

Application Operations Management

API Reference

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Huawei Cloud Computing Technologies Co., Ltd.

Address: Huawei Cloud Data Center Jiaoxinggong Road
Qianzhong Avenue
Gui'an New District
Gui Zhou 550029
People's Republic of China

Website: <https://www.huaweicloud.com/intl/en-us/>

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1 Before You Start

Welcome to use Application Operations Management (AOM). AOM is a one-stop, multi-dimensional O&M management platform for cloud applications. It provides one-stop observability analysis and automated O&M. By collecting metrics, logs, and performance data from the cloud and local devices, AOM enables you to monitor real-time running status of applications, resources, and services and detect faults in a timely manner, improving O&M automation capability and efficiency.

This document describes how to use APIs to perform operations on AOM, such as creation, deletion, and query. For details about all supported operations, see [2 API Overview](#).

If you plan to call AOM APIs, ensure that you are familiar with AOM concepts. For details, see [Service Overview](#).

Endpoints

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

Concepts

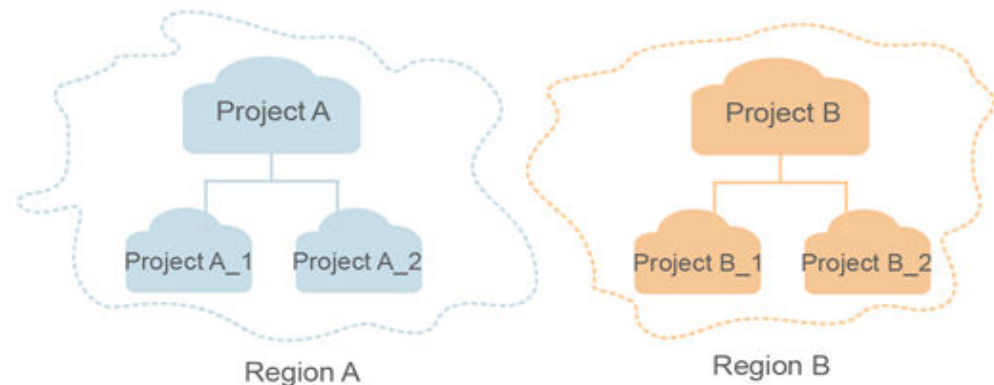
- Account
An account is created upon successful registration with the cloud. The account has full access permissions for all of its cloud services and resources. It can be used to reset user passwords and grant user permissions. The account is a payment entity and should not be used directly to perform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

Regions are divided by geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service (EVS), Object Storage Service (OBS), Virtual Private Cloud (VPC), Elastic IP (EIP), and Image Management Service (IMS), are shared within a region. Regions are classified into universal and dedicated regions. A universal region provides universal cloud services for common tenants. A dedicated region provides specific services for specific tenants.

For details, see [Region and AZ](#).

- Availability Zone (AZ)
AZs are physically isolated locations in a region, but are interconnected through an internal network for enhanced application availability.
- Project
Projects group and isolate resources (including compute, storage, and network resources) across physical regions. A default project is provided for each cloud region. Users can be granted permissions to access all resources in a specific project. For more refined access control, create subprojects under a project and purchase resources in the subprojects. Users can then be assigned permissions to access only specific resources in the subprojects.

Figure 1-1 Project isolating model



To view a project ID, go to the [My Credentials](#) page.

- Enterprise Project
Enterprise projects group and manage resources across regions. Resources in enterprise projects are logically isolated. An enterprise project can contain resources in multiple regions, and resources can be transferred between enterprise projects.

For details about how to obtain enterprise project IDs and features, see the [Enterprise Management User Guide](#).

API Calling

AOM supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For details about API calling, see [3 Calling APIs](#).

2 API Overview

AOM provides alarm, monitoring, Prometheus monitoring, log, Prometheus instance, configuration management, automation, and CMDB APIs, helping you quickly and cost-effectively maintain applications. Currently, AOM 2.0 is available in ME-Riyadh, CN North-Beijing1, CN North-Beijing4, CN North-Beijing2, CN East-Shanghai1, CN East-Shanghai2, CN South-Guangzhou, CN Southwest-Guiyang1, CN-Hong Kong, AP-Bangkok, AP-Singapore, AP-Jakarta, AF-Johannesburg, TR-Istanbul, LA-Mexico City1, LA-Mexico City2, LA-Sao Paulo1, and LA-Santiago.

Table 2-1 API overview

Type	API
Alarm APIs	Alarm APIs, including the APIs for adding, updating, and deleting event alarm rules.
Monitoring APIs	Monitoring APIs, including the APIs for querying metrics, and querying and adding monitoring data.
Prometheus Monitoring APIs	Prometheus monitoring APIs, including the APIs for querying the expression calculation result in a specified period or at a specified time point.
Log APIs	Log APIs, including the API for querying logs.
Prometheus Instance APIs	APIs related to Prometheus instances, including adding and querying Prometheus instances, and uninstalling hosted Prometheus instances.
Configuration Management APIs	Configuration APIs, including the APIs for querying the cloud services for which AOM 2.0 has been granted permissions, and querying ICAgents installed on cluster hosts.
CMDB APIs (AOM 2.0 only)	CMDB APIs, including the APIs for adding, modifying, querying, and deleting applications.

Type	API
Automation APIs (AOM 2.0 only)	Automation APIs, including the APIs for creating tasks and creating and executing scripts. Automation APIs are available only in CN North-Beijing4, CN East-Shanghai1, CN East-Shanghai2, CN South-Guangzhou, and ME-Riyadh regions.

3 Calling APIs

3.1 Making an API Request

This section describes the structure of a REST API request, and uses the IAM API for [creating an IAM user](#) as an example to demonstrate how to call an API.

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.

- **URI-scheme:** Protocol used to transmit requests. All APIs use HTTPS.
- **Endpoint:** Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from [Regions and Endpoints](#).

For example, the endpoint of IAM in the **CN-Hong Kong** region is **iam.ap-southeast-1.myhuaweicloud.com**.

NOTICE

For monitoring, log, and auto scaling APIs, use AOM endpoints. For APM APIs, use APM endpoints. For details, see [Endpoints](#).

- **resource-path:** Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the **resource-path** of the API used to obtain a user token is **/v3/auth/tokens**.
- **query-string:** Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of "Parameter name=Parameter value". For example, **? limit=10** indicates that a maximum of 10 data records will be displayed.

For example, to create an IAM user, obtain the endpoint of any region (for example, the endpoint of CN-Hong Kong: iam.ap-

southeast-1.myhuaweicloud.com) and **resource-path** (/v3.0/OS-USER/users) in the URI of the API for **creating an IAM user**. Then, construct the URI as follows:

```
https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
```

Figure 3-1 Example URI



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** of all APIs is **HTTPS**, and the endpoints of all APIs in the same region are identical.

Request Methods

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

- **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**: requests the server to return the response header only.
- **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 URI of the API for **creating an IAM user**, the request method is **POST**. The request is as follows:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
```

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 for the authentication information, add **Content-Type**, which specifies the request body type.

Common request header fields are as follows:

- **Content-Type**: specifies the request body type or format. This field is mandatory and its default value is **application/json**. Other values of this field will be provided for specific APIs if any.
- **Authorization**: signature authentication information. This field is optional. When AK/SK-based authentication is enabled, this field is automatically specified when SDK is used to sign the request. For more information, see [3.2 Authentication](#).

- **X-Sdk-Date:** the time when a request is sent. This field is optional. When AK/SK-based authentication is enabled, this field is automatically specified when SDK is used to sign the request. For more information, see [3.2 Authentication](#).
- **X-Auth-Token:** user token only for token-based API authentication. The user token is a response to the API used to [obtain a user token](#). This API is the only one that does not require authentication.
- **X-Project-ID:** subproject ID. This field is optional and can be used in multi-project scenarios. The **X-Project-ID** field is mandatory in the request header for accessing resources in a subproject through AK/SK-based authentication.
- **X-Domain-ID:** account ID, which is optional. When you call APIs of global services using AK/SK-based authentication, **X-Domain-ID** needs to be configured in the request header.

For the API used to [create an IAM user](#), if AK/SK authentication is used, the request with the header is as follows:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
Content-Type: application/json
X-Sdk-Date: 20240416T095341Z
Authorization: SDK-HMAC-SHA256 Access=*****, SignedHeaders=content-type;host;x-sdk-date,
Signature=*****
```

Request Body

The body of a request is often sent in a structured format as specified in **Content-Type**.

