



Parameter	Type	Description
api_apply_status	String	<p>Application status. Available values include:</p> <p><b>STATUS_TYPE_PENDING_APPROVAL:</b> The application is pending review.</p> <p><b>STATUS_TYPE_REJECTED:</b> The application has been rejected.</p> <p><b>STATUS_TYPE_PENDING_CHECK:</b> The application is pending check.</p> <p><b>STATUS_TYPE_PENDING_EXECUTE:</b> The application is pending execution.</p> <p><b>STATUS_TYPE_SYNCHRONOUS_EXECUTE:</b> The application is synchronously executed.</p> <p><b>STATUS_TYPE_FORCED_CANCEL:</b> The application has been forcibly canceled.</p> <p><b>STATUS_TYPE_PASSED:</b> The application has been approved.</p>
api_apply_type	String	<p>Application type. Available values include:</p> <p><b>APPLY_TYPE_PUBLISH:</b> publishing an API</p> <p><b>APPLY_TYPE_AUTHORIZE:</b> authorizing an API</p> <p><b>APPLY_TYPE_APPLY:</b> applying for authorization</p> <p><b>APPLY_TYPE_RENEW:</b> applying for renewing the validity period</p> <p><b>APPLY_TYPE_STOP:</b> suspending an API</p> <p><b>APPLY_TYPE_RECOVER:</b> restoring an API</p> <p><b>APPLY_TYPE_API_CANCEL_AUTHORIZE:</b> canceling API authorization (by the API reviewer)</p> <p><b>APPLY_TYPE_APP_CANCEL_AUTHORIZATION:</b> canceling API authorization (by the app owner)</p> <p><b>APPLY_TYPE_OFFLINE:</b> unpublishing an API</p>
api_id	String	API ID
api_name	String	API name

Parameter	Type	Description
api_using_time	Long	Expiry time of using the API, which is a 13-digit timestamp
app_id	String	App ID
app_name	String	App name
apply_time	Long	Application time, which is a 13-digit timestamp
approval_time	Long	Authorization time, which is a 13-digit timestamp
approver_name	String	Reviewer name
comment	String	Review comment
user_name	String	Applicant name

## Status Code

Status Code	Description
200	The message list is obtained.

For details about status codes, see [Status Codes](#).

## 10.3.2 Reviewing Applications

### Description

This API is used to review applications, including approving and rejecting the applications.

### URL

- URI format  
POST /v1/{project\_id}/service/applys
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .

## Request Message

- Example request

```
{
  "apply_result": true,
  "apply_ids": [
    "72edfd975d20f2ca5d920bbdf42bf25a"
  ]
}
```

- Request parameter description

Parameter	Mandatory	Type	Description
apply_result	Yes	Boolean	Review result <b>true</b> : approved <b>false</b> : rejected
apply_ids	Yes	String[]	IDs of applications

## Response

- Example response  
None

## Status Code

Status Code	Description
204	The applications are reviewed successfully.

For details about status codes, see [Status Codes](#).

## 10.3.3 Obtaining Application Details

### Description

This API is used to obtain details of an application.

This function is only used for displaying application details and not for processing. Therefore, background parameters such as the ID are not displayed.

### URL

- URI format  
GET /v1/{project\_id}/service/applys/{apply\_id}
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
apply_id	Yes	String	Application/message ID

## Request Message

- Example request  
None

## Response

- Example response

```
{
  "id": null,
  "api_apply_status": "STATUS_TYPE_PASSED",
  "api_apply_type": "APPLY_TYPE_APPLY",
  "api_id": null,
  "api_name": "api_demo",
  "api_using_time": 1580452617000,
  "app_id": null,
  "app_name": "app_demo",
  "apply_time": 1578875421000,
  "approval_time": null,
  "approver_name": null,
  "comment": "Pass",
  "user_name": "Tim"
}
```

- Response parameter description

Parameter	Type	Description
id	String	Application No. (not displayed)

Parameter	Type	Description
api_apply_statuses	String	<p>Application status. Available values include:</p> <p><b>STATUS_TYPE_PENDING_APPROVAL:</b> The application is pending review.</p> <p><b>STATUS_TYPE_REJECTED:</b> The application has been rejected.</p> <p><b>STATUS_TYPE_PENDING_CHECK:</b> The application is pending check.</p> <p><b>STATUS_TYPE_PENDING_EXECUTE:</b> The application is pending execution.</p> <p><b>STATUS_TYPE_SYNCHRONOUS_EXECUTE:</b> The application is synchronously executed.</p> <p><b>STATUS_TYPE_FORCED_CANCEL:</b> The application has been forcibly canceled.</p> <p><b>STATUS_TYPE_PASSED:</b> The application has been approved.</p>
api_apply_type	String	<p>Application type. Available values include:</p> <p><b>APPLY_TYPE_PUBLISH:</b> publishing an API</p> <p><b>APPLY_TYPE_AUTHORIZE:</b> authorizing an API</p> <p><b>APPLY_TYPE_APPLY:</b> applying for authorization</p> <p><b>APPLY_TYPE_RENEW:</b> applying for renewing the validity period</p> <p><b>APPLY_TYPE_STOP:</b> suspending an API</p> <p><b>APPLY_TYPE_RECOVER:</b> restoring an API</p> <p><b>APPLY_TYPE_API_CANCEL_AUTHORIZE:</b> canceling API authorization (by the API reviewer)</p> <p><b>APPLY_TYPE_APP_CANCEL_AUTHORIZE:</b> canceling API authorization (by the app owner)</p> <p><b>APPLY_TYPE_OFFLINE:</b> unpublishing an API</p>
api_id	String	API ID (not displayed)
api_name	String	API name
api_using_time	Long	Expiry time of using the API, which is a 13-digit timestamp

Parameter	Type	Description
app_id	String	App ID (not displayed)
app_name	String	App name
apply_time	Long	Application time, which is a 13-digit timestamp
approval_time	Long	Authorization time, which is a 13-digit timestamp (not displayed)
approver_name	String	Reviewer name (not displayed)
comment	String	Review comment
user_name	String	Applicant name

## Status Code

Status Code	Description
200	The message list is obtained.

For details about status codes, see [Status Codes](#).

# 10.4 Message Management

## 10.4.1 Querying the Message List

### Description

This API is used to query the list of notification messages in the review center. Different from applications, notification messages cannot be rejected and can be processed only within a specified time period.

### URL

- URI format  
GET /v1/{project\_id}/service/messages[?offset,limit,api\_name]
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .

Parameter	Mandatory	Type	Description
offset	No	Integer	Query start coordinate, that is, skipping the first <i>X</i> records. The value can only be <b>0</b> or an integer multiple of <b>limit</b> . If the requirement is not met, the value is rounded down. The default value is <b>0</b> . The value range is [0, MAX_INTEGER).
limit	No	Integer	Number of records to be queried, that is, <i>Y</i> records. The default value is <b>100</b> . The value range is [1, 100].
api_name	No	String	API name

## Request Message

- Example request  
None

## Response

- Example response

```
{
  "total": 1,
  "records": [
    {
      "id": "a1c93c3cb17d9747fc41df0377b6fe0f",
      "api_apply_status": "STATUS_TYPE_PASSED",
      "api_apply_type": "APPLY_TYPE_APPLY",
      "api_id": "47046fe7830c1be77cb0dc23bd86afa5",
      "api_name": "api_demo",
      "api_using_time": 1580452617000,
      "app_id": "908489209a320df61607355c57c82882",
      "app_name": "app_demo",
      "apply_time": 1578875421000,
      "approval_time": 1578897421000,
      "approver_name": "Jack",
      "comment": "Pass",
      "user_name": "Tim"
    }
  ]
}
```

- Response parameter description

Parameter	Type	Description
total	Integer	Number of messages that match the query conditions
records	Dictionary	Messages that are returned

- records parameter description

Parameter	Type	Description
id	String	Application ID
api_apply_status	String	Application status. Available values include: <b>STATUS_TYPE_PENDING_APPROVAL</b> : The application is pending review. <b>STATUS_TYPE_REJECTED</b> : The application has been rejected. <b>STATUS_TYPE_PENDING_CHECK</b> : The application is pending check. <b>STATUS_TYPE_PENDING_EXECUTE</b> : The application is pending execution. <b>STATUS_TYPE_SYNCHRONOUS_EXECUTE</b> : The application is synchronously executed. <b>STATUS_TYPE_FORCED_CANCEL</b> : The application has been forcibly canceled. <b>STATUS_TYPE_PASSED</b> : The application has been approved.
api_apply_type	String	Application type. Available values include: <b>APPLY_TYPE_PUBLISH</b> : publishing an API <b>APPLY_TYPE_AUTHORIZE</b> : authorizing an API <b>APPLY_TYPE_APPLY</b> : applying for authorization <b>APPLY_TYPE_RENEW</b> : applying for renewing the validity period <b>APPLY_TYPE_STOP</b> : suspending an API <b>APPLY_TYPE_RECOVER</b> : restoring an API <b>APPLY_TYPE_API_CANCEL_AUTHORIZE</b> : canceling API authorization (by the API reviewer) <b>APPLY_TYPE_APP_CANCEL_AUTHORIZE</b> : canceling API authorization (by the app owner) <b>APPLY_TYPE_OFFLINE</b> : unpublishing an API
api_id	String	API ID
api_name	String	API name



Parameter	Type	Description
api_using_time	Long	Expiry time of using the API, which is a 13-digit timestamp
app_id	String	App ID
app_name	String	App name
apply_time	Long	Application time, which is a 13-digit timestamp
approval_time	Long	Authorization time, which is a 13-digit timestamp
approver_name	String	Reviewer name
comment	String	Review comment
user_name	String	Applicant name

## Status Code

Status Code	Description
200	The message list is obtained.

For details about status codes, see [Status Codes](#).

## 10.4.2 Processing Messages

### Description

This API is used to process received notification messages within a specified time period.

### URL

- URI format  
POST /v1/{project\_id}/service/messages
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .

## Request Message

- Example request

```
{  
  "message_id": "82edfd975d5tf2ca5d920bbdf42bf2z9",  
  "action": 1,  
  "time": "2021-01-01T10:00:00.000Z"  
}
```

- Request parameter description

Parameter	Mandatory	Type	Description
message_id	Yes	String	Message ID
action	Yes	Integer	Operation to be performed <b>0</b> : immediate operation <b>1</b> : periodic operation Value range: [0, 1]
time	No	String	End time, in ISO format (+0 time zone). The operation in the notification received will be performed after the expiration time. This parameter is required only for periodic execution. By default, the end time is three days after the current server time and is accurate to hour.

## Response

- Example response  
None

## Status Code

Status Code	Description
204	The messages are successfully processed.

For details about status codes, see [Status Codes](#).

## 10.4.3 Obtaining Message Details

### Description

This API is used to obtain the details of a message. This function is only used for displaying application details and not for processing. Therefore, background parameters such as the ID are not displayed.