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.

For the API used to [create an IAM user](#), you can check the required request parameters and their description in the API request. The following provides an example request with a body included. Replace the italic fields in bold with the actual values.

- **accountid:** ID of the account to which the IAM user belongs.
- **username:** name of the IAM user to be created.
- **email:** email address of the IAM user.
- *******:** password of the IAM user.

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
Content-Type: application/json
X-Sdk-Date: 20240416T095341Z
Authorization: SDK-HMAC-SHA256 Access=*****, SignedHeaders=content-type;host;x-sdk-date,
Signature=*****

{
  "user": {
    "domain_id": "accountid",
    "name": "username",
    "password": "*****",
    "email": "email",
    "description": "IAM User Description"
  }
}
```

If all data required for the API request is available, you can send the request to call the API through curl, Postman, or coding.

3.2 Authentication

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

- AK/SK-based authentication: Requests are authenticated by encrypting the request body using an AK/SK pair.
- Token-based authentication: Requests are authenticated using a token.

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.
- You can use the AK/SK in a permanent or temporary access key. The **X-Security-Token** field must be configured if the AK/SK in a temporary access key is used, and the field value is **security_token** of the temporary access key.

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

- AK: a unique access key ID associated with a secret access key. AK is used together with SK to obtain an encrypted signature for a request.
- SK: a 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.

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 signing SDK, see [AK/SK Signing and Authentication Guide](#).

NOTICE

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

Token-based Authentication

NOTE

- The validity period of a token is 24 hours. If a token is used for authentication, cache it to prevent frequent API calling.
- Ensure that the token is valid when you use it. Using a token that will soon expire may cause API calling failures.

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

The token can be obtained by calling the API for [obtaining a user token](#). Project-level tokens are required for calling APIs of this service. That is, when calling the

API for **obtaining a user token**, specify a project under **auth.scope** in the request body.

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

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, if the token is **ABCDEFJ....**, **X-Auth-Token: ABCDEFJ....** can be added to a request as follows:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

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 [8.1 Status Codes](#).

If status code **201** is returned for the calling of the API for **creating an IAM user**, the request is successful.

Response Header

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

For the API for **creating an IAM user**, the message header shown in [Figure 3-2](#) is returned.

Figure 3-2 Response header

```
"X-Frame-Options": "SAMEORIGIN",
"X-IAM-ETag-id": "2562365939-d8f6f12921974cb097338ac11fceac8a",
"Transfer-Encoding": "chunked",
"Strict-Transport-Security": "max-age=31536000; includeSubdomains;",
"Server": "api-gateway",
"X-Request-Id": "af2953f2bcc67a42325a69a19e6c32a2",
"X-Content-Type-Options": "nosniff",
"Connection": "keep-alive",
"X-Download-Options": "noopen",
"X-XSS-Protection": "1; mode=block;",
"X-IAM-Trace-Id": "token_ null_af2953f2bcc67a42325a69a19e6c32a2",
"Date": "Tue, 21 May 2024 09:03:40 GMT",
"Content-Type": "application/json; charset=utf8"
```

Response Body

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

For the API for [creating an IAM user](#), the following message body is returned. The following describes part of the response body.

```
{
  "user": {
    "id": "c131886aec...",
    "name": "IAMUser",
    "description": "IAM User Description",
    "areacode": "",
    "phone": "",
    "email": "***@***.com",
    "status": null,
    "enabled": true,
    "pwd_status": false,
    "access_mode": "default",
    "is_domain_owner": false,
    "xuser_id": "",
    "xuser_type": "",
    "password_expires_at": null,
    "create_time": "2024-05-21T09:03:41.000000",
    "domain_id": "d78cbac1.....",
    "xdomain_id": "30086000.....",
    "xdomain_type": "",
    "default_project_id": null
  }
}
```

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": "Request body is invalid.",
  "error_code": "IAM.0011"
}
```

In the response body, **errorCode** is an error code, and **errorMessage** provides information about the error.

4 APIs

4.1 Alarm

4.1.1 Querying the Event Alarm Rule List

Function

This API is used to query the event alarm rule list.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v2/{project_id}/event2alarm-rule

Table 4-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-2 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> • application/json

Response Parameters

Status code: 200

Table 4-3 Response body parameters

Parameter	Type	Description
[items]	Array of Event2alarmRuleBody objects	Event alarm entity.

Table 4-4 Event2alarmRuleBody

Parameter	Type	Description
user_id	String	Project ID.
name	String	Rule name. Enter a maximum of 100 characters and do not start or end with a special character. Only letters, digits, underscores (_), and hyphens (-) are allowed.
description	String	Rule description. Enter a maximum of 1024 characters and do not start or end with an underscore (_) or hyphen (-). Only letters, digits, and special characters (_-<>=,.) are allowed.
create_time	Long	Creation time.
update_time	Long	Update time.
resource_provider	String	Event source.
metadata	metadata object	Source data.
enable	Boolean	Whether to enable the rule.

Parameter	Type	Description
trigger_policies	Array of trigger_policies objects	Trigger policy.
alarm_type	String	Alarm type. notification: direct alarm reporting. denoising: alarm noise reduction. Enumeration values: <ul style="list-style-type: none">• notification• denoising
action_rule	String	Alarm action rule.
inhibit_rule	String	Alarm suppression rule.
route_group_rule	String	Alarm grouping rule.
event_names	Array of strings	Event name.
migrated	Boolean	Whether to migrate to AOM 2.0.
topics	Array of SmnTopics objects	SMN information.

Table 4-5 metadata

Parameter	Type	Description
customField	Array of strings	Custom tag.

Table 4-6 trigger_policies

Parameter	Type	Description
id	Integer	ID.
name	String	Event name.
trigger_type	String	Trigger type. accumulative: Accumulated trigger. immediately: Immediate trigger. Enumeration values: <ul style="list-style-type: none">• accumulative• immediately
period	Integer	Trigger cycle.
operator	String	Comparison operator.

Parameter	Type	Description
count	Integer	Number of trigger times.
level	String	Alarm severity.

Table 4-7 SmnTopics

Parameter	Type	Description
display_name	String	Topic display name, which will be the name of an email sender. Max.: 192 bytes. This parameter is left blank by default.
name	String	Name of the topic. Enter 1 to 255 characters starting with a letter or digit. Only letters, digits, hyphens (-), and underscores (_) are allowed.
push_policy	Integer	SMN message push policy. Options: 0 and 1.
status	Integer	Status of the topic subscriber. 0: The topic has been deleted or the subscription list of this topic is empty. 1: The subscription object is in the subscribed state. 2: The subscription object is in the unsubscribed or canceled state. Enumeration values: <ul style="list-style-type: none"> • 0 • 1 • 2
topic_urn	String	Unique resource identifier of the topic.

Status code: 401

Table 4-8 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403

Table 4-9 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500

Table 4-10 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Example Requests

Query the event alarm rule list.

`https://{endpoint}/v2/{project_id}/event2alarm-rule`

Example Responses

Status code: 200

OK: The request is successful.

```
[ {
  "action_rule": "1",
  "alarm_type": "notification",
  "create_time": 1701442632968,
  "description": "",
  "enable": true,
  "event_names": [ ],
  "inhibit_rule": "",
  "metadata": {
    "customField": [ "xxx" ]
  },
  "migrated": false,
  "name": "1jB5h6GnbY",
  "resource_provider": "AOM",
  "route_group_rule": "",
  "topics": [ ],
  "trigger_policies": [ {
```

```
"count" : 99,  
"id" : 0,  
"level" : "",  
"name" : "",  
"operator" : ">=",  
"period" : 300,  
"trigger_type" : "accumulative"  
}],  
"update_time" : 0,  
"user_id" : "2a473356cca5487f8373be891bffc1cf"  
}]
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{  
  "error_code" : "SVCSTG.AMS.2000051",  
  "error_msg" : "auth failed.",  
  "error_type" : "AUTH_FAILED"  
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{  
  "error_code" : "AOM.0403",  
  "error_msg" : "auth failed.",  
  "error_type" : "AUTH_FAILED"  
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{  
  "error_code" : "APM.00000500",  
  "error_msg" : "Internal Server Error",  
  "trace_id" : ""  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v2.region.AomRegion;  
import com.huaweicloud.sdk.aom.v2.*;  
import com.huaweicloud.sdk.aom.v2.model.*;  
  
public class ListEvent2alarmRuleSolution {  
  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
```

security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.

// In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment

```
String ak = System.getenv("CLOUD_SDK_AK");
String sk = System.getenv("CLOUD_SDK_SK");
String projectId = "{project_id}";

ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
ListEvent2alarmRuleRequest request = new ListEvent2alarmRuleRequest();
try {
    ListEvent2alarmRuleResponse response = client.listEvent2alarmRule(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListEvent2alarmRuleRequest()
        response = client.list_event2alarm_rule(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
```

```
print(e.error_code)
print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListEvent2alarmRuleRequest{}
    response, err := client.ListEvent2alarmRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

Status Code	Description
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.2 Adding an Event Alarm Rule

Function

This API is used to add an event alarm rule.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v2/{project_id}/event2alarm-rule

Table 4-11 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-12 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> application/json

Table 4-13 Request body parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	Project ID.
name	Yes	String	Rule name. Enter a maximum of 100 characters and do not start or end with a special character. Only letters, digits, underscores (_), and hyphens (-) are allowed.
description	No	String	Rule description. Enter a maximum of 1024 characters and do not start or end with an underscore (_) or hyphen (-). Only letters, digits, and special characters (_- <>=,.) are allowed.
create_time	Yes	Long	Creation time.
update_time	No	Long	Update time.
resource_provider	No	String	Event source.
metadata	Yes	metadata object	Source data.
enable	Yes	Boolean	Whether to enable the rule.
trigger_policies	Yes	Array of trigger_policies objects	Trigger policy.
alarm_type	Yes	String	Alarm type. notification: direct alarm reporting. denoising: alarm noise reduction. Enumeration values: <ul style="list-style-type: none">• notification• denoising
action_rule	Yes	String	Alarm action rule.
inhibit_rule	No	String	Alarm suppression rule.
route_group_rule	No	String	Alarm grouping rule.
event_names	No	Array of strings	Event name.

Parameter	Mandatory	Type	Description
migrated	No	Boolean	Whether to migrate to AOM 2.0.
topics	No	Array of SmnTopics objects	SMN information.

Table 4-14 metadata

Parameter	Mandatory	Type	Description
customField	No	Array of strings	Custom tag.

Table 4-15 trigger_policies

Parameter	Mandatory	Type	Description
id	No	Integer	ID.
name	No	String	Event name.
trigger_type	No	String	Trigger type. accumulative: Accumulated trigger. immediately: Immediate trigger. Enumeration values: <ul style="list-style-type: none"> • accumulative • immediately
period	No	Integer	Trigger cycle.
operator	No	String	Comparison operator.
count	No	Integer	Number of trigger times.
level	No	String	Alarm severity.

Table 4-16 SmnTopics

Parameter	Mandatory	Type	Description
display_name	No	String	Topic display name, which will be the name of an email sender. Max.: 192 bytes. This parameter is left blank by default.

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the topic. Enter 1 to 255 characters starting with a letter or digit. Only letters, digits, hyphens (-), and underscores (_) are allowed.
push_policy	Yes	Integer	SMN message push policy. Options: 0 and 1.
status	No	Integer	Status of the topic subscriber. 0: The topic has been deleted or the subscription list of this topic is empty. 1: The subscription object is in the subscribed state. 2: The subscription object is in the unsubscribed or canceled state. Enumeration values: <ul style="list-style-type: none"> • 0 • 1 • 2
topic_urn	Yes	String	Unique resource identifier of the topic.

Response Parameters

Status code: 400

Table 4-17 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 401

Table 4-18 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403

Table 4-19 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500

Table 4-20 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Example Requests

Add an event alarm rule whose user ID is "xxxx", name is "scl_test_event", and event source is "AOM".

`https://{endpoint}/v2/{project_id}/event2alarm-rule`

```
{
  "user_id" : "xxxx",
  "name" : "scl_test_event",
  "description" : "",
  "create_time" : 1669276173427,
  "update_time" : 0,
```

```
"resource_provider" : "AOM",
"metadata" : {
  "customField" : [ "xxx=xxx" ]
},
"enable" : true,
"trigger_policies" : [ {
  "id" : 0,
  "name" : "",
  "trigger_type" : "accumulative",
  "period" : 300,
  "operator" : ">=",
  "count" : 99,
  "level" : ""
} ],
"alarm_type" : "notification",
"action_rule" : "111111",
"inhibit_rule" : "",
"route_group_rule" : ""
}
```

Example Responses

Status code: 204

OK: The request is successful.

```
No Content
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.02011400",
  "error_msg" : "actionRule is invalid!",
  "error_type" : "BAD_REQUEST",
  "trace_id" : ""
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "SVCSTG.AMS.2000051",
  "error_msg" : "auth failed.",
  "error_type" : "AUTH_FAILED"
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "error_code" : "SVCSTG.AMS.2000051",
  "error_msg" : "auth failed.",
  "error_type" : "AUTH_FAILED",
  "trace_id" : "8fb508e9e31b44279016f708e1c60e4c"
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "APM.00000500",
  "error_msg" : "Internal Server Error",
  "trace_id" : ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add an event alarm rule whose user ID is "xxxx", name is "scl_test_event", and event source is "AOM".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;

public class AddEvent2alarmRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        AddEvent2alarmRuleRequest request = new AddEvent2alarmRuleRequest();
        Event2alarmRuleBody body = new Event2alarmRuleBody();
        List<Event2alarmRuleBodyTriggerPolicies> listbodyTriggerPolicies = new ArrayList<>();
        listbodyTriggerPolicies.add(
            new Event2alarmRuleBodyTriggerPolicies()
                .withId(0)
                .withName("")
                .withTriggerType(Event2alarmRuleBodyTriggerPolicies.TriggerTypeEnum.fromValue("accumulative
"))
                .withPeriod(300)
                .withOperator(">=")
                .withCount(99)
                .withLevel("")
        );
        List<String> listMetadataCustomField = new ArrayList<>();
        listMetadataCustomField.add("xxx=xxx");
        Event2alarmRuleBodyMetadata metadatabody = new Event2alarmRuleBodyMetadata();
```

```
metadatabody.withCustomField(listMetadataCustomField);
body.withRouteGroupRule("");
body.withInhibitRule("");
body.withActionRule("111111");
body.withAlarmType(Event2alarmRuleBody.AlarmTypeEnum.fromValue("notification"));
body.withTriggerPolicies(listbodyTriggerPolicies);
body.withEnable(true);
body.withMetadata(metadatabody);
body.withResourceProvider("AOM");
body.withUpdateTime(0L);
body.withCreateTime(1669276173427L);
body.withDescription("");
body.withName("scl_test_event");
body.withUserId("xxxx");
request.withBody(body);
try {
    AddEvent2alarmRuleResponse response = client.addEvent2alarmRule(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

Add an event alarm rule whose user ID is "xxxx", name is "scl_test_event", and event source is "AOM".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdfaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdfaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = AddEvent2alarmRuleRequest()
        listTriggerPoliciesbody = [
            Event2alarmRuleBodyTriggerPolicies(
                id=0,
                name="",
                trigger_type="accumulative",
            )
        ]
        request.set_list_trigger_policies_body(listTriggerPoliciesbody)
        response = client.add_event_2_alarm_rule(request)
        print(response)
```