## URL

- URI format  
GET /v1/{project\_id}/service/messages/{message\_id}
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
message_id	Yes	String	Application/message ID

## Request Message

- Example request  
None

## Response

- Example response
 

```
{
  "id": null,
  "api_apply_status": "STATUS_TYPE_PASSED",
  "api_apply_type": "APPLY_TYPE_APPLY",
  "api_id": null,
  "api_name": "api_demo",
  "api_using_time": 1580452617000,
  "app_id": null,
  "app_name": "app_demo",
  "apply_time": 1578875421000,
  "approval_time": null,
  "approver_name": null,
  "comment": "Pass",
  "user_name": "Tim"
}
```

- Response parameter description

Parameter	Type	Description
id	String	Application No. (not displayed)

Parameter	Type	Description
api_apply_statuses	String	<p>Application status. Available values include:</p> <p><b>STATUS_TYPE_PENDING_APPROVAL:</b> The application is pending review.</p> <p><b>STATUS_TYPE_REJECTED:</b> The application has been rejected.</p> <p><b>STATUS_TYPE_PENDING_CHECK:</b> The application is pending check.</p> <p><b>STATUS_TYPE_PENDING_EXECUTE:</b> The application is pending execution.</p> <p><b>STATUS_TYPE_SYNCHRONOUS_EXECUTE:</b> The application is synchronously executed.</p> <p><b>STATUS_TYPE_FORCED_CANCEL:</b> The application has been forcibly canceled.</p> <p><b>STATUS_TYPE_PASSED:</b> The application has been approved.</p>
api_apply_type	String	<p>Application type. Available values include:</p> <p><b>APPLY_TYPE_PUBLISH:</b> publishing an API</p> <p><b>APPLY_TYPE_AUTHORIZE:</b> authorizing an API</p> <p><b>APPLY_TYPE_APPLY:</b> applying for authorization</p> <p><b>APPLY_TYPE_RENEW:</b> applying for renewing the validity period</p> <p><b>APPLY_TYPE_STOP:</b> suspending an API</p> <p><b>APPLY_TYPE_RECOVER:</b> restoring an API</p> <p><b>APPLY_TYPE_API_CANCEL_AUTHORIZE:</b> canceling API authorization (by the API reviewer)</p> <p><b>APPLY_TYPE_APP_CANCEL_AUTHORIZE:</b> canceling API authorization (by the app owner)</p> <p><b>APPLY_TYPE_OFFLINE:</b> unpublishing an API</p>
api_id	String	API ID (not displayed)
api_name	String	API name
api_using_time	Long	Expiry time of using the API, which is a 13-digit timestamp

Parameter	Type	Description
app_id	String	App ID (not displayed)
app_name	String	App name
apply_time	Long	Application time, which is a 13-digit timestamp
approval_time	Long	Authorization time, which is a 13-digit timestamp (not displayed)
approver_name	String	Reviewer name (not displayed)
comment	String	Review comment
user_name	String	Applicant name

## Status Code

Status Code	Description
200	The message list is obtained.

For details about status codes, see [Status Codes](#).

# 10.5 Service Catalog Management

## 10.5.1 Creating a Service Catalog

### Description

This API is used to create a service catalog. The ID of the root directory is 0.

### URL

- URI format  
POST /v1/{project\_id}/service/servicecatalogs
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .

## Request Message

- Example request

```
{
  "pid": "8c9850726a1ee050be2b67e43c688870",
  "name": "demo",
  "description": "this is a demo"
}
```

- Request parameter description

Parameter	Type	Description
pid	String	Parent catalog ID
name	String	Catalog name. The value contains 1 to 64 characters and can contain letters, digits, and underscores (_).
description	String	Description

## Response

- Example response

```
{
  "catalog_id": "2847131b4d5a26c5bd4bfd9d8f63f577",
  "name": "demo",
  "description": "this is a demo",
  "create_time": 1578284788000,
  "create_user": "Tim",
  "update_time": 1578284788000,
  "update_user": "Tim"
}
```

- Response parameter description

Parameter	Type	Description
catalog_id	String	Catalog ID
name	String	Catalog name
description	String	Description
create_time	Long	Time when the catalog was created, which is a 13-digit timestamp
create_user	String	Name of the creator
update_time	Long	Time when the catalog was updated, which is a 13-digit timestamp
update_user	String	User who updated the catalog

## Status Code

Status Code	Description
200	The catalog is created successfully.

For details about status codes, see [Status Codes](#).

## 10.5.2 Updating a Service Catalog

### Description

This API is used to update a service catalog.

### URL

- URI format  
PUT /v1/{project\_id}/service/servicecatalogs/{catalog\_id}
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
catalog_id	Yes	String	Catalog ID

### Request Message

- Example request

```
{
  "name": "demo",
  "description": "this is a demo"
}
```

- Request parameter description

Parameter	Type	Description
name	String	Catalog name. The value contains 1 to 64 characters and can contain letters, digits, and underscores (_).
description	String	Description

### Response

- Example response

```
{
  "catalog_id": "2847131b4d5a26c5bd4bfd9d8f63f577",
  "name": "demo",
  "description": "this is a demo",
  "create_time": 1578284788000,
  "create_user": "Tim",
  "update_time": 1578284788000,
  "update_user": "Tim"
}
```

- Response parameter description

Parameter	Type	Description
catalog_id	String	Catalog ID
name	String	Catalog name
description	String	Description
create_time	Long	Time when the catalog was created, which is a 13-digit timestamp
create_user	String	Name of the creator
update_time	Long	Time when the catalog was updated, which is a 13-digit timestamp
update_user	String	User who updated the catalog

## Status Code

Status Code	Description
200	The catalog is successfully updated.

For details about status codes, see [Status Codes](#).

## 10.5.3 Querying a Service Catalog

### Description

This API is used to query a service catalog.

### URL

- URI format  
GET /v1/{project\_id}/service/servicecatalogs/{catalog\_id}
- Parameter description



Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
catalog_id	Yes	String	Catalog ID

## Request Message

- Example request  
None

## Response

- Example response

```
{
  "catalog_id": "2847131b4d5a26c5bd4bfd9d8f63f577",
  "name": "demo",
  "path": "/demo1/demo2/demo",
  "catalog_total": 1,
  "api_total": 1,
  "description": "this is a demo",
  "create_time": 1578284788000,
  "create_user": "Tim",
  "update_time": 1578284788000,
  "update_user": "Tim"
}
```

- Response parameter description

Parameter	Type	Description
catalog_id	String	Catalog ID
name	String	Catalog name
path	String	Catalog path
catalog_total	String	Total number of catalogs
api_total	String	Total number of APIs in the catalog
description	String	Description
create_time	Long	Time when the catalog was created, which is a 13-digit timestamp
create_user	String	Name of the creator
update_time	Long	Time when the catalog was updated, which is a 13-digit timestamp
update_user	String	User who updated the catalog

## Status Code

Status Code	Description
200	The catalog is obtained.

For details about status codes, see [Status Codes](#).

## 10.5.4 Deleting Service Catalogs

### Description

This API is used to delete service catalogs.

When a service catalog is deleted, all its sub-catalogs are deleted. Catalogs with APIs cannot be deleted.

### URL

- URI format  
POST /v1/{project\_id}/service/servicecatalogs/batch-delete
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .

### Request Message

- Example request

```
{
  "ids": [
    "2847131b4d5a26c5bd4bfd9d8f63f577",
    "8c9850726a1ee050be2b67e43c688870"
  ]
}
```
- Request parameter description

Parameter	Type	Description
ids	String[]	IDs of the catalogs to be deleted

### Response

- Example response  
None

## Status Code

Status Code	Description
204	The catalogs are successfully deleted.

For details about status codes, see [Status Codes](#).

## 10.5.5 Moving a Catalog to Another Catalog

### Description

This API is used to move a catalog to another directory.

When the catalog is moved, all its sub-catalogs are also moved.

### URL

- URI format  
POST /v1/{project\_id}/service/servicecatalogs/{catalog\_id}/move
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
catalog_id	Yes	String	Catalog ID

### Request Message

- Example request

```
{
  "target_pid": "8c9850726a1ee050be2b67e43c688870"
}
```
- Request parameter description

Parameter	Type	Description
target_pid	String	Catalog to which the catalog will be moved

### Response

- Example response  
None

## Status Code

Status Code	Description
204	The catalog is moved successfully.

For details about status codes, see [Status Codes](#).

## 10.5.6 Moving APIs to Another Catalog

### Description

This API is used to move APIs to another catalog.

### URL

- URI format  
POST /v1/{project\_id}/service/servicecatalogs/apis/batch-move
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .

### Request Message

- Example request

```
{
  "target_pid": "8c9850726a1ee050be2b67e43c688870",
  "apis": [
    "fd0beac79418d65e3b3ed24a6e33b24b"
  ]
}
```

- Request parameter description

Parameter	Type	Description
target_pid	String	Catalog to which the catalog will be moved
apis	String[]	IDs of the APIs to be moved

### Response

- Example response  
None

## Status Code

Status Code	Description
204	The APIs are moved successfully.

For details about status codes, see [Status Codes](#).

## 10.5.7 Obtaining the List of APIs and Catalogs in a Catalog

### Description

This API is used to obtain the list of APIs and catalogs in the current catalog. The list is displayed in the data format of the catalog.

### URL

- URI format  
GET /v1/{project\_id}/service/servicecatalogs/{catalog\_id}/detail[?offset,limit]
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
catalog_id	Yes	String	Catalog ID
offset	No	Integer	Query start coordinate, that is, skipping the first <i>X</i> records. The default value is <b>0</b> . The value range is [0, MAX_INTEGER).
limit	No	Integer	Number of records to be queried, that is, <i>Y</i> records. The default value is <b>100</b> . The value range is [1, 100].

### Request Message

- Example request  
None

### Response

- Example response

```
{  
  "total": 1,  
  "api_catalogs": [  
    {
```

```

"catalog_id": "2847131b4d5a26c5bd4bfd9d8f63f577",
"pid": "8c9850726a1ee050be2b67e43c688870",
"name": "demo",
"description": "this is a demo",
"api_catalog_type": "CATALOG",
"create_time": 1578284788000,
"create_user": "Tim",
"update_time": 1578284788000,
"update_user": "Tim"
}
]
}

```

- Response parameter description

Parameter	Type	Description
total	Integer	Total number of records that match the query conditions
api_catalogs	Dictionary	Catalogs that are returned

- api\_catalogs parameter description

Parameter	Type	Description
catalog_id	String	ID of the catalog (or API in the catalog format)
pid	String	Parent catalog ID
name	String	Name of the catalog (or API in the catalog format)
description	String	Description
api_catalog_type	String	Type. Available values include: <b>CATALOG</b> API: api
create_time	Long	Time when the catalog was created, which is a 13-digit timestamp
create_user	String	Name of the creator
update_time	Long	Time when the catalog was updated, which is a 13-digit timestamp
update_user	String	User who updated the catalog

## Status Code

Status Code	Description
200	The list of sub-catalogs is obtained.

For details about status codes, see [Status Codes](#).

## 10.5.8 Obtaining the List of APIs in a Catalog

### Description

This API is used to obtain the list of APIs in a catalog.

### URL

- URI format  
GET /v1/{project\_id}/service/servicecatalogs/{catalog\_id}/apis[?offset,limit]
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
catalog_id	Yes	String	Catalog ID
offset	No	Integer	Query start coordinate, that is, skipping the first <i>X</i> records. The default value is <b>0</b> . The value range is [0, MAX_INTEGER).
limit	No	Integer	Number of records to be queried, that is, <i>Y</i> records. The default value is <b>100</b> . The value range is [1, 100].

### Request Message

- Example request  
None

### Response

- Example response

```
{
  "total": 1,
  "apis": [
    {
      "id": "fd0beac79418d65e3b3ed24a6e33b24b",
      "name": "testApi",
      "catalog_id": "677942eeca42b85d82fcef909d8345f4",
      "create_time": 1579162215000,
      "status": "API_STATUS_CREATED",
      "manager": "admin",
      "type": null,
      "debug_status": "API_DEBUG_WAITING"
    }
  ]
}
```

- Response parameter description

Parameter	Type	Description
total	Integer	Total number of records that match the query conditions
apis	Dictionary	APIs that are returned

- apis parameters

Parameter	Type	Description
id	String	API Id
name	String	API name
catalog_id	String	Service catalog ID
create_time	Long	Creation time (a 13-digit timestamp)
status	String	<p>API status. This parameter is unavailable for the Exclusive edition.</p> <p><b>API_STATUS_CREATED:</b> The API has been created.</p> <p><b>API_STATUS_PUBLISH_WAIT_REVIEW:</b> The API has been published and is waiting to be reviewed.</p> <p><b>API_STATUS_PUBLISH_REJECT:</b> The request to publish the API has been rejected.</p> <p><b>API_STATUS_PUBLISHED:</b> The API has been published.</p> <p><b>API_STATUS_WAITING_STOP:</b> The API is to be suspended.</p> <p><b>API_STATUS_STOPPED:</b> The API has been suspended.</p> <p><b>API_STATUS_RECOVER_WAIT_REVIEW:</b> The request to recover the API waits to be reviewed.</p> <p><b>API_STATUS_WAITING_OFFLINE:</b> The API is pending offline.</p> <p><b>API_STATUS_OFFLINE:</b> The API is offline.</p> <p><b>API_STATUS_OFFLINE_WAIT_REVIEW:</b> The API offline request is waiting to be reviewed.</p>



Parameter	Type	Description
debug_status	String	API debugging status. This parameter is unavailable for the Exclusive edition. <b>API_DEBUG_WAITING</b> : The API is waiting to be debugged. <b>API_DEBUG_FAILED</b> : API debugging fails. <b>API_DEBUG_SUCCESS</b> : API debugging is successful.
type	String	API type (not displayed). Available values include: <b>API_SPECIFIC_TYPE_CONFIGURATION</b> : configuration API <b>API_SPECIFIC_TYPE_SCRIPT</b> : script API <b>API_SPECIFIC_TYPE_REGISTER</b> : registration API
manger	String	Reviewer name

## Status Code

Status Code	Description
200	The list of sub-catalogs is obtained.