```
        period=300,
        operator=">=",
        count=99,
        level=""
    )
]
listCustomFieldMetadata = [
    "xxx=xxx"
]
metadatabody = Event2alarmRuleBodyMetadata(
    custom_field=listCustomFieldMetadata
)
request.body = Event2alarmRuleBody(
    route_group_rule="",
    inhibit_rule="",
    action_rule="111111",
    alarm_type="notification",
    trigger_policies=listTriggerPoliciesbody,
    enable=True,
    metadata=metadatabody,
    resource_provider="AOM",
    update_time=0,
    create_time=1669276173427,
    description="",
    name="scl_test_event",
    user_id="xxxx"
)
response = client.add_event2alarm_rule(request)
print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Add an event alarm rule whose user ID is "xxxx", name is "scl_test_event", and event source is "AOM".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
```

```
WithCredential(auth).
Build()

request := &model.AddEvent2alarmRuleRequest{}
idTriggerPolicies:= int32(0)
nameTriggerPolicies:= ""
triggerTypeTriggerPolicies:=
model.GetEvent2alarmRuleBodyTriggerPoliciesTriggerTypeEnum().ACCUMULATIVE
periodTriggerPolicies:= int32(300)
operatorTriggerPolicies:= ">="
countTriggerPolicies:= int32(99)
levelTriggerPolicies:= ""
var listTriggerPoliciesbody = []model.Event2alarmRuleBodyTriggerPolicies{
    {
        Id: &idTriggerPolicies,
        Name: &nameTriggerPolicies,
        TriggerType: &triggerTypeTriggerPolicies,
        Period: &periodTriggerPolicies,
        Operator: &operatorTriggerPolicies,
        Count: &countTriggerPolicies,
        Level: &levelTriggerPolicies,
    },
}
var listCustomFieldMetadata = []string{
    "xxx=xxx",
}
metadatabody := &model.Event2alarmRuleBodyMetadata{
    CustomField: &listCustomFieldMetadata,
}
routeGroupRuleEvent2alarmRuleBody:= ""
inhibitRuleEvent2alarmRuleBody:= ""
resourceProviderEvent2alarmRuleBody:= "AOM"
updateTimeEvent2alarmRuleBody:= int64(0)
descriptionEvent2alarmRuleBody:= ""
request.Body = &model.Event2alarmRuleBody{
    RouteGroupRule: &routeGroupRuleEvent2alarmRuleBody,
    InhibitRule: &inhibitRuleEvent2alarmRuleBody,
    ActionRule: "111111",
    AlarmType: model.GetEvent2alarmRuleBodyAlarmTypeEnum().NOTIFICATION,
    TriggerPolicies: listTriggerPoliciesbody,
    Enable: true,
    Metadata: metadatabody,
    ResourceProvider: &resourceProviderEvent2alarmRuleBody,
    UpdateTime: &updateTimeEvent2alarmRuleBody,
    CreateTime: int64(1669276173427),
    Description: &descriptionEvent2alarmRuleBody,
    Name: "scl_test_event",
    UserId: "xxxx",
}
response, err := client.AddEvent2alarmRule(request)
if err == nil {
    fmt.Printf("%v\n", response)
} else {
    fmt.Println(err)
}
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.3 Modifying an Event Alarm Rule

Function

This API is used to modify an event alarm rule.

Calling Method

For details, see [Calling APIs](#).

URI

PUT /v2/{project_id}/event2alarm-rule

Table 4-21 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-22 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	No	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none">• application/json

Table 4-23 Request body parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	Project ID.
name	Yes	String	Rule name. Enter a maximum of 100 characters and do not start or end with a special character. Only letters, digits, underscores (_), and hyphens (-) are allowed.
description	No	String	Rule description. Enter a maximum of 1024 characters and do not start or end with an underscore (_) or hyphen (-). Only letters, digits, and special characters (_- <>=,.) are allowed.
create_time	Yes	Long	Creation time.
update_time	No	Long	Update time.
resource_provider	No	String	Event source.
metadata	Yes	metadata object	Source data.
enable	Yes	Boolean	Whether to enable the rule.
trigger_policies	Yes	Array of trigger_policies objects	Trigger policy.

Parameter	Mandatory	Type	Description
alarm_type	Yes	String	Alarm type. notification: direct alarm reporting. denoising: alarm noise reduction. Enumeration values: <ul style="list-style-type: none"> • notification • denoising
action_rule	Yes	String	Alarm action rule.
inhibit_rule	No	String	Alarm suppression rule.
route_group_rule	No	String	Alarm grouping rule.
event_names	No	Array of strings	Event name.
migrated	No	Boolean	Whether to migrate to AOM 2.0.
topics	No	Array of SmnTopics objects	SMN information.

Table 4-24 metadata

Parameter	Mandatory	Type	Description
customField	No	Array of strings	Custom tag.

Table 4-25 trigger_policies

Parameter	Mandatory	Type	Description
id	No	Integer	ID.
name	No	String	Event name.
trigger_type	No	String	Trigger type. accumulative: Accumulated trigger. immediately: Immediate trigger. Enumeration values: <ul style="list-style-type: none"> • accumulative • immediately
period	No	Integer	Trigger cycle.

Parameter	Mandatory	Type	Description
operator	No	String	Comparison operator.
count	No	Integer	Number of trigger times.
level	No	String	Alarm severity.

Table 4-26 SmnTopics

Parameter	Mandatory	Type	Description
display_name	No	String	Topic display name, which will be the name of an email sender. Max.: 192 bytes. This parameter is left blank by default.
name	Yes	String	Name of the topic. Enter 1 to 255 characters starting with a letter or digit. Only letters, digits, hyphens (-), and underscores (_) are allowed.
push_policy	Yes	Integer	SMN message push policy. Options: 0 and 1.
status	No	Integer	Status of the topic subscriber. 0: The topic has been deleted or the subscription list of this topic is empty. 1: The subscription object is in the subscribed state. 2: The subscription object is in the unsubscribed or canceled state. Enumeration values: <ul style="list-style-type: none">• 0• 1• 2
topic_urn	Yes	String	Unique resource identifier of the topic.

Response Parameters

Status code: 400

Table 4-27 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 401**Table 4-28** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403**Table 4-29** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500**Table 4-30** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.

Parameter	Type	Description
trace_id	String	Request ID.

Example Requests

Update an event alarm rule whose user ID is "xxxxxxx", event source is "AOM", and name is "scl_test_event".

```
https://{endpoint}/v2/{project_id}/event2alarm-rule
```

```
{
  "user_id" : "xxxxxxx",
  "name" : "scl_test_event",
  "description" : "",
  "create_time" : 1669276304343,
  "update_time" : 1669276304343,
  "resource_provider" : "AOM",
  "metadata" : {
    "customField" : [ "xxx" ]
  },
  "enable" : true,
  "trigger_policies" : [ {
    "id" : 0,
    "name" : "",
    "trigger_type" : "accumulative",
    "period" : 300,
    "operator" : ">=",
    "count" : 99,
    "level" : ""
  } ],
  "alarm_type" : "notification",
  "action_rule" : "111111",
  "inhibit_rule" : "",
  "route_group_rule" : ""
}
```

Example Responses

Status code: 204

OK: The request is successful.

No Content

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.02011400",
  "error_msg" : "actionRule is invalid!",
  "error_type" : "BAD_REQUEST",
  "trace_id" : ""
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "SVCSTG.AMS.2000051",
```



```
"error_msg" : "auth failed.",  
"error_type" : "AUTH_FAILED"  
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{  
  "error_code" : "SVCSTG.AMS.2000051",  
  "error_msg" : "auth failed.",  
  "error_type" : "AUTH_FAILED"  
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{  
  "error_code" : "APM.00000500",  
  "error_msg" : "Internal Server Error",  
  "trace_id" : ""  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Update an event alarm rule whose user ID is "xxxxxxx", event source is "AOM", and name is "scl_test_event".

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v2.region.AomRegion;  
import com.huaweicloud.sdk.aom.v2.*;  
import com.huaweicloud.sdk.aom.v2.model.*;  
  
import java.util.List;  
import java.util.ArrayList;  
  
public class UpdateEventRuleSolution {  
  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or  
        // environment variables and decrypted during use to ensure security.  
        // In this example, AK and SK are stored in environment variables for authentication. Before running  
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
        String ak = System.getenv("CLOUD_SDK_AK");  
        String sk = System.getenv("CLOUD_SDK_SK");  
        String projectId = "{project_id}";  
  
        ICredential auth = new BasicCredentials()  
            .withProjectId(projectId)  
            .withAk(ak)  
            .withSk(sk);
```

```
AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
UpdateEventRuleRequest request = new UpdateEventRuleRequest();
Event2alarmRuleBody body = new Event2alarmRuleBody();
List<Event2alarmRuleBodyTriggerPolicies> listbodyTriggerPolicies = new ArrayList<>();
listbodyTriggerPolicies.add(
    new Event2alarmRuleBodyTriggerPolicies()
        .withId(0)
        .withName("")
        .withTriggerType(Event2alarmRuleBodyTriggerPolicies.TriggerTypeEnum.fromValue("accumulative
"))
        .withPeriod(300)
        .withOperator(">=")
        .withCount(99)
        .withLevel("")
);
List<String> listMetadataCustomField = new ArrayList<>();
listMetadataCustomField.add("xxx");
Event2alarmRuleBodyMetadata metadatabody = new Event2alarmRuleBodyMetadata();
metadatabody.withCustomField(listMetadataCustomField);
body.withRouteGroupRule("");
body.withInhibitRule("");
body.withActionRule("111111");
body.withAlarmType(Event2alarmRuleBody.AlarmTypeEnum.fromValue("notification"));
body.withTriggerPolicies(listbodyTriggerPolicies);
body.withEnable(true);
body.withMetadata(metadatabody);
body.withResourceProvider("AOM");
body.withUpdateTime(1669276304343L);
body.withCreateTime(1669276304343L);
body.withDescription("");
body.withName("scl_test_event");
body.withUserId("xxxxxxx");
request.withBody(body);
try {
    UpdateEventRuleResponse response = client.updateEventRule(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

Update an event alarm rule whose user ID is "xxxxxxx", event source is "AOM", and name is "scl_test_event".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
```

risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.

In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment

```
ak = os.environ["CLOUD_SDK_AK"]
sk = os.environ["CLOUD_SDK_SK"]
projectId = "{project_id}"

credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = UpdateEventRuleRequest()
    listTriggerPoliciesbody = [
        Event2alarmRuleBodyTriggerPolicies(
            id=0,
            name="",
            trigger_type="accumulative",
            period=300,
            operator=">=",
            count=99,
            level=""
        )
    ]
    listCustomFieldMetadata = [
        "xxx"
    ]
    metadatabody = Event2alarmRuleBodyMetadata(
        custom_field=listCustomFieldMetadata
    )
    request.body = Event2alarmRuleBody(
        route_group_rule="",
        inhibit_rule="",
        action_rule="111111",
        alarm_type="notification",
        trigger_policies=listTriggerPoliciesbody,
        enable=True,
        metadata=metadatabody,
        resource_provider="AOM",
        update_time=1669276304343,
        create_time=1669276304343,
        description="",
        name="scl_test_event",
        user_id="xxxxxxx"
    )
    response = client.update_event_rule(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Update an event alarm rule whose user ID is "xxxxxxx", event source is "AOM", and name is "scl_test_event".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
```

```
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateEventRuleRequest{}
    idTriggerPolicies:= int32(0)
    nameTriggerPolicies:= ""
    triggerTypeTriggerPolicies:=
model.GetEvent2alarmRuleBodyTriggerPoliciesTriggerTypeEnum().ACCUMULATIVE
    periodTriggerPolicies:= int32(300)
    operatorTriggerPolicies:= ">="
    countTriggerPolicies:= int32(99)
    levelTriggerPolicies:= ""
    var listTriggerPoliciesbody = []model.Event2alarmRuleBodyTriggerPolicies{
        {
            Id: &idTriggerPolicies,
            Name: &nameTriggerPolicies,
            TriggerType: &triggerTypeTriggerPolicies,
            Period: &periodTriggerPolicies,
            Operator: &operatorTriggerPolicies,
            Count: &countTriggerPolicies,
            Level: &levelTriggerPolicies,
        },
    }
    var listCustomFieldMetadata = []string{
        "xxx",
    }
    metadatabody := &model.Event2alarmRuleBodyMetadata{
        CustomField: &listCustomFieldMetadata,
    }
    routeGroupRuleEvent2alarmRuleBody:= ""
    inhibitRuleEvent2alarmRuleBody:= ""
    resourceProviderEvent2alarmRuleBody:= "AOM"
    updateTimeEvent2alarmRuleBody:= int64(1669276304343)
    descriptionEvent2alarmRuleBody:= ""
    request.Body = &model.Event2alarmRuleBody{
        RouteGroupRule: &routeGroupRuleEvent2alarmRuleBody,
        InhibitRule: &inhibitRuleEvent2alarmRuleBody,
        ActionRule: "111111",
        AlarmType: model.GetEvent2alarmRuleBodyAlarmTypeEnum().NOTIFICATION,
        TriggerPolicies: listTriggerPoliciesbody,
        Enable: true,
        Metadata: metadatabody,
        ResourceProvider: &resourceProviderEvent2alarmRuleBody,
        UpdateTime: &updateTimeEvent2alarmRuleBody,
        CreateTime: int64(1669276304343),
        Description: &descriptionEvent2alarmRuleBody,
        Name: "scl_test_event",
    }
}
```

```
    UserId: "xxxxxxx",  
  }  
  response, err := client.UpdateEventRule(request)  
  if err == nil {  
    fmt.Printf("%+v\n", response)  
  } else {  
    fmt.Println(err)  
  }  
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.4 Deleting an Event Alarm Rule

Function

This API is used to delete an event alarm rule.

Calling Method

For details, see [Calling APIs](#).

URI

DELETE /v2/{project_id}/event2alarm-rule

Table 4-31 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-32 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> • application/json

Table 4-33 Request body parameters

Parameter	Mandatory	Type	Description
[items]	Yes	Array of strings	Name of the rule to be deleted.

Response Parameters

Status code: 400

Table 4-34 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 401

Table 4-35 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403**Table 4-36** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500**Table 4-37** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Example Requests

Delete event alarm rule "aomTestLts".

```
https://{endpoint}/v2/{project_id}/event2alarm-rule  
[ "aomTestLts" ]
```

Example Responses

Status code: 204

OK: The request is successful.

No Content

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.02013125",
  "error_msg" : "send kafka message failed",
  "error_type" : "INTERNAL_SERVER_ERROR",
  "trace_id" : "8fb508e9e31b44279016f708e1c60e4c"
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "SVCSTG.AMS.2000051",
  "error_msg" : "auth failed.",
  "error_type" : "AUTH_FAILED"
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "error_code" : "SVCSTG.AMS.2000051",
  "error_msg" : "auth failed.",
  "error_type" : "AUTH_FAILED"
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "APM.00000500",
  "error_msg" : "Internal Server Error",
  "trace_id" : ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Delete event alarm rule "aomTestLts".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;
```



```
import java.util.List;
import java.util.ArrayList;

public class DeleteEvent2alarmRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        DeleteEvent2alarmRuleRequest request = new DeleteEvent2alarmRuleRequest();
        List<String> listbodyBody = new ArrayList<>();
        listbodyBody.add("aomTestLts");
        request.withBody(listbodyBody);
        try {
            DeleteEvent2alarmRuleResponse response = client.deleteEvent2alarmRule(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Delete event alarm rule "aomTestLts".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)
```

```
client = AomClient.new_builder() \  
  .with_credentials(credentials) \  
  .with_region(AomRegion.value_of("<YOUR REGION>")) \  
  .build()  
  
try:  
  request = DeleteEvent2alarmRuleRequest()  
  listBodybody = [  
    "aomTestLts"  
  ]  
  request.body = listBodybody  
  response = client.delete_event2alarm_rule(request)  
  print(response)  
except exceptions.ClientRequestException as e:  
  print(e.status_code)  
  print(e.request_id)  
  print(e.error_code)  
  print(e.error_msg)
```

Go

Delete event alarm rule "aomTestLts".