For details about status codes, see [Status Codes](#).

## 10.5.9 Obtaining the List of Sub-Catalogs in a Catalog

### Description

This API is used to obtain the list of sub-catalogs in a catalog. (The returned sub-catalogs are displayed on the same page. It is recommended that this API be used only in scenarios where pagination is not supported, for example, generating a catalog tree.)

### URL

- URI format  
GET /v1/{project\_id}/service/servicecatalogs/{catalog\_id}/catalogs
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
catalog_id	Yes	String	Catalog ID

## Request Message

- Example request  
None

## Response

- Example response

```
{
  "total": 1,
  "api_catalogs": [
    {
      "catalog_id": "2847131b4d5a26c5bd4bfd9d8f63f577",
      "pid": "8c9850726a1ee050be2b67e43c688870",
      "name": "demo",
      "description": "this is a demo",
      "api_catalog_type": "CATALOG",
      "create_time": 1578284788000,
      "create_user": "Tim",
      "update_time": 1578284788000,
      "update_user": "Tim"
    }
  ]
}
```

- Response parameter description

Parameter	Type	Description
total	Integer	Total number of records that match the query conditions
api_catalogs	Dictionary	Catalogs that are returned

- api\_catalogs parameter description

Parameter	Type	Description
catalog_id	String	Catalog ID
pid	String	Parent catalog ID
name	String	Catalog name
description	String	Description

Parameter	Type	Description
api_catalog_type	String	Type. Available values include: <b>CATALOG</b>
create_time	Long	Time when the catalog was created, which is a 13-digit timestamp
create_user	String	Name of the creator
update_time	Long	Time when the catalog was updated, which is a 13-digit timestamp
update_user	String	User who updated the catalog

## Status Code

Status Code	Description
200	The list of sub-catalogs is obtained.

For details about status codes, see [Status Codes](#).

## 10.5.10 Obtaining the ID of a Catalog Through Its Path

### Description

This API is used to obtain the ID of a catalog through its path.

### URL

- URI format  
GET /v1/{project\_id}/service/servicecatalogs/ids[?path]
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
path	Yes	String	Catalog path

### Request Message

- Example request  
None

## Response

- Example response

```
{  
  "catalog_id": "2847131b4d5a26c5bd4bfd9d8f63f577"  
}
```

- Response parameter description

Parameter	Type	Description
catalog_id	String	Catalog ID

## Status Code

Status Code	Description
200	The catalog ID is obtained.

For details about status codes, see [Status Codes](#).

## 10.5.11 Obtaining the Path of a Catalog Through Its ID

### Description

This API is used to obtain the path of a catalog through its ID.

### URL

- URI format  
GET /v1/{project\_id}/service/servicecatalogs/{catalog\_id}/paths
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
catalog_id	Yes	String	Catalog ID

### Request Message

- Example request  
None

## Response

- Example response

```
{  
  "path": "/demo1/demo2/demo"  
}
```

- Response parameter description

Parameter	Type	Description
path	String	Catalog path

## Status Code

Status Code	Description
200	The catalog path is obtained.

For details about status codes, see [Status Codes](#).

## 10.5.12 Obtaining the Paths to a Catalog Through Its ID

### Description

This API is used to obtain the paths of all the layers from the root directory to the current catalog based on the catalog ID.

### URL

- URI format  
GET /v1/{project\_id}/service/servicecatalogs/{catalog\_id}/layerpaths
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
catalog_id	Yes	String	Catalog ID

### Request Message

- Example request  
None

## Response

- Example response

```
{
  "paths": [
    {
      "catalog_id": "2847131b4d5a26c5bd4bfd9d8f63f577",
      "name": "/demo",
      "order": 3
    }
    {
      "catalog_id": "3847131b4d565657g435536568f635342",
      "name": "/demo2",
      "order": 2
    }
    {
      "catalog_id": "450aa37131b4d5a26c5bcfd9d8f63j653",
      "name": "/demo1",
      "order": 1
    }
    {
      "catalog_id": "0",
      "name": "/",
      "order": 0
    }
  ]
}
```

- Response parameter description

Parameter	Type	Description
paths	Dictionary	Paths that are returned

- paths parameters

Parameter	Type	Description
catalog_id	String	Catalog ID
name	String	Name of a single path
order	Integer	Catalog level

## Status Code

Status Code	Description
200	The paths are obtained.

For details about status codes, see [Status Codes](#).

## 10.6 Gateway Management

## 10.6.1 Obtaining the List of Gateway Instances

### Description

This API is used to obtain the list of gateway instances of a specified type.

### URL

- URI format  
GET /v1/{project\_id}/service/apigw/instances [?apig\_type]
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
apig_type	Yes	String	Gateway type. Available values include: <b>APIGW</b> : API Gateway Dedicated edition <b>ROMA_APIC</b> : ROMA-APIC gateway

### Request Message

- Example request  
None

### Response

- Example response

```
{
  "gateway_instances": [
    {
      "instance_id": "0ca3311f5dc941b7b3d1950d1682b646",
      "instance_name": "apigw_test_001"
    }
  ]
}
```
- Response parameter description

Parameter	Type	Description
gateway_instances	Dictionary	List of gateway instances

- gateway\_instances parameters

Parameter	Type	Description
instance_id	String	Gateway instance ID

Parameter	Type	Description
instance_name	String	Gateway instance name

## Status Code

Status Code	Description
200	success

For details about status codes, see [Status Codes](#).

## 10.6.2 Obtaining the List of Gateway Groups

### Description

This API is used to obtain the list of gateway groups.

### URL

- URI format  
GET /v1/{project\_id}/service/apigw/instances/{apig\_instance\_id}/groups [?apig\_type]
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
apig_instance_id	Yes	String	Gateway instance ID. For DLM Shared, the value of this parameter is <b>APIG</b> .
apig_type	Yes	String	Gateway type. Available values include: <b>APIG</b> : API Gateway Shared edition <b>APIGW</b> : API Gateway Dedicated edition <b>ROMA_APIC</b> : ROMA-APIC gateway

### Request Message

- Example request  
None



## Response

- Example response

```
{
  "gateway_groups": [
    {
      "group_id": "ef5a4d1dd3064702a943c2de303348e2",
      "group_name": "DEFAULT"
    }
  ]
}
```

- Response parameter description

Parameter	Type	Description
gateway_group s	Dictionary	List of gateway groups

- gateway\_groups parameters

Parameter	Type	Description
group_id	String	Gateway group ID
group_name	String	Gateway group name

## Status Code

Status Code	Description
200	success

For details about status codes, see [Status Codes](#).

# 10.7 App Management

## 10.7.1 Creating an App

### Description

This API is used to create an app that uses the app or IAM verification.

### URL

- URI format  
POST /v1/{project\_id}/service/apps
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .

## Request Message

- Example request

```
{
  "app_type": "APP",
  "name": "app_test_001",
  "description": "This is the app's description.",
}
```

- Request parameter description

Parameter	Mandatory	Type	Description
app_type	Yes	String	App type <b>IAM</b> : IAM authentication <b>APP</b> (formerly <b>APIG/APIGW/DLM/ROMA_APIC</b> ): app authentication
name	Yes	String	App name
description	No	String	App description

## Response

- Example response

```
{
  "id": "908489209a320df61607355c57c82882",
  "name": "app_test_001",
  "description": "This is the app's description.",
  "app_key": "fbbf9462bb434cb4a13ee7d2bb70c418",
  "app_secret": "c1245f01937442e098ffa6ff134cb3dc",
  "register_time": 1578284788000,
  "update_time": 1578284788000,
  "create_user": "create_user",
  "update_user": "update_user",
  "app_type": "APP"
}
```

- Response parameter description

Parameter	Type	Description
id	String	App ID
name	String	App name
description	String	App description
app_key	String	App key

Parameter	Type	Description
app_secret	String	App secret
register_time	Long	Registration time, which is a 13-digit timestamp
update_time	Long	Update time, which is a 13-digit timestamp
create_user	String	Creator
update_user	String	User who updated the app
app_type	String	App type <b>IAM</b> : IAM authentication <b>APP</b> : app authentication <b>APIG</b> : API Gateway Shared edition (inventory data) <b>APIGW</b> : API Gateway Dedicated edition (inventory data) <b>DLM</b> : no gateway (inventory data) <b>ROMA_APIC</b> : ROMA-APIC gateway (inventory data)

## Status Code

Status Code	Description
200	success

For details about status codes, see [Status Codes](#).

## 10.7.2 Querying the App List

### Description

This API is used to query the app list.

### URL

- URI format  
GET /v1/{project\_id}/service/apps [?offset,limit,name,app\_type]
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
offset	No	Integer	Query start coordinate, that is, skipping the first $X$ records. The default value is <b>0</b> . The value range is [0, MAX_INTEGER).
limit	No	Integer	Number of records to be queried, that is, $Y$ records. The default value is <b>10</b> . The value range is [1, 100].
name	No	String	App name. Fuzzy search is supported.
app_type	No	String	App type <b>IAM</b> : IAM authentication <b>APP</b> (formerly <b>APIG/APIGW/DLM/ROMA_APIC</b> ): app authentication

## Request Message

- Example request  
None

## Response

- Example response

```
{
  "total": 1,
  "apps": [
    {
      "id": "908489209a320df61607355c57c82882",
      "name": "app_test_001",
      "description": "This is the app's description.",
      "app_key": "fbbf9462bb434cb4a13ee7d2bb70c418",
      "app_secret": "c1245f01937442e098ffa6ff134cb3dc",
      "register_time": 1578284788000,
      "update_time": 1578284788000,
      "create_user": "create_user",
      "update_user": "update_user",
      "app_type": "APP"
    }
  ]
}
```

- Response parameter description

Parameter	Type	Description
total	Integer	Total number of apps that match the query conditions

Parameter	Type	Description
apps	Dictionary	Total number of apps that match the query conditions

## - apps parameters

Parameter	Type	Description
id	String	App ID
name	String	App name
description	String	App description
app_key	String	App key
app_secret	String	App secret
register_time	Long	Registration time, which is a 13-digit timestamp
update_time	Long	Update time, which is a 13-digit timestamp
create_user	String	Creator
update_user	String	User who updated the app
app_type	String	App type <b>IAM</b> : IAM authentication <b>APP</b> : app authentication <b>APIG</b> : API Gateway Shared edition (inventory data) <b>APIGW</b> : API Gateway Dedicated edition (inventory data) <b>DLM</b> : no gateway (inventory data) <b>ROMA_APIC</b> : ROMA-APIC gateway (inventory data)

## Status Code

Status Code	Description
200	success

For details about status codes, see [Status Codes](#).

## 10.7.3 Updating an App

### Description

This API is used to update an app.

### URL

- URI format  
PUT /v1/{project\_id}/service/apps/{app\_id}
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
app_id	Yes	String	App ID

### Request Message

- Example request

```
{
  "name": "app_test_001",
  "description": "This is the app's description."
}
```
- Request parameter description

Parameter	Mandatory	Type	Description
name	Yes	String	App name
description	No	String	App description

### Response

- Example response

```
{
  "id": "908489209a320df61607355c57c82882",
  "name": "app_test_001",
  "description": "This is the app's description.",
  "app_key": "fbbf9462bb434cb4a13ee7d2bb70c418",
  "app_secret": "c1245f01937442e098ffa6ff134cb3dc",
  "register_time": 1578284788000,
  "update_time": 1578284788000,
  "create_user": "create_user",
  "update_user": "update_user",
  "app_type": "APP"
}
```
- Response parameter description

Parameter	Type	Description
id	String	App ID
name	String	App name
description	String	App description
app_key	String	App key
app_secret	String	App secret
register_time	Long	Registration time, which is a 13-digit timestamp
update_time	Long	Update time, which is a 13-digit timestamp
create_user	String	Creator
update_user	String	User who updated the app
app_type	String	App type <b>IAM</b> : IAM authentication <b>APP</b> : app authentication <b>APIG</b> : API Gateway Shared edition (inventory data) <b>APIGW</b> : API Gateway Dedicated edition (inventory data) <b>DLM</b> : no gateway (inventory data) <b>ROMA_APIC</b> : ROMA-APIC gateway (inventory data)

## Status Code

Status Code	Description
200	success

For details about status codes, see [Status Codes](#).