```
package main  
  
import (  
  "fmt"  
  "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"  
  aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"  
  "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"  
  region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"  
)  
  
func main() {  
  // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
  // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
  // variables and decrypted during use to ensure security.  
  // In this example, AK and SK are stored in environment variables for authentication. Before running this  
  // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
  ak := os.Getenv("CLOUD_SDK_AK")  
  sk := os.Getenv("CLOUD_SDK_SK")  
  projectId := "{project_id}"  
  
  auth := basic.NewCredentialsBuilder().  
    WithAk(ak).  
    WithSk(sk).  
    WithProjectId(projectId).  
    Build()  
  
  client := aom.NewAomClient(  
    aom.AomClientBuilder().  
      WithRegion(region.ValueOf("<YOUR REGION>")).  
      WithCredential(auth).  
      Build())  
  
  request := &model.DeleteEvent2alarmRuleRequest{}  
  var listBodybody = []string{  
    "aomTestLts",  
  }  
  request.Body = &listBodybody  
  response, err := client.DeleteEvent2alarmRule(request)  
  if err == nil {  
    fmt.Printf("%+v\n", response)  
  } else {  
    fmt.Println(err)  
  }  
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.5 Querying Events and Alarms

Function

This API is used to query events and alarms of a user.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v2/{project_id}/events

Table 4-38 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-39 Query Parameters

Parameter	Mandatory	Type	Description
type	No	String	Type of information to be queried. active_alert: Active alarms are to be queried. history_alert: Historical alarms are to be queried. If this parameter is not transferred or other values are transferred, information that meets the specified search criteria will be returned. Enumeration values: <ul style="list-style-type: none"> • history_alert • active_alert
limit	No	Integer	Default: 1,000.
marker	No	String	Pagination marker. The initial value is 0 , and the subsequent value is the value of next_marker in the response body.

Request Parameters

Table 4-40 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> • application/json
Enterprise-Project-Id	No	String	Enterprise project ID. <ul style="list-style-type: none"> • To query instances in an enterprise project, enter the enterprise project ID. • To query instances in all enterprise projects, enter all_granted_eps.

Table 4-41 Request body parameters

Parameter	Mandatory	Type	Description
time_range	Yes	String	<p>Time range specified to query data of the last N minutes when the client time is inconsistent with the server time. It can also be used to accurately query the data of a specified period.</p> <p>Example:</p> <ul style="list-style-type: none"> -1.-1.60: indicates that the data of the latest 60 minutes is queried. This query is based on the server time regardless of the current client time. 1650852000000.1650852300000.5: indicates the five minutes from 10:00:00 to 10:05:00 on April 25, 2022 GMT+08:00. <p>Format: startTimeInMillis.endTimeInMillis.durationInMinutes</p> <p>Parameter description:</p> <ul style="list-style-type: none"> startTimeInMillis: Start time of the query, in milliseconds. If this parameter is set to -1, the server calculates the start time as follows: endTimeInMillis – durationInMinutes x 60 x 1000. For example, -1.1650852300000.5 is equivalent to 1650852000000.1650852300000.5. endTimeInMillis: End time of the query, in milliseconds. If this parameter is set to -1, the server calculates the end time as follows: startTimeInMillis + durationInMinutes x 60 x 1000. If the calculated end time is later than the

Parameter	Mandatory	Type	Description
			<p>current system time, the current system time is used. For example, 1650852000000.-1.5 is equivalent to 1650852000000.1650852300000.5.</p> <ul style="list-style-type: none"> durationInMinutes: Time span, in minutes. The value must be greater than 0 and greater than or equal to the result of "(endTimeInMillis - startTimeInMillis)/(60 x 1000) - 1". If both the start time and end time are set to -1, the system sets the end time to the current UTC time (in milliseconds) and calculates the start time as follows: endTimeInMillis - durationInMinutes x 60 x 1000. For example, -1.-1.60 indicates the latest 60 minutes. <p>Constraint: In a single request, the following condition must be met: durationInMinutes x 60/period ≤ 1440</p>
step	No	Long	Statistical step (unit: ms). For example, if the statistical step is one minute, set this parameter to 60,000.
search	No	String	Field specified for fuzzy query, which can be left blank. If this field is not left blank, fuzzy query can be performed accordingly. In that case, the metadata field is mandatory.
sort	No	sort object	Sorting order, which can be left blank.
metadata_relation	No	Array of RelationModel objects	Combination of search criteria, which can be left blank.

Table 4-42 sort

Parameter	Mandatory	Type	Description
order_by	No	Array of strings	List of sorted fields. Fields in this list are sorted based on the specified order.
order	No	String	Sorting order. asc: ascending order. desc: descending order. Enumeration values: <ul style="list-style-type: none"> • asc • desc

Table 4-43 RelationModel

Parameter	Mandatory	Type	Description
key	No	String	Key specified for query, which corresponds to the key in the metadata.
value	No	Array of strings	Value of the specified key in the search criterion.
relation	No	String	Relationship between search criteria. Values: AND: All criteria must be met. OR: One of the criteria needs to be met. NOT: None of the criteria can be met. Enumeration values: <ul style="list-style-type: none"> • AND • OR • NOT

Response Parameters

Status code: 200

Table 4-44 Response body parameters

Parameter	Type	Description
events	Array of EventModel objects	Event or alarm details.
page_info	PageInfo object	Pagination information.

Table 4-45 EventModel

Parameter	Type	Description
starts_at	Long	Time when an event or alarm is generated (CST timestamp precise down to the millisecond).
ends_at	Long	Time when an event or alarm is cleared (CST timestamp precise down to the millisecond). 0: The event or alarm is not deleted.
timeout	Long	Duration (in milliseconds) at which an alarm is automatically cleared. For example, if an alarm needs to be automatically cleared in one minute, set this parameter to 60000. The default value is 3 days (that is, 3 days x 24 hours x 60 minutes x 1000 ms = 4,320,000 ms).

Parameter	Type	Description
metadata	Map<String,String >	<p>Details of an event or alarm. The value is a key-value pair. The following fields are mandatory:</p> <ul style="list-style-type: none"> • event_name: event or alarm name, which is a string. • event_severity: event severity, which is an enumerated value with string elements. Options: Critical, Major, Minor, and Info. • event_type: event type, which is an enumerated value with string elements. Options: event and alarm. • resource_provider: name of a cloud service corresponding to an event, which is a string. • resource_type: type of the resource corresponding to an event, which is a string. • resource_id: resource ID corresponding to an event, which is a string.
annotations	Map<String,Objec t>	Additional field for an event or alarm, which can be left blank.
attach_rule	Map<String,Objec t>	Reserved field for an event or alarm, which can be left blank.
id	String	Event or alarm ID, which is automatically generated by the system.

Table 4-46 PageInfo

Parameter	Type	Description
current_count	Integer	Total number of events and alarms on the current page.
previous_marker	String	Previous marker.
next_marker	String	Next marker.

Status code: 400

Table 4-47 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error description.
error_type	String	API call failure type.
trace_id	String	Request ID.

Status code: 401**Table 4-48** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error description.
error_type	String	API call failure type.
trace_id	String	Request ID.

Status code: 403**Table 4-49** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error description.
error_type	String	API call failure type.
trace_id	String	Request ID.

Status code: 500**Table 4-50** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error description.
error_type	String	API call failure type.

Parameter	Type	Description
trace_id	String	Request ID.

Status code: 503

Table 4-51 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error description.
error_type	String	API call failure type.
trace_id	String	Request ID.

Example Requests

Query the events and alarms of a specified user.

https://{endpoint}/v2/{project_id}/events

```
{
  "time_range": "-1.-1.30",
  "metadata_relation": [ {
    "key": "event_type",
    "relation": "AND",
    "value": [ "alarm" ]
  }, {
    "key": "event_severity",
    "relation": "AND",
    "value": [ "Critical", "Major", "Minor", "Info" ]
  } ],
  "search": "",
  "sort": {
    "order_by": [ "starts_at" ],
    "order": "desc"
  }
}
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "events": [ {
    "annotations": {
      "alarm_fix_suggestion_zh_cn": "Suggestions",
      "alarm_probableCause_zh_cn": "Possible Causes",
      "message": "Alarm Details"
    },
    "arrives_at": 16377362908000,
    "ends_at": 0,
    "enterprise_project_id": "0",
  } ]
}
```

```
"event_sn" : "1283514476372426755",
"id" : "6775161208461480000",
"metadata" : {
  "event_name" : "test",
  "event_severity" : "Major",
  "event_type" : "alarm",
  "resource_id" : "ecs123",
  "resource_provider" : "ecs",
  "resource_type" : "vm"
},
"policy" : { },
"starts_at" : 16377362908000,
"timeout" : 60000
} ],
"page_info" : {
  "current_count" : 1,
  "next_marker" : "",
  "previous_marker" : "0"
}
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.08032002",
  "error_message" : "The request body is illegal",
  "error_type" : "SC_BAD_REQUEST"
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.0403",
  "error_message" : "auth failed.",
  "error_type" : "AUTH_FAILED",
  "trace_id" : null
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.0403",
  "error_message" : "auth failed.",
  "error_type" : "AUTH_FAILED",
  "trace_id" : null
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "APM.00000500",
  "error_message" : "Internal Server Error",
  "trace_id" : null
}
```

Status code: 503

Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.0503",
  "error_message" : "SC_NOT_IMPLEMENTED",
  "error_type" : "SC_NOT_IMPLEMENTED"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query the events and alarms of a specified user.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;

public class ListEventsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListEventsRequest request = new ListEventsRequest();
        EventQueryParam2 body = new EventQueryParam2();
        List<String> listMetadataRelationValue = new ArrayList<>();
        listMetadataRelationValue.add("Critical");
        listMetadataRelationValue.add("Major");
        listMetadataRelationValue.add("Minor");
        listMetadataRelationValue.add("Info");
        List<String> listMetadataRelationValue1 = new ArrayList<>();
        listMetadataRelationValue1.add("alarm");
        List<RelationModel> listbodyMetadataRelation = new ArrayList<>();
        listbodyMetadataRelation.add(
            new RelationModel()
                .withKey("event_type")
                .withValue(listMetadataRelationValue1)
                .withRelation(RelationModel.RelationEnum.fromValue("AND"))
        );
    }
}
```

```
);
listbodyMetadataRelation.add(
    new RelationModel()
        .withKey("event_severity")
        .withValue(listMetadataRelationValue)
        .withRelation(RelationModel.RelationEnum.fromValue("AND"))
);
List<String> listSortOrderBy = new ArrayList<>();
listSortOrderBy.add("starts_at");
EventQueryParam2Sort sortbody = new EventQueryParam2Sort();
sortbody.withOrderBy(listSortOrderBy)
    .withOrder(EventQueryParam2Sort.OrderEnum.fromValue("desc"));
body.withMetadataRelation(listbodyMetadataRelation);
body.withSort(sortbody);
body.withSearch("");
body.withTimeRange("-1.-1.30");
request.withBody(body);
try {
    ListEventsResponse response = client.listEvents(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

Query the events and alarms of a specified user.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListEventsRequest()
        listValueMetadataRelation = [
            "Critical",
            "Major",
            "Minor",
        ]
```

```
    "Info"
  ]
  listValueMetadataRelation1 = [
    "alarm"
  ]
  listMetadataRelationbody = [
    RelationModel(
      key="event_type",
      value=listValueMetadataRelation1,
      relation="AND"
    ),
    RelationModel(
      key="event_severity",
      value=listValueMetadataRelation,
      relation="AND"
    )
  ]
  listOrderBySort = [
    "starts_at"
  ]
  sortbody = EventQueryParam2Sort(
    order_by=listOrderBySort,
    order="desc"
  )
  request.body = EventQueryParam2(
    metadata_relation=listMetadataRelationbody,
    sort=sortbody,
    search="",
    time_range="-1.-1.30"
  )
  response = client.list_events(request)
  print(response)
except exceptions.ClientRequestException as e:
  print(e.status_code)
  print(e.request_id)
  print(e.error_code)
  print(e.error_msg)
```

Go

Query the events and alarms of a specified user.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
```

```
aom.AomClientBuilder().
    WithRegion(region.ValueOf("<YOUR REGION>")).
    WithCredential(auth).
    Build()

request := &model.ListEventsRequest{}
var listValueMetadataRelation = []string{
    "Critical",
    "Major",
    "Minor",
    "Info",
}
var listValueMetadataRelation1 = []string{
    "alarm",
}
keyMetadataRelation:= "event_type"
relationMetadataRelation:= model.GetRelationModelRelationEnum().AND
keyMetadataRelation1:= "event_severity"
relationMetadataRelation1:= model.GetRelationModelRelationEnum().AND
var listMetadataRelationbody = []model.RelationModel{
    {
        Key: &keyMetadataRelation,
        Value: &listValueMetadataRelation1,
        Relation: &relationMetadataRelation,
    },
    {
        Key: &keyMetadataRelation1,
        Value: &listValueMetadataRelation,
        Relation: &relationMetadataRelation1,
    },
}
var listOrderBySort = []string{
    "starts_at",
}
orderSort:= model.GetEventQueryParam2SortOrderEnum().DESC
sortbody := &model.EventQueryParam2Sort{
    OrderBy: &listOrderBySort,
    Order: &orderSort,
}
searchEventQueryParam2:= ""
request.Body = &model.EventQueryParam2{
    MetadataRelation: &listMetadataRelationbody,
    Sort: sortbody,
    Search: &searchEventQueryParam2,
    TimeRange: "-1.-1.30",
}
response, err := client.ListEvents(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.

Status Code	Description
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.1.6 Counting Events and Alarms

Function

This API is used to count events and alarms that meet specified conditions.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v2/{project_id}/events/statistic

Table 4-52 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-53 Query Parameters

Parameter	Mandatory	Type	Description
type	No	String	Type of information to be queried. active_alert: Active alarms are to be queried. history_alert: Historical alarms are to be queried. If this parameter is not transferred or other values are transferred, information that meets the specified search criteria will be returned. Enumeration values: <ul style="list-style-type: none">• history_alert• active_alert

Request Parameters

Table 4-54 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none">• application/json

Table 4-55 Request body parameters

Parameter	Mandatory	Type	Description
time_range	Yes	String	<p>Time range specified to query data of the last N minutes when the client time is inconsistent with the server time. It can also be used to accurately query the data of a specified period.</p> <p>Example:</p> <ul style="list-style-type: none"> -1.-1.60: indicates that the data of the latest 60 minutes is queried. This query is based on the server time regardless of the current client time. 1650852000000.1650852300000.5: indicates the five minutes from 10:00:00 to 10:05:00 on April 25, 2022 GMT+08:00. <p>Format: startTimeInMillis.endTimeInMillis.durationInMinutes</p> <p>Parameter description:</p> <ul style="list-style-type: none"> startTimeInMillis: Start time of the query, in milliseconds. If this parameter is set to -1, the server calculates the start time as follows: endTimeInMillis – durationInMinutes x 60 x 1000. For example, -1.1650852300000.5 is equivalent to 1650852000000.1650852300000.5. endTimeInMillis: End time of the query, in milliseconds. If this parameter is set to -1, the server calculates the end time as follows: startTimeInMillis + durationInMinutes x 60 x 1000. If the calculated end time is later than the

Parameter	Mandatory	Type	Description
			<p>current system time, the current system time is used. For example, 1650852000000.-1.5 is equivalent to 1650852000000.1650852300000.5.</p> <ul style="list-style-type: none"> durationInMinutes: Time span, in minutes. The value must be greater than 0 and greater than or equal to the result of "(endTimeInMillis - startTimeInMillis)/(60 x 1000) - 1". If both the start time and end time are set to -1, the system sets the end time to the current UTC time (in milliseconds) and calculates the start time as follows: endTimeInMillis - durationInMinutes x 60 x 1000. For example, -1.-1.60 indicates the latest 60 minutes. <p>Constraint: In a single request, the following condition must be met: durationInMinutes x 60/period ≤ 1440</p>
step	Yes	Long	Statistical step (unit: ms). For example, if the statistical step is one minute, set this parameter to 60,000.
search	No	String	Field specified for fuzzy query, which can be left blank. If this field is not left blank, the system will return metadata's mandatory fields that are fuzzily matched.
sort	No	sort object	Sorting order, which can be left blank.
metadata_relation	No	Array of RelationModel objects	Combination of search criteria, which can be left blank.

Table 4-56 sort

Parameter	Mandatory	Type	Description
order_by	No	Array of strings	List of sorted fields. Fields in this list are sorted based on the specified order.
order	No	String	Sorting order. asc: ascending order. desc: descending order. Enumeration values: <ul style="list-style-type: none"> • asc • desc

Table 4-57 RelationModel

Parameter	Mandatory	Type	Description
key	No	String	Key specified for query, which corresponds to the key in the metadata.
value	No	Array of strings	Value of the specified key in the search criterion.
relation	No	String	Relationship between search criteria. Values: AND: All criteria must be met. OR: One of the criteria needs to be met. NOT: None of the criteria can be met. Enumeration values: <ul style="list-style-type: none"> • AND • OR • NOT

Response Parameters

Status code: 200

Table 4-58 Response body parameters

Parameter	Type	Description
step	Long	Statistical step (unit: ms). For example, if the statistical step is one minute, set this parameter to 60,000.
timestamps	Array of longs	Time series object corresponding to the statistical result.
series	Array of EventSeries objects	Statistical results of a time series object's different severities of events or alarms.
summary	Map<String,Integer>	Alarm statistics summary.

Table 4-59 EventSeries

Parameter	Type	Description
event_severity	String	Enumerated values of event or alarm severities. Enumeration values: <ul style="list-style-type: none"> • Critical • Major • Minor • Info
values	Array of integers	Event or alarm statistical result.

Status code: 400

Table 4-60 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error description.
error_type	String	API call failure type.
trace_id	String	Request ID.

Status code: 401

Table 4-61 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error description.
error_type	String	API call failure type.
trace_id	String	Request ID.

Status code: 403**Table 4-62** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error description.
error_type	String	API call failure type.
trace_id	String	Request ID.

Status code: 500**Table 4-63** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error description.
error_type	String	API call failure type.
trace_id	String	Request ID.

Status code: 503**Table 4-64** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error description.
error_type	String	API call failure type.

Parameter	Type	Description
trace_id	String	Request ID.

Example Requests

Query the events and alarms on the step basis in a specified time range.