## 10.7.4 Deleting an App

### Description

This API is used to delete an app.

### URL

- URI format

DELETE /v1/{project\_id}/service/apps/{app\_id}

- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .
app_id	Yes	String	App ID

## Request Message

- Example request  
None

## Response

- Example response  
None

## Status Code

Status Code	Description
204	success

For details about status codes, see [Status Codes](#).

## 10.7.5 Querying App Details

### Description

This API is used to query the details of an app.

### URL

- URI format  
GET /v1/{project\_id}/service/apps/{app\_id}
- Parameter description

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. For details about how to obtain the project ID, see <a href="#">Project ID and Account ID</a> .



Parameter	Mandatory	Type	Description
app_id	Yes	String	App ID

## Request Message

- Example request  
None

## Response

- Example response

```
{
  "id": "908489209a320df61607355c57c82882",
  "name": "app_test_001",
  "description": "This is the app's description.",
  "app_key": "fbf9462bb434cb4a13ee7d2bb70c418",
  "app_secret": "c1245f01937442e098ffa6ff134cb3dc",
  "register_time": 1578284788000,
  "update_time": 1578284788000,
  "create_user": "create_user",
  "update_user": "update_user",
  "app_type": "APP"
}
```

- Response parameter description

Parameter	Type	Description
id	String	App ID
name	String	App name
description	String	App description
app_key	String	App key
app_secret	String	App secret
register_time	Long	Registration time, which is a 13-digit timestamp
update_time	Long	Update time, which is a 13-digit timestamp
create_user	String	Creator
update_user	String	User who updated the app

Parameter	Type	Description
app_type	String	App type <b>IAM</b> : IAM authentication <b>APP</b> : app authentication <b>APIG</b> : API Gateway Shared edition (inventory data) <b>APIGW</b> : API Gateway Dedicated edition (inventory data) <b>DLM</b> : no gateway (inventory data) <b>ROMA_APIC</b> : ROMA-APIC gateway (inventory data)

## Status Code

Status Code	Description
200	success

For details about status codes, see [Status Codes](#).

# 10.8 Overview APIs

## 10.8.1 Querying API Overview

### Function

This API is used to query API overview.

### URI

GET /v1/{project\_id}/service/statistic/apis-overview

**Table 10-1** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 10-2** Query Parameters

Parameter	Mandatory	Type	Description
start_time	Yes	Long	Start time, which is a 13-digit timestamp
end_time	Yes	Long	End time, which is a 13-digit timestamp
time_unit	Yes	String	Time unit Enumeration values: <ul style="list-style-type: none"><li>• <b>HOURL</b></li><li>• <b>DAY</b></li></ul>

## Request Parameters

**Table 10-3** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
Workspace	No	String	Workspace ID
Dlm-Type	Yes	String	DLM edition Enumeration values: <ul style="list-style-type: none"><li>• <b>SHARED</b></li><li>• <b>EXCLUSIVE</b></li></ul>

## Response Parameters

**Status code: 204**

**Table 10-4** Response body parameters

Parameter	Type	Description
publish_num	Integer	Number of published APIs
developing_num	Integer	Number of APIs being developed
apply_num	Integer	Number of applications
call_num	Integer	Number of calls
success_num	Integer	Number of successful calls (data obtained)
fail_num	Integer	Number of failed calls (failed to obtain data)

Parameter	Type	Description
legal_num	Integer	Number of legal calls (verification passed)
illegal_num	Integer	Number of illegal calls (failed to pass verification)

**Status code: 400**

**Table 10-5** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

None

## Example Responses

**Status code: 204**

The API overview is obtained.

```
{
  "publish_num" : 54,
  "developing_num" : 117,
  "apply_num" : 4,
  "call_num" : 10,
  "success_num" : 9,
  "fail_num" : 1,
  "legal_num" : 10,
  "illegal_num" : "0\r"
}
```

## Status Codes

Status Code	Description
204	The API overview is obtained.
400	BadRequest

## 10.8.2 Querying App Overview

### Function

This API is used to query app overview.

### URI

GET /v1/{project\_id}/service/statistic/apps-overview

**Table 10-6** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 10-7** Query Parameters

Parameter	Mandatory	Type	Description
start_time	Yes	Long	Start time, which is a 13-digit timestamp
end_time	Yes	Long	End time, which is a 13-digit timestamp
time_unit	Yes	String	Time unit Enumeration values: <ul style="list-style-type: none"> <li>• <b>HOURL</b></li> <li>• <b>DAY</b></li> </ul>

### Request Parameters

**Table 10-8** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
Workspace	No	String	Workspace ID
Dlm-Type	Yes	String	DLM edition Enumeration values: <ul style="list-style-type: none"> <li>• <b>SHARED</b></li> <li>• <b>EXCLUSIVE</b></li> </ul>

## Response Parameters

### Status code: 204

**Table 10-9** Response body parameters

Parameter	Type	Description
apply_num	Integer	Number of applications
call_num	Integer	Number of calls
success_num	Integer	Number of successful calls (data obtained)
fail_num	Integer	Number of failed calls (failed to obtain data)
legal_num	Integer	Number of legal calls (verification passed)
illegal_num	Integer	Number of illegal calls (failed to pass verification)

### Status code: 400

**Table 10-10** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

None

## Example Responses

### Status code: 204

The app overview is obtained.

```
{
  "apply_num" : 4,
  "call_num" : 10,
  "success_num" : 9,
  "fail_num" : 1,
  "legal_num" : 10,
  "illegal_num" : "0\r"
}
```

## Status Codes

Status Code	Description
204	The app overview is obtained.
400	BadRequest

## 10.8.3 Querying Top N Services Called by an API

### Function

This API is used to query top N services called by an API.

### URI

GET /v1/{project\_id}/service/statistic/apis-top-n

**Table 10-11** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 10-12** Query Parameters

Parameter	Mandatory	Type	Description
instance_id	No	String	Cluster ID
start_time	Yes	Long	Start time, which is a 13-digit timestamp
end_time	Yes	Long	End time, which is a 13-digit timestamp
time_unit	Yes	String	Time unit Enumeration values: <ul style="list-style-type: none"><li>• <b>HOURL</b></li><li>• <b>DAY</b></li></ul>
top_num	Yes	Integer	Top N

Parameter	Mandatory	Type	Description
order_by	Yes	String	Sorting order Enumeration values: <ul style="list-style-type: none"> <li>• CALL_NUM</li> <li>• SUCCESS_NUM</li> <li>• FAIL_NUM</li> <li>• LEGAL_NUM</li> <li>• ILLEGAL_NUM</li> <li>• COST_TIME_AVG</li> <li>• SUCCESS_COST_TIME_AVG</li> <li>• FAIL_COST_TIME_AVG</li> <li>• SUCCESS_RATE</li> <li>• FAIL_RATE</li> <li>• LEGAL_RATE</li> <li>• ILLEGAL_RATE</li> </ul>

## Request Parameters

**Table 10-13** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
Workspace	No	String	Workspace ID
Dlm-Type	Yes	String	DLM edition Enumeration values: <ul style="list-style-type: none"> <li>• SHARED</li> <li>• EXCLUSIVE</li> </ul>

## Response Parameters

Status code: 204

**Table 10-14** Response body parameters

Parameter	Type	Description
statistics	Array of <a href="#">StatisticForDetail</a> objects	Statistics details



**Table 10-15** StatisticForDetail

Parameter	Type	Description
id	String	Statistics object ID
name	String	Statistics object name
call_num	Integer	Number of calls
success_num	Integer	Number of successful calls (data obtained)
fail_num	Integer	Number of failed calls (failed to obtain data)
legal_num	Integer	Number of legal calls (verification passed)
illegal_num	Integer	Number of illegal calls (failed to pass verification)
cost_time_avg	Number	Average request duration
success_cost_time_avg	Number	Average duration of successful requests
fail_cost_time_avg	Number	Average duration of failed requests
success_rate	Number	Success rate
fail_rate	Number	Failure rate
legal_rate	Number	Rate of legal calls
illegal_rate	Number	Rate of illegal calls

**Status code: 400**

**Table 10-16** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

None

## Example Responses

**Status code: 204**

Top N services called by an API are obtained.

```
{
  "statistics" : [ {
    "id" : "3423634676234236674",
    "name" : "Name of the statistics object",
    "call_num" : 0,
    "success_num" : 0,
    "fail_num" : 0,
    "legal_num" : 0,
    "illegal_num" : 0,
    "cost_time_avg" : 0,
    "success_cost_time_avg" : 0,
    "fail_cost_time_avg" : 0,
    "success_rate" : 0,
    "fail_rate" : 0,
    "legal_rate" : 0,
    "illegal_rate" : "0\r"
  } ]
}
```

## Status Codes

Status Code	Description
204	Top N services called by an API are obtained.
400	BadRequest

## 10.8.4 Querying Top N Services Used by an App

### Function

This API is used to query top N services used by an app.

### URI

GET /v1/{project\_id}/service/statistic/apps-top-n

**Table 10-17** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 10-18** Query Parameters

Parameter	Mandatory	Type	Description
start_time	Yes	Long	Start time, which is a 13-digit timestamp
end_time	Yes	Long	End time, which is a 13-digit timestamp

Parameter	Mandatory	Type	Description
time_unit	Yes	String	Time unit Enumeration values: <ul style="list-style-type: none"><li>• HOUR</li><li>• DAY</li></ul>
top_num	Yes	Integer	Top N
order_by	Yes	String	Sorting order Enumeration values: <ul style="list-style-type: none"><li>• CALL_NUM</li><li>• SUCCESS_NUM</li><li>• FAIL_NUM</li><li>• LEGAL_NUM</li><li>• ILLEGAL_NUM</li><li>• COST_TIME_AVG</li><li>• SUCCESS_COST_TIME_AVG</li><li>• FAIL_COST_TIME_AVG</li><li>• SUCCESS_RATE</li><li>• FAIL_RATE</li><li>• LEGAL_RATE</li><li>• ILLEGAL_RATE</li></ul>

## Request Parameters

**Table 10-19** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
Workspace	No	String	Workspace ID
Dlm-Type	Yes	String	DLM edition Enumeration values: <ul style="list-style-type: none"><li>• SHARED</li><li>• EXCLUSIVE</li></ul>

## Response Parameters

Status code: 204

**Table 10-20** Response body parameters

Parameter	Type	Description
statistics	Array of <a href="#">StatisticForDetail</a> objects	Statistics details

**Table 10-21** StatisticForDetail

Parameter	Type	Description
id	String	Statistics object ID
name	String	Statistics object name
call_num	Integer	Number of calls
success_num	Integer	Number of successful calls (data obtained)
fail_num	Integer	Number of failed calls (failed to obtain data)
legal_num	Integer	Number of legal calls (verification passed)
illegal_num	Integer	Number of illegal calls (failed to pass verification)
cost_time_avg	Number	Average request duration
success_cost_time_avg	Number	Average duration of successful requests
fail_cost_time_avg	Number	Average duration of failed requests
success_rate	Number	Success rate
fail_rate	Number	Failure rate
legal_rate	Number	Rate of legal calls
illegal_rate	Number	Rate of illegal calls

**Status code: 400****Table 10-22** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

None

## Example Responses

**Status code: 204**

Top N services used by an app are obtained.

```
{
  "statistics": [ {
    "id": "3423634676234236674",
    "name": "Name of the statistics object",
    "call_num": 0,
    "success_num": 0,
    "fail_num": 0,
    "legal_num": 0,
    "illegal_num": 0,
    "cost_time_avg": 0,
    "success_cost_time_avg": 0,
    "fail_cost_time_avg": 0,
    "success_rate": 0,
    "fail_rate": 0,
    "legal_rate": 0,
    "illegal_rate": "0\r"
  } ]
}
```

## Status Codes

Status Code	Description
204	Top N services used by an app are obtained.
400	BadRequest

## 10.8.5 Querying API Statistics Details

### Function

This API is used to query API statistics details.

### URI

GET /v1/{project\_id}/service/statistic/apis-detail/{api\_id}

**Table 10-23** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
api_id	Yes	String	API ID

**Table 10-24** Query Parameters

Parameter	Mandatory	Type	Description
instance_id	No	String	Cluster ID
start_time	Yes	Long	Start time, which is a 13-digit timestamp
end_time	Yes	Long	End time, which is a 13-digit timestamp
time_unit	Yes	String	Time unit Enumeration values: <ul style="list-style-type: none"><li>• HOUR</li><li>• DAY</li></ul>

## Request Parameters

**Table 10-25** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
Workspace	No	String	Workspace ID
Dlm-Type	Yes	String	DLM edition Enumeration values: <ul style="list-style-type: none"><li>• SHARED</li><li>• EXCLUSIVE</li></ul>

## Response Parameters

**Status code: 204**

**Table 10-26** Response body parameters

Parameter	Type	Description
id	String	Statistics object ID
name	String	Statistics object name
call_num	Integer	Number of calls
success_num	Integer	Number of successful calls (data obtained)
fail_num	Integer	Number of failed calls (failed to obtain data)

Parameter	Type	Description
legal_num	Integer	Number of legal calls (verification passed)
illegal_num	Integer	Number of illegal calls (failed to pass verification)
cost_time_avg	Number	Average request duration
success_cost_time_avg	Number	Average duration of successful requests
fail_cost_time_avg	Number	Average duration of failed requests
success_rate	Number	Success rate
fail_rate	Number	Failure rate
legal_rate	Number	Rate of legal calls
illegal_rate	Number	Rate of illegal calls

**Status code: 400**

**Table 10-27** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

None

## Example Responses

**Status code: 204**

API statistics details are obtained.

```
{
  "id" : "3423634676234236674",
  "name" : "Name of the statistics object",
  "call_num" : 0,
  "success_num" : 0,
  "fail_num" : 0,
  "legal_num" : 0,
  "illegal_num" : 0,
  "cost_time_avg" : 0,
  "success_cost_time_avg" : 0,
  "fail_cost_time_avg" : 0,
  "success_rate" : 0,
  "fail_rate" : 0,
```

```
"legal_rate" : 0,
"illegal_rate" : "0\r"
}
```

## Status Codes

Status Code	Description
204	API statistics details are obtained.
400	BadRequest

## 10.8.6 Querying App Statistics Details

### Function

This API is used to querying app statistics details.

### URI

GET /v1/{project\_id}/service/statistic/apps-detail/{app\_id}

**Table 10-28** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
app_id	Yes	String	App ID

**Table 10-29** Query Parameters

Parameter	Mandatory	Type	Description
start_time	Yes	Long	Start time, which is a 13-digit timestamp
end_time	Yes	Long	End time, which is a 13-digit timestamp
time_unit	Yes	String	Time unit Enumeration values: <ul style="list-style-type: none"> <li>• HOUR</li> <li>• DAY</li> </ul>



## Request Parameters

**Table 10-30** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
Workspace	No	String	Workspace ID
Dlm-Type	Yes	String	DLM edition Enumeration values: <ul style="list-style-type: none"> <li>• <b>SHARED</b></li> <li>• <b>EXCLUSIVE</b></li> </ul>

## Response Parameters

**Status code: 204**

**Table 10-31** Response body parameters

Parameter	Type	Description
id	String	Statistics object ID
name	String	Statistics object name
call_num	Integer	Number of calls
success_num	Integer	Number of successful calls (data obtained)
fail_num	Integer	Number of failed calls (failed to obtain data)
legal_num	Integer	Number of legal calls (verification passed)
illegal_num	Integer	Number of illegal calls (failed to pass verification)
cost_time_avg	Number	Average request duration
success_cost_time_avg	Number	Average duration of successful requests
fail_cost_time_avg	Number	Average duration of failed requests
success_rate	Number	Success rate
fail_rate	Number	Failure rate
legal_rate	Number	Rate of legal calls
illegal_rate	Number	Rate of illegal calls

**Status code: 400**

**Table 10-32** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

### Example Requests

None

### Example Responses

**Status code: 204**

App statistics details are obtained.

```
{
  "id" : "3423634676234236674",
  "name" : "Name of the statistics object",
  "call_num" : 0,
  "success_num" : 0,
  "fail_num" : 0,
  "legal_num" : 0,
  "illegal_num" : 0,
  "cost_time_avg" : 0,
  "success_cost_time_avg" : 0,
  "fail_cost_time_avg" : 0,
  "success_rate" : 0,
  "fail_rate" : 0,
  "legal_rate" : 0,
  "illegal_rate" : "0\r"
}
```

### Status Codes

Status Code	Description
204	App statistics details are obtained.
400	BadRequest

## 10.8.7 Querying API Dashboard Data Details

### Function

This API is used to query API dashboard data details.

## URI

GET /v1/{project\_id}/service/statistic/apis-dashboards

**Table 10-33** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 10-34** Query Parameters

Parameter	Mandatory	Type	Description
instance_id	No	String	Cluster ID
start_time	Yes	Long	Start time, which is a 13-digit timestamp
end_time	Yes	Long	End time, which is a 13-digit timestamp
time_unit	Yes	String	Time unit Enumeration values: <ul style="list-style-type: none"><li>• <b>HOURLY</b></li><li>• <b>DAILY</b></li></ul>

## Request Parameters

**Table 10-35** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
Workspace	No	String	Workspace ID
Dlm-Type	Yes	String	DLM edition Enumeration values: <ul style="list-style-type: none"><li>• <b>SHARED</b></li><li>• <b>EXCLUSIVE</b></li></ul>

## Response Parameters

Status code: 204

**Table 10-36** Response body parameters

Parameter	Type	Description
dashboards	Array of <a href="#">StatisticForDashboard</a> objects	Statistics dashboard

**Table 10-37** StatisticForDashboard

Parameter	Type	Description
log_time	Integer	Log time. The value is a 13-digit timestamp.
call_num	Integer	Number of calls
success_num	Integer	Number of successful calls (data obtained)
fail_num	Integer	Number of failed calls (failed to obtain data)
legal_num	Integer	Number of legal calls (verification passed)
illegal_num	Integer	Number of illegal calls (failed to pass verification)
cost_time_avg	Number	Average request duration
success_cost_time_avg	Number	Average duration of successful requests
fail_cost_time_avg	Number	Average duration of failed requests
success_rate	Number	Success rate
fail_rate	Number	Failure rate
legal_rate	Number	Rate of legal calls
illegal_rate	Number	Rate of illegal calls

**Status code: 400****Table 10-38** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

None

## Example Responses

**Status code: 204**

API dashboard data details are obtained.

```
{
  "dashboards": [ {
    "log_time": 1629403200000,
    "call_num": 0,
    "success_num": 0,
    "fail_num": 0,
    "legal_num": 0,
    "illegal_num": 0,
    "cost_time_avg": 0,
    "success_cost_time_avg": 0,
    "fail_cost_time_avg": 0,
    "success_rate": 0,
    "fail_rate": 0,
    "legal_rate": 0,
    "illegal_rate": "0\r"
  } ]
}
```

## Status Codes

Status Code	Description
204	API dashboard data details are obtained.
400	BadRequest

## 10.8.8 Querying Data Details of a Specified API Dashboard

### Function

This API is used to query data details of a specified API dashboard.

### URI

GET /v1/{project\_id}/service/statistic/apis-dashboards/{api\_id}

**Table 10-39** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
api_id	Yes	String	API ID

**Table 10-40** Query Parameters

Parameter	Mandatory	Type	Description
instance_id	No	String	Cluster ID
start_time	Yes	Long	Start time, which is a 13-digit timestamp
end_time	Yes	Long	End time, which is a 13-digit timestamp
time_unit	Yes	String	Time unit Enumeration values: <ul style="list-style-type: none"> <li>• HOUR</li> <li>• DAY</li> </ul>

## Request Parameters

**Table 10-41** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
Workspace	No	String	Workspace ID
Dlm-Type	Yes	String	DLM edition Enumeration values: <ul style="list-style-type: none"> <li>• SHARED</li> <li>• EXCLUSIVE</li> </ul>

## Response Parameters

Status code: 204

**Table 10-42** Response body parameters

Parameter	Type	Description
dashboards	Array of <a href="#">StatisticForDashboard</a> objects	Statistics dashboard

**Table 10-43** StatisticForDashboard

Parameter	Type	Description
log_time	Integer	Log time. The value is a 13-digit timestamp.
call_num	Integer	Number of calls
success_num	Integer	Number of successful calls (data obtained)
fail_num	Integer	Number of failed calls (failed to obtain data)
legal_num	Integer	Number of legal calls (verification passed)
illegal_num	Integer	Number of illegal calls (failed to pass verification)
cost_time_avg	Number	Average request duration
success_cost_time_avg	Number	Average duration of successful requests
fail_cost_time_avg	Number	Average duration of failed requests
success_rate	Number	Success rate
fail_rate	Number	Failure rate
legal_rate	Number	Rate of legal calls
illegal_rate	Number	Rate of illegal calls

**Status code: 400****Table 10-44** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

None

## Example Responses

**Status code: 204**

Data details of a specified API dashboard are obtained.

```
{  
  "dashboards": [ {
```

```
"log_time" : 1629403200000,
"call_num" : 0,
"success_num" : 0,
"fail_num" : 0,
"legal_num" : 0,
"illegal_num" : 0,
"cost_time_avg" : 0,
"success_cost_time_avg" : 0,
"fail_cost_time_avg" : 0,
"success_rate" : 0,
"fail_rate" : 0,
"legal_rate" : 0,
"illegal_rate" : "0\r"
} ]
}
```

## Status Codes

Status Code	Description
204	Data details of a specified API dashboard are obtained.
400	BadRequest

## 10.8.9 Querying App Dashboard Data Details

### Function

This API is used to querying app dashboard data details.

### URI

GET /v1/{project\_id}/service/statistic/apps-dashboards

**Table 10-45** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 10-46** Query Parameters

Parameter	Mandatory	Type	Description
start_time	Yes	Long	Start time, which is a 13-digit timestamp
end_time	Yes	Long	End time, which is a 13-digit timestamp



Parameter	Mandatory	Type	Description
time_unit	Yes	String	Time unit Enumeration values: <ul style="list-style-type: none"> <li>• HOUR</li> <li>• DAY</li> </ul>

## Request Parameters

**Table 10-47** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
Workspace	No	String	Workspace ID
Dlm-Type	Yes	String	DLM edition Enumeration values: <ul style="list-style-type: none"> <li>• SHARED</li> <li>• EXCLUSIVE</li> </ul>

## Response Parameters

Status code: 204

**Table 10-48** Response body parameters

Parameter	Type	Description
dashboards	Array of <a href="#">StatisticForDashboard</a> objects	Statistics dashboard

**Table 10-49** StatisticForDashboard

Parameter	Type	Description
log_time	Integer	Log time. The value is a 13-digit timestamp.
call_num	Integer	Number of calls
success_num	Integer	Number of successful calls (data obtained)
fail_num	Integer	Number of failed calls (failed to obtain data)

Parameter	Type	Description
legal_num	Integer	Number of legal calls (verification passed)
illegal_num	Integer	Number of illegal calls (failed to pass verification)
cost_time_avg	Number	Average request duration
success_cost_time_avg	Number	Average duration of successful requests
fail_cost_time_avg	Number	Average duration of failed requests
success_rate	Number	Success rate
fail_rate	Number	Failure rate
legal_rate	Number	Rate of legal calls
illegal_rate	Number	Rate of illegal calls

**Status code: 400**

**Table 10-50** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

None

## Example Responses

**Status code: 204**

App dashboard data details are obtained.

```
{
  "dashboards": [ {
    "log_time": 1629403200000,
    "call_num": 0,
    "success_num": 0,
    "fail_num": 0,
    "legal_num": 0,
    "illegal_num": 0,
    "cost_time_avg": 0,
    "success_cost_time_avg": 0,
    "fail_cost_time_avg": 0,
    "success_rate": 0,
    "fail_rate": 0,
  }
]
```

```

"legal_rate" : 0,
"illegal_rate" : "0\r"
} ]
}

```

## Status Codes

Status Code	Description
204	App dashboard data details are obtained.
400	BadRequest

## 10.8.10 Querying Top N Apps Called by a Specified API

### Function

This API is used to querying top N apps called by a specified API.

### URI

GET /v1/{project\_id}/service/statistic/apis-top-n/{api\_id}

**Table 10-51** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
api_id	Yes	String	API ID

**Table 10-52** Query Parameters

Parameter	Mandatory	Type	Description
instance_id	No	String	Cluster ID
start_time	Yes	Long	Start time, which is a 13-digit timestamp
end_time	Yes	Long	End time, which is a 13-digit timestamp
time_unit	Yes	String	Time unit Enumeration values: <ul style="list-style-type: none"> <li>• HOUR</li> <li>• DAY</li> </ul>
top_num	Yes	Integer	Top N

Parameter	Mandatory	Type	Description
order_by	Yes	String	Sorting order Enumeration values: <ul style="list-style-type: none"> <li>• CALL_NUM</li> <li>• SUCCESS_NUM</li> <li>• FAIL_NUM</li> <li>• LEGAL_NUM</li> <li>• ILLEGAL_NUM</li> <li>• COST_TIME_AVG</li> <li>• SUCCESS_COST_TIME_AVG</li> <li>• FAIL_COST_TIME_AVG</li> <li>• SUCCESS_RATE</li> <li>• FAIL_RATE</li> <li>• LEGAL_RATE</li> <li>• ILLEGAL_RATE</li> </ul>

## Request Parameters

**Table 10-53** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	IAM Token
Workspace	No	String	Workspace ID
Dlm-Type	Yes	String	DLM edition Enumeration values: <ul style="list-style-type: none"> <li>• SHARED</li> <li>• EXCLUSIVE</li> </ul>

## Response Parameters

Status code: 204

**Table 10-54** Response body parameters

Parameter	Type	Description
statistics	Array of <a href="#">StatisticForCallDetail</a> objects	Call statistics

**Table 10-55** StatisticForCallDetail

Parameter	Type	Description
id	String	Statistics object ID
name	String	Statistics object name
call_num	Integer	Number of calls
success_num	Integer	Number of successful calls (data obtained)
fail_num	Integer	Number of failed calls (failed to obtain data)
legal_num	Integer	Number of legal calls (verification passed)
illegal_num	Integer	Number of illegal calls (failed to pass verification)

**Status code: 400**

**Table 10-56** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_msg	String	Error message

## Example Requests

None

## Example Responses

**Status code: 204**

Top N apps called by a specified API are obtained.

```
{
  "statistics" : [ {
    "id" : "3423634676234236674",
    "name" : "Name of the statistics object",
    "call_num" : 0,
    "success_num" : 0,
    "fail_num" : 0,
    "legal_num" : 0,
    "illegal_num" : "0\r"
  } ]
}
```

## Status Codes

Status Code	Description
204	Top N apps called by a specified API are obtained.
400	BadRequest

# 11 Appendix

## 11.1 Common Message Headers

### Common request header fields

[Table 11-1](#) describes common request headers.

**Table 11-1** Common request header fields

Field	Description	Mandatory	Example
Content-Type	Specifies the request body MIME type. This field is mandatory and its default value is <b>application/json</b> . Other values of this field will be provided for specific APIs if any.	Yes	The default value is <b>application/json</b> .
Content-Length	Specifies the length of the request body. The unit is byte.	No	3495
X-Language	Specifies the request language.	No	en_us
X-Project-Id	Specifies a project ID. Obtain the project ID by following the instructions in <a href="#">Project ID and Account ID</a> .	No	e9993fc787d94b6c886cbaa340f9c0f4

Field	Description	Mandatory	Example
X-Auth-Token	<p>Specifies a user token.</p> <p>The user token is a response to the API used to <b>obtain a user token</b>. This API is the only one that does not require authentication.</p> <p>The token is the value of <b>X-Subject-Token</b> in the response header.</p>	This field is mandatory for token authentication.	<p>The following is part of an example token:</p> <p>MIIPAgYJKoZlhvc-NAQcCo...ggg1BBI INPXsidG9rZ</p>
X-Sdk-Date	<p>Time when the request is sent. The time is in <b>YYYYMMDD'T'HHMMSS'Z</b> ' format.</p> <p>The value is the current GMT time of the system.</p>	This field is mandatory for AK/SK-based authentication.	20150907T101459Z
Host	<p>Specifies the server domain name and port number of the resources being requested. The value can be obtained from the URL of the service API. The value is in the format of <i>hostname[:port]</i>. If the port number is not specified, the default port is used. The default port number for HTTPS is 443.</p>	This field is mandatory for AK/SK-based authentication.	<p>code.test.com</p> <p>or</p> <p>code.test.com:443</p>
Authorization	<p>Authentication information.</p> <p>The value can be obtained from the request signing result.</p>	This field is mandatory for AK/SK-based authentication.	<p>SDK-HMAC-SHA256 Credential=QRUP2R3QFNAOVAVMYHZW/ 20160202/ northchina/test/sdk_request, SignedHeaders=host;x-sdk-date, Signature=9d8b56b055c0e1f7a9498d881a7cb726be91b4f0cde1773b0b1557e987a480ce</p>



Field	Description	Mandatory	Example
workspace	Workspace ID. For details about how to obtain it, see <a href="#">DataArts Studio Instance ID and Workspace ID</a> .	<ul style="list-style-type: none"> <li>You do not need to set this field when calling a CDM API because in that case, only the default workspace can be used.</li> <li>When a DataArts Factory API is called, data in the default workspace is queried by default. To query data in other workspaces, include this header in the query request.</li> <li>This header is mandatory for calling the APIs of other modules. Otherwise, API calls will fail.</li> </ul>	d1cd7861478748a6925bc02f47c69279
X-Dlm-Type	DataArts DataService edition, which is Exclusive	This parameter is mandatory for calling DataArts DataService APIs.	<b>EXCLUSIVE:</b> exclusive edition

## Common response headers

**Table 11-2** describes common response headers.

**Table 11-2** Common response headers

Parameter	Description
Content-Length	Length of the response body. The unit is byte.
Date	Time when a response is returned
Content-type	Request body MIME type

## 11.2 Parsing a Stream in a Response Message

The response messages of the job export API and connection export API are streams that need to be converted to files. For details, see the following sample code:

```
String EXPORT_JOB_URL = "https://{endpoint}/v1/{project_id}/jobs/{job_name}/export";

try (CloseableHttpClient httpClient = HttpClients.createDefault()) {
    HttpPost httpPost = new HttpPost(EXPORT_JOB_URL);
    httpPost.setHeader("Content-Type", "application/json; charset=UTF-8");
    httpPost.setHeader("Accept", "application/octet-stream");
    httpPost.setHeader("X-Auth-Token", token);

    HttpResponse response = httpClient.execute(httpPost);
    int statusCode = response.getStatusLine().getStatusCode();
    if (statusCode == 200) {
        String filePath = "d:";
        String fileName = "job.zip";
        FileOutputStream fileOutputStream = new FileOutputStream(filePath + fileName);
        response.getEntity().writeTo(fileOutputStream);
    } else {
        System.out.println(statusCode);
    }
}
```

## 11.3 Status Codes

A status code consists of three digits. The first digit defines the class of a response. There are five values for the first digit:

- 1xx: indication information, indicating that the request has been received and can be further processed.
- 2xx: success, indicating that the request has been received, understood, and accepted.
- 3xx: redirection, indicating that the request requires further operations before it can be completed.
- 4xx: client error, indicating that there is a syntax error in the request or the request cannot be implemented.
- 5xx: server error, indicating that the server has failed to implement a valid request.

[Table 11-3](#) describes status codes.

**Table 11-3** Status codes

Status Code	Message	Description
100	Continue	The client should continue with its request. This interim response is used to inform the client that part of the request has been received and has not yet been rejected by the server.

Status Code	Message	Description
101	Switching Protocols	The protocol should be switched. The protocol can only be switched to a newer protocol. 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 has been fulfilled and a new resource has been created.
202	Accepted	The request has been accepted, but the processing has not been completed.
203	Non-Authoritative Information	The server has successfully processed the request, but is returning information that may be from another source.
204	NoContent	The request has been fulfilled, but the HTTP response does not contain a response body. The status code is returned in response to an HTTPS 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 the partial 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.

Status Code	Message	Description
305	Use Proxy	The requested resource is available only through a proxy.
306	Unused	The HTTP status code is no longer used.
400	BadRequest	The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized	This 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 server understood the request, but is refusing to fulfill it. The client should not repeat the request without modifications.
404	NotFound	The requested resource cannot be found. The client should not repeat the request without modifications.
405	MethodNotAllowed	The method specified in the request is not supported for the requested resource. The client should not repeat the request without modifications.
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 indicates that the client must first authenticate itself with the proxy.
408	Request Time-out	The server has timed out waiting for the request. The client may repeat the request without modifications at a later time.
409	Conflict	The request could not be processed due to a conflict with the current state of the resource. This status code indicates that the resource that the client is attempting to create already exists, or that the request has failed to be processed because of the update of the conflict request.

Status Code	Message	Description
410	Gone	The requested resource has been deleted permanently and is no longer available.
411	Length Required	The server is refusing to process the request without a defined <b>Content-Length</b> .
412	Precondition Failed	The server did not meet one of the preconditions that the requester put on the request.
413	Request Entity Too Large	The server is refusing to process a request because the request entity is too large for the server to process. The server may close the connection to prevent the client from continuing the request. If the server is only temporarily unable to process the request, the response will contain a <b>Retry-After</b> header field.
414	Request-URI Too Large	The Request-URI is 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 has failed to meet the requirements of the <b>Expect</b> request-header field.
422	UnprocessableEntity	The request is well-formed but cannot 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.
500	InternalServerError	The server is able to receive the request but unable to understand it.
501	Not Implemented	The server does not support the function required to fulfill the request.

Status Code	Message	Description
502	Bad Gateway	The server was acting as a gateway or proxy and received an invalid request from the remote server.
503	ServiceUnavailable	The requested service is invalid. The client should not repeat the request without modifications.
504	ServerTimeout	The request cannot be fulfilled within a given time. This status code is returned to the client only if 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.

## 11.4 Error Codes

### 11.4.1 CDM Error Codes

If an error occurs in API calling, no result is returned. Identify the error cause based on the error codes of each API. If an error occurs in API calling, HTTP status code 4xx or 5xx is returned. The response body contains the specific error code and information. If you are unable to identify the cause of an error, contact customer service and provide the error code so that we can help you solve the problem as soon as possible.

- Sample exception response

```
{
  "errCode": "Cdm.0100",
  "externalMessage": "Job[jdbc2hive] doesn't exist."
}
```

- Parameter description

Parameter	Mandatory	Type	Description
errCode	No	String	Error code
externalMessage	No	String	Error message

- Error code

In the following error message, *%s* is a variable. In the actual situation, the parameter name, table name, job name, and link name are replaced with the actual values.

If an error code starting with **APIGW** is returned after you call an API, rectify the fault by referring to the instructions provided in [Error Codes](#).

Error Code	Status Code	Error	Description	Solution
Cdm.0000	400	System error.	A system error occurs.	Contact customer service or technical support.
Cdm.0001	400	The resource does not exist or is invalid.	The requested resource does not exist or you have no permission to access the resource.	Contact customer service or technical support.
Cdm.0004	400	Invalid parameter type.	The input parameter does not match the parameter type.	Change the parameter value based on the error message and try again.
Cdm.0009	400	%s is not an integer or is beyond the value range [0, 2147483647].	The input parameter is not an integer or is beyond the value range.	Change the parameter value based on the error message and try again.
Cdm.0010	400	The integer must be within the range of [%s].	The parameter is missing or its length is 0.	Change the parameter value based on the error message and try again.
Cdm.0011	400	The parameter value exceeds the value range.	The parameter format is incorrect or the parameter value exceeds the value range. As a result, the parsing failed.	Check whether the parameter value is valid based on the error message. If it is not, correct it and try again.
Cdm.0012	400	JDBC driver is not found.	JDBC driver is not found.	Contact customer service or technical support.

Error Code	Status Code	Error	Description	Solution
Cdm.0013	400	Agent connection failure.	The agent fails to be connected.	It is possible that the network is disconnected, or no security group or firewall rule is configured to allow access. If the fault persists, contact technical support.
Cdm.0014	400	Invalid parameter.	The parameter is invalid.	Change the parameter value and try again.
Cdm.0015	400	Failed to parse the file.	The file fails to be parsed.	Check whether the content or format of the uploaded file is correct. If it is not, correct it and try again.
Cdm.0016	400	The file to be uploaded cannot be empty.	The uploaded file is empty.	Ensure that the file you uploaded is not empty and try again.
Cdm.0017	400	Failed to save the input value.	The input value cannot be saved.	Contact customer service or technical support.
Cdm.0018	400	The content of jobs or links is invalid.	The content of jobs or links is invalid.	Contact customer service or technical support.
Cdm.0019	400	Failed to delete the link from the database.	The link in the database fails to be deleted.	Try again later or contact customer service or technical support.
Cdm.0020	400	The string must contain the following substring: %s.	The verified parameter is empty or does not contain the specified substring.	Change the parameter value based on the error message and try again.



Error Code	Status Code	Error	Description	Solution
Cdm.0021	400	Failed to connect to server %s.	The server fails to be connected.	Contact customer service or technical support.
Cdm.0024	400	[%s] must be within the range of [%s].	The verified parameter is not in the specified value range.	Change the parameter value based on the error message and try again.
Cdm.0031	400	Failed to create data to be submitted.	Failed to create data to be submitted.	Contact customer service or technical support.
Cdm.0037	400	Failed to submit the job.	The job fails to be submitted.	Contact customer service or technical support.
Cdm.0051	400	Invalid submission engine: %s.	Invalid job engine name.	Specify a correct job engine and try again.
Cdm.0052	400	Job %s is running.	The job is running.	The operation cannot be performed because the job is running. Try again after the job completes.
Cdm.0053	400	Job %s is not running.	The job is not running.	Run the job and try again.
Cdm.0054	400	Job %s does not exist.	The job does not exist.	Check whether the job exists.
Cdm.0055	400	Unsupported job type.	Unsupported job type.	Configure a supported job type.
Cdm.0056	400	Failed to submit the job. Cause: %s.	The job fails to be submitted.	Locate the cause based on the error message, rectify the fault, and try again.
Cdm.0057	400	Invalid job execution engine: %s.	The job engine is invalid.	Specify a correct job engine and try again.

Error Code	Status Code	Error	Description	Solution
Cdm.0058	400	Invalid combination of submission and execution engines.	The combination of submission and execution engines is invalid.	Specify a correct job engine and try again.
Cdm.0059	400	Job %s has been disabled and cannot be submitted.	The job has been disabled and cannot be submitted.	Create a job and try again. Alternatively, contact customer service or technical support.
Cdm.0060	400	Link %s for this job has been disabled. The job cannot be submitted.	The link for this job has been disabled.	Change the link and submit the job again.
Cdm.0061	400	Connector %s does not support the specified direction. The job cannot be submitted.	The connector cannot be used as the source or destination of a job.	The connector cannot be used as the source or destination of a job. Change the connector and submit the job again.
Cdm.0062	400	The binary file is applicable only to the SFTP, FTP, HDFS, or OBS connector.	The connector is invalid.	Specify a correct connector and try again.
Cdm.0063	400	An error occurred when creating the table. Cause: %s.	The table fails to be created.	Locate the cause based on the error message, rectify the fault, and try again.
Cdm.0064	400	Incorrect data format.	The data format is incorrect.	Check whether the data format is correct based on the error message. If it is not, correct it and try again.

Error Code	Status Code	Error	Description	Solution
Cdm.0065	400	Failed to start the timer. Cause: %s.	The timer fails to be started.	Contact customer service or technical support.
Cdm.0066	400	Failed to obtain the sample value. Cause: %s.	The sample value fails to be obtained.	Contact customer service or technical support.
Cdm.0067	400	Failed to obtain the schema. Cause: %s.	The schema field fails to be obtained.	Contact customer service or technical support.
Cdm.0085	400	%s exceeds the maximum value %s.	The parameter value exceeds the maximum value.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.0089	400	The configuration item [%s] does not exist.	The configuration item does not exist.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.0100	400	Job [%s] does not exist.	The job does not exist.	Specify a correct job and try again.
Cdm.0101	400	Link [%s] does not exist.	The link does not exist.	Specify a correct link and try again.
Cdm.0102	400	Connector [%s] does not exist.	The connector does not exist.	Specify a correct connector and try again.
Cdm.0104	400	The job name already exists.	The job name already exists.	Rename the job and try again.
Cdm.0201	400	Failed to obtain the instance.	The instance fails to be obtained.	Contact customer service or technical support.

Error Code	Status Code	Error	Description	Solution
Cdm.0202	400	Unknown status.	The job status is unknown.	Try again later or contact customer service or technical support.
Cdm.0204	400	No MRS link available.	No MRS link is created.	Go to the <b>Links</b> page to create an MRS link and try again.
Cdm.0230	400	Failed to load the specified class: %s.	The class fails to be loaded.	Contact customer service or technical support.
Cdm.0231	400	Failed to initialize the specified class: %s.	The class fails to be initialized.	Contact customer service or technical support.
Cdm.0232	400	Failed to write data. Cause: %s.	Data fails to be written.	Contact customer service or technical support.
Cdm.0233	400	Data extraction exception. Cause: %s.	An exception occurs during data extraction.	Contact customer service or technical support.
Cdm.0234	400	Data loading exception. Cause: %s.	An exception occurs during data loading.	Contact customer service or technical support.
Cdm.0235	400	All data has been used up. Cause: %s.	All data has been used up.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.0236	400	Invalid partitions have been retrieved from Partitioner.	Invalid partitions have been retrieved from Partitioner.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.

Error Code	Status Code	Error	Description	Solution
Cdm.0238	400	%s cannot be left blank.	The parameter is invalid.	Change the parameter value based on the error message and try again.
Cdm.0240	400	Failed to obtain the status of file %s.	The file status fails to be obtained.	Contact customer service or technical support.
Cdm.0241	400	Failed to obtain the type of file %s.	The file type fails to be obtained.	Contact customer service or technical support.
Cdm.0242	400	File check exception: %s.	An exception occurs during file check.	Contact customer service or technical support.
Cdm.0243	400	Failed to rename %s to %s.	Rename failed.	Rename the job and try again.
Cdm.0244	400	Failed to create file %s.	The file fails to be created.	Check whether you have the permissions or try again later. If the fault persists, contact customer service or technical support.
Cdm.0245	400	Failed to delete file %s.	The file fails to be deleted.	Check whether you have the permissions or try again later. If the fault persists, contact customer service or technical support.
Cdm.0246	400	Failed to create directory %s.	The directory fails to be created.	Check whether you have the permissions or try again later. If the fault persists, contact customer service or technical support.

Error Code	Status Code	Error	Description	Solution
Cdm.0247	400	HBase operation failure. Cause: %s.	HBase operation failed.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.0248	400	Failed to clear data %s. Cause: %s.	Data fails to be cleared.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.0249	400	Invalid file name %s.	The file name is invalid.	Change the file name and try again.
Cdm.0250	400	Failed to perform operations on path %s.	Operations on path %s are not allowed.	Check whether you have the permissions or try again later. If the fault persists, contact customer service or technical support.
Cdm.0251	400	Failed to load data to HBase. Cause: %s.	Data fails to be uploaded to HBase.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.0307	400	Failed to obtain the connection lease of the requested transaction. Cause: %s.	The connection lease for the requested transaction fails to be obtained.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.0315	400	Link name %s already exists.	The link already exists.	Specify another link name and try again.

Error Code	Status Code	Error	Description	Solution
Cdm.0316	400	Failed to update the link that does not exist.	The link that does not exist cannot be updated.	Specify a correct link and try again.
Cdm.0317	400	Invalid link %s.	The link is invalid.	Specify a correct link and try again.
Cdm.0318	400	The job already exists and cannot be created repeatedly.	The job already exists.	Specify another job name and try again.
Cdm.0319	400	Failed to update the job that does not exist.	The job that does not exist cannot be updated.	Check whether the job to be updated exists. If it does, change the job name and try again.
Cdm.0320	400	Invalid job %s.	The job is invalid.	Contact customer service or technical support.
Cdm.0321	400	Link %s has been used.	The link has been used.	Release the link and try again.
Cdm.0322	400	Job %s has been used.	The job has been used.	Contact customer service or technical support.
Cdm.0323	400	The submission already exists and cannot be created repeatedly.	The submission already exists.	Try again later.
Cdm.0327	400	Invalid link or job %s.	Link or job %s is invalid.	Specify a correct link or job and try again.
Cdm.0411	400	Failed to connect to the file server.	An error occurs when connecting to the file server.	Contact customer service or technical support.

Error Code	Status Code	Error	Description	Solution
Cdm.0413	400	Failed to transfer data to the file server.	An error occurs in data transfer to the file server.	Contact customer service or technical support.
Cdm.0415	400	Failed to download files from the server.	An error occurs when downloading files from the file server.	Contact customer service or technical support.
Cdm.0416	400	Data extraction failure.	An error occurs when extracting data.	Contact customer service or technical support.
Cdm.0420	400	Source file or source directory unavailable.	The source file or source directory does not exist.	Check whether the source file or source directory exists. If it does not, specify a correct source file or directory and try again.
Cdm.0423	400	Duplicate files exist in the destination path.	Duplicate files exist in the destination path.	Delete duplicate files from the destination path and try again.
Cdm.0501	400	Invalid URI [%s].	The URI is invalid.	Specify a correct URI and try again.
Cdm.0518	400	Failed to connect to HDFS. Cause: %s.	HDFS fails to be connected.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.



Error Code	Status Code	Error	Description	Solution
Cdm.0600	400	Failed to connect to the FTP server.	The FTP server fails to be connected.	It is possible that the network is disconnected, no security group or firewall rule is configured to allow access, the FTP host name cannot be parsed, or the FTP username or password is incorrect. If the fault persists, contact customer service or technical support.
Cdm.0700	400	Failed to connect to the SFTP server.	The SFTP server fails to be connected.	It is possible that the network is disconnected, no security group or firewall rule is configured to allow access, the SFTP host name cannot be parsed, or the SFTP username or password is incorrect. If the fault persists, contact customer service or technical support.

Error Code	Status Code	Error	Description	Solution
Cdm.0800	400	Failed to connect to the OBS server.	The OBS server fails to be connected.	It is possible that the OBS endpoint is inconsistent with the current region, the AK/SK pair is incorrect, the AK/SK pair is not the one of the current user, or no security group or firewall rule is configured to allow access. If the fault persists, contact customer service or technical support.
Cdm.0801	400	OBS bucket [%s] unavailable.	The OBS bucket does not exist.	The OBS bucket may not exist or is not in the current region. Specify a correct OBS bucket and try again.
Cdm.0831	400	Failed to connect to the KODO server. Cause: %s.	The KODO server fails to be connected.	Contact customer service or technical support.
Cdm.0900	400	Table [%s] unavailable.	The table does not exist.	Specify a correct table name and try again.
Cdm.0901	400	Failed to connect to the database server. Cause: %s.	The database server fails to be connected.	Contact customer service or technical support.
Cdm.0902	400	Failed to execute the SQL statement. Cause: %s.	The SQL statement fails to be executed.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.

Error Code	Status Code	Error	Description	Solution
Cdm.0903	400	Failed to obtain metadata. Cause: %s.	Metadata fails to be obtained.	Check whether the quote character is correct or whether the database table exists when you create the link. If the fault persists, contact customer service or technical support.
Cdm.0904	400	Failed to retrieve data from the result. Cause: %s.	An error occurs when retrieving data from the result.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.0913	400	Schema and SQL cannot be left blank at the same time.	Either Schema or SQL must be specified.	Specify one of them and try again.
Cdm.0916	400	In incremental reading mode, the previous value must be specified.	The previous value is not specified in incremental reading.	Specify the previous value and try again.
Cdm.0917	400	Previous value cannot be obtained without field check.	The field is missing.	Contact customer service or technical support.
Cdm.0921	400	Unsupported type %s.	The type is invalid.	Specify a correct type and try again.
Cdm.0925	400	The partition field contains unsupported values.	The partition field contains unsupported values.	Correct the values and try again.

Error Code	Status Code	Error	Description	Solution
Cdm.0926	400	Failed to obtain the schema field. Cause: %s.	The schema field fails to be obtained.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.0927	400	The relay table cannot be empty.	The relay table cannot be empty.	Specify an empty relay table and try again.
Cdm.0928	400	Failed to transfer data from the relay table to the destination table.	An error occurs when transferring data from the relay table to the destination table.	Contact customer service or technical support.
Cdm.0931	400	The value of the schema field [%s] does not match that of the field [%s] in the result set.	The value of the schema field [%s] does not match that of the field [%s] in the result set.	Change the schema value to be the same as that in the result set and try again.
Cdm.0932	400	Failed to find the maximum value of the field.	The maximum value of the field cannot be found.	Contact customer service or technical support.
Cdm.0934	400	Tables with the same name exist in different schemas/catalogs.	Tables with the same name exist in different schemas/catalogs.	Contact customer service or technical support.
Cdm.0936	400	The number of dirty data records reaches the upper limit.	The number of dirty data records reaches the upper limit.	Edit the job and increase the number of dirty data records.
Cdm.0940	400	Precise match of the table name failed.	Precise match of the table name failed.	Specify a correct table name and try again.

Error Code	Status Code	Error	Description	Solution
Cdm.0941	400	Failed to connect to the server. Cause: [%s].	The server fails to be connected.	Check whether the IP address, host name, and port number are correct, and whether the network security group and firewall are correctly configured. Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.0950	400	Failed to connect the authentication information to the database.	The authentication information cannot be connected to the database.	Correct the authentication information and try again.
Cdm.0962	400	The host IP address must be specified.	No host IP address is specified.	Specify the host IP address and try again.
Cdm.0963	400	The host port must be specified.	No host port is specified.	Specify the host port and try again.
Cdm.0964	400	The database must be specified.	No database is specified.	Specify a database and try again.
Cdm.1000	400	Hive table [%s] does not exist.	The Hive table does not exist.	Specify a correct Hive table name and try again.

Error Code	Status Code	Error	Description	Solution
Cdm.1010	400	Invalid URI %s. URI must be null or valid.	The URI is invalid.	Specify a correct URI and try again. Correct URI examples: <ul style="list-style-type: none"> <li>• hdfs://example.com:8020/</li> <li>• hdfs://example.com/</li> <li>• file:///</li> <li>• file:///tmp</li> <li>• file://localhost/tmp</li> </ul>
Cdm.1011	400	Failed to connect to Hive. Cause: %s.	Hive fails to be connected.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1100	400	Table [%s] unavailable.	The table does not exist.	Enter a correct table name and try again.
Cdm.1101	400	Failed to obtain the link. Cause: %s.	The link fails to be obtained.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1102	400	Failed to create the table. Cause: %s.	The table fails to be created.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1103	400	No rowkey is set.	No rowkey is set.	Set the rowkey and try again.

Error Code	Status Code	Error	Description	Solution
Cdm.1104	400	Failed to open the table. Cause: %s.	The table fails to be opened.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1105	400	Failed to initialize the job. Cause: %s.	The job fails to be initialized.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1111	400	The table name cannot be empty.	The table name is not specified.	Specify a correct table name and try again.
Cdm.1114	400	Rowkey is empty. Set it in field mapping.	Rowkey is empty.	Fix the error based on the error message.
Cdm.1115	400	<b>Columns</b> is empty. Set it in field mapping.	<b>Columns</b> is empty.	Fix the error based on the error message.
Cdm.1116	400	Duplicate column name. Reset it in the field mapping step.	The column name already exists.	Fix the error based on the error message.
Cdm.1117	400	Failed to check whether the table exists. Cause: %s.	An error occurs when checking whether the table exists.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1118	400	Table %s does not contain the column family %s.	The table does not contain the specified column family.	Specify a column family and try again.

Error Code	Status Code	Error	Description	Solution
Cdm.1120	400	The table contains data. Clear the data or reset the parameter to determine whether to clear the table data before importing the table.	The table contains data. Clear the data or reset the parameter to determine whether to clear the table data before importing the table.	Fix the error based on the error message.
Cdm.1121	400	Failed to close the link. Cause: %s.	The link fails to be closed.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1201	400	Failed to connect to the Redis server. Cause: %s.	The Redis server fails to be connected.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1203	400	Failed to extract data from the Redis server. Cause: %s.	Data fails to be extracted from the Redis server.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1205	400	The prefix of the Redis value cannot be empty.	The prefix of the Redis value cannot be empty.	Delete the whitespace before the Redis prefix and try again.
Cdm.1206	400	The storage type of the Redis value must be <b>string</b> or <b>hash</b> .	The storage type of the Redis value must be <b>string</b> or <b>hash</b> .	Fix the error based on the error message.



Error Code	Status Code	Error	Description	Solution
Cdm.1207	400	When the value storage type is <b>string</b> , <b>Value Delimiter</b> must be specified.	The value storage type is <b>string</b> , but <b>Value Delimiter</b> is not specified.	Specify a value delimiter and try again.
Cdm.1208	400	<b>columnList</b> of Redis must be specified.	<b>columnList</b> of Redis must be specified.	Specify <b>columnList</b> and try again.
Cdm.1209	400	Redis Key Delimiter cannot be empty.	Redis Key Delimiter cannot be empty.	Specify a correct delimiter and try again.
Cdm.1210	400	<b>primaryKeyList</b> of Redis must be specified.	<b>primaryKeyList</b> of Redis is not specified.	Specify <b>primaryKeyList</b> and try again.
Cdm.1211	400	<b>primaryKeyList</b> of Redis must exist in <b>columnList</b> .	<b>primaryKeyList</b> of Redis does not exist in <b>columnList</b> .	Specify <b>primaryKeyList</b> and try again.
Cdm.1213	400	<b>Redis Server Address</b> must be specified.	<b>Redis Server Address</b> is not specified.	Specify <b>Redis Server Address</b> and try again.
Cdm.1301	400	Failed to connect to the MongoDB server. Cause: <i>%s</i> .	The MongoDB server fails to be connected.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1302	400	Failed to extract data from the MongoDB server. Cause: <i>%s</i> .	Data fails to be extracted from the MongoDB server.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.

Error Code	Status Code	Error	Description	Solution
Cdm.1304	400	The MongoDB server set must be specified.	The MongoDB server set is not specified.	Specify the MongoDB server set and try again.
Cdm.1305	400	<b>Server Address</b> of MongoDB must be specified.	<b>Server Address</b> of MongoDB is not specified.	Specify <b>Server Address</b> and try again.
Cdm.1306	400	The database name of the MongoDB service must be specified.	The database name of the MongoDB service is not specified.	Specify a database and try again.
Cdm.1307	400	<b>serverlist</b> of MongoDB must be specified.	<b>serverlist</b> of MongoDB is not specified.	Specify <b>serverlist</b> and try again.
Cdm.1501	400	Failed to connect to the Elasticsearch server. Cause: %s.	The Elasticsearch server fails to be connected.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1502	400	Failed to write data to the Elasticsearch server. Cause: %s.	Data fails to be written to the Elasticsearch server.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1503	400	Failed to close the Elasticsearch link. Cause: %s.	The Elasticsearch link fails to be closed.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.

Error Code	Status Code	Error	Description	Solution
Cdm.1504	400	Failed to obtain the Elasticsearch index. Cause: %s	An error occurs when obtaining the Elasticsearch index.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1505	400	Failed to obtain the Elasticsearch type. Cause: %s	An error occurs when obtaining the Elasticsearch type.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1506	400	Failed to obtain the Elasticsearch field. Cause: %s	An error occurs when obtaining the Elasticsearch file field.	Locate the cause based on the error message. If the fault persists, contact customer service or technical support.
Cdm.1508	400	The host name or IP address of the Elasticsearch server must be specified.	The host name or IP address of the Elasticsearch server is not specified.	Specify the host name or IP address and try again.
Cdm.1510	400	The Elasticsearch index must be specified.	The Elasticsearch index is not specified.	Specify an index and try again.
Cdm.1511	400	The Elasticsearch type must be specified.	The Elasticsearch type is not specified.	Specify a type and try again.
Cdm.1513	400	<b>columnList</b> must contain the field type definition.	<b>columnList</b> does not contain the field type definition.	Include the field type definition and try again.
Cdm.1514	400	<b>columnList</b> must contain <b>primaryKey</b> .	<b>columnList</b> does not contain <b>primaryKey</b> .	Specify <b>primaryKey</b> and try again.

Error Code	Status Code	Error	Description	Solution
Cdm.1516	400	Invalid column name %s.	The column name is invalid.	Enter a correct column name and try again.
Cdm.1517	400	Failed to obtain the number of documents.	An error occurs when obtaining the number of documents.	Contact customer service or technical support.
Cdm.1519	400	Data extraction exception.	An error occurs when extracting data.	Contact customer service or technical support.
Cdm.1601	400	Failed to connect to the server.	The server fails to be connected.	Contact customer service or technical support.
Cdm.1603	400	Failed to obtain the sample value of topic %s.	The sample value of topic %s fails to be obtained.	Contact customer service or technical support.
Cdm.1604	400	No data contained in topic %s.	No data exists in the topic.	Locate the cause. Alternatively, change the topic and try again.

## 11.4.2 DLF Error Codes

The error response is in the following format:

```
{
  "error_code":"DLF.1001",
  "error_msg":"The job not found"
}
```

[Table 11-4](#) describes the error codes.

**Table 11-4** Error codes

Status Code	Error Code	Error Message	Solution
400	DLF.0100	The job does not exist.	Ensure that the job exists.

Status Code	Error Code	Error Message	Solution
400	DLF.0101	The job quota has reached the upper limit.	Apply for a higher quota.
400	DLF.0102	The job name has been used by another job.	Try another name.
400	DLF.0136	This API can be called only for batch jobs.	Check the job.
400	DLF.0137	The job instance does not exist.	Ensure that the job instance exists.
400	DLF.0201	The script fails to be created.	Check the script.
400	DLF.0202	The script name has been used by another script.	Try another name.
400	DLF.0203	The script fails to be modified.	Check the script.
400	DLF.0802	The specified parameter is not configured.	Check the parameter.
400	DLF.0803	The OBS path is invalid.	Check the OBS path.
400	DLF.0810	The queried task does not exist.	Check that the task exists.
400	DLF.0815	The OBS file fails to be accessed.	Check the OBS file.
400	DLF.1006	The job node is empty.	Check the node.
400	DLF.1242	The OBS bucket does not exist.	Ensure that the OBS bucket exists.
400	DLF.3004	The job name cannot be left blank.	Check the job name.
400	DLF.3018	The job name is invalid.	Check the job name.
400	DLF.3025	The job scheduling parameter is invalid.	Check the job scheduling parameter.
400	DLF.3050	The job description is invalid.	Check the job description.

Status Code	Error Code	Error Message	Solution
400	DLF.6201	The script does not exist.	Ensure that the script exists.
400	DLF.6205	The script execution instance does not exist.	Check that the script execution instance exists.
400	DLF.6241	The resource to be queried does not exist.	Ensure that the resource exists.
400	DLF.6247	The script type is not specified.	Check the script.
400	DLF.6253	The script quota has reached the upper limit.	Apply for a higher quota.
400	DLF.6258	The directory contains data that cannot be deleted.	Delete the data in the directory first.
400	DLF.6259	A resource with the same name already exists in the directory.	Try another name.
400	DLF.6263	The resource type is invalid.	Check the resource type.
400	DLF.6264	The OBS path of the resource file is invalid.	Check the OBS path.
400	DLF.6265	The resource description is invalid.	Check the resource description.
400	DLF.6309	The connection name has been used by another connection.	Try another connection name.
400	DLF.6322	The data connection does not exist.	Check that the data connection exists.
400	DLF.6323	The connection type cannot be modified.	Check the parameter type.
400	DLF.6416	The cluster has been occupied by another connection.	Check the cluster.
400	DLF.6418	Either the DWS cluster name or the access address and port number of the cluster must be configured.	Check the DWS cluster name or the access address and port of the cluster.

Status Code	Error Code	Error Message	Solution
400	DLF.6888	Invalid account permissions.	Check the account permissions.