```
https://{endpoint}/v2/{project_id}/events/statistic
```

```
{
  "time_range": "-1.-1.5",
  "step": 60000
}
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "series": [ {
    "event_severity": "Critical",
    "values": [ 2, 3, 3, 1, 0 ]
  }, {
    "event_severity": "Major",
    "values": [ 4, 3, 5, 4, 0 ]
  }, {
    "event_severity": "Minor",
    "values": [ 3, 1, 1, 1, 0 ]
  }, {
    "event_severity": "Info",
    "values": [ 0, 0, 0, 0, 0 ]
  } ],
  "step": 60000,
  "summary": {
    "critical_count": 9,
    "info_count": 0,
    "major_count": 16,
    "minor_count": 6
  },
  "timestamps": [ 1711788600000, 1711788660000, 1711788720000, 1711788780000, 1711788840000 ]
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code": "AOM.08033002",
  "error_message": "The request body is illegal",
  "trace_id": ""
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code": "AOM.0403",
  "error_message": "auth failed.",
}
```



```
"error_type" : "AUTH_FAILED",  
"trace_id" : null  
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{  
  "error_code" : "AOM.0403",  
  "error_message" : "auth failed.",  
  "error_type" : "AUTH_FAILED",  
  "trace_id" : null  
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{  
  "error_code" : "APM.00000500",  
  "error_message" : "Internal Server Error",  
  "trace_id" : ""  
}
```

Status code: 503

Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

```
{  
  "error_code" : "AOM.0503",  
  "error_message" : "SC_NOT_IMPLEMENTED",  
  "error_type" : "SC_NOT_IMPLEMENTED"  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query the events and alarms on the step basis in a specified time range.

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v2.region.AomRegion;  
import com.huaweicloud.sdk.aom.v2.*;  
import com.huaweicloud.sdk.aom.v2.model.*;  
  
public class CountEventsSolution {  
  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or  
        // environment variables and decrypted during use to ensure security.  
        // In this example, AK and SK are stored in environment variables for authentication. Before running
```

this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment

```
String ak = System.getenv("CLOUD_SDK_AK");
String sk = System.getenv("CLOUD_SDK_SK");
String projectId = "{project_id}";

ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
CountEventsRequest request = new CountEventsRequest();
EventQueryParam body = new EventQueryParam();
body.withStep(60000L);
body.withTimeRange("-1.-1.5");
request.withBody(body);
try {
    CountEventsResponse response = client.countEvents(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

Query the events and alarms on the step basis in a specified time range.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.valueOf("<YOUR REGION>")) \
        .build()

    try:
        request = CountEventsRequest()
        request.body = EventQueryParam(
            step=60000,
```

```
        time_range="-1.-1.5"  
    )  
    response = client.count_events(request)  
    print(response)  
except exceptions.ClientRequestException as e:  
    print(e.status_code)  
    print(e.request_id)  
    print(e.error_code)  
    print(e.error_msg)
```

Go

Query the events and alarms on the step basis in a specified time range.

```
package main  
  
import (  
    "fmt"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"  
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"  
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"  
)  
  
func main() {  
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    // variables and decrypted during use to ensure security.  
    // In this example, AK and SK are stored in environment variables for authentication. Before running this  
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak := os.Getenv("CLOUD_SDK_AK")  
    sk := os.Getenv("CLOUD_SDK_SK")  
    projectId := "{project_id}"  
  
    auth := basic.NewCredentialsBuilder().  
        WithAk(ak).  
        WithSk(sk).  
        WithProjectId(projectId).  
        Build()  
  
    client := aom.NewAomClient(  
        aom.AomClientBuilder().  
            WithRegion(region.ValueOf("<YOUR REGION>")).  
            WithCredential(auth).  
            Build())  
  
    request := &model.CountEventsRequest{}  
    request.Body = &model.EventQueryParam{  
        Step: int64(60000),  
        TimeRange: "-1.-1.5",  
    }  
    response, err := client.CountEvents(request)  
    if err == nil {  
        fmt.Printf("%+v\n", response)  
    } else {  
        fmt.Println(err)  
    }  
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.1.7 Reporting Events and Alarms

Function

This API is used to report events and alarms of a user.

Calling Method

For details, see [Calling APIs](#).

URI

PUT /v2/{project_id}/push/events

Table 4-65 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-66 Query Parameters

Parameter	Mandatory	Type	Description
action	No	String	Requested action. clear: The alarm is to be cleared. If this parameter is not transferred or other values are transferred, the alarm is reported by default. Enumeration values: <ul style="list-style-type: none">• clear

Request Parameters

Table 4-67 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none">• application/json
enterprise-project-id	No	String	ID of the enterprise project to which the alarm belongs.

Table 4-68 Request body parameters

Parameter	Mandatory	Type	Description
events	Yes	Array of EventModel objects	Event or alarm details.

Table 4-69 EventModel

Parameter	Mandatory	Type	Description
starts_at	No	Long	Time when an event or alarm is generated (CST timestamp precise down to the millisecond).
ends_at	No	Long	Time when an event or alarm is cleared (CST timestamp precise down to the millisecond). 0: The event or alarm is not deleted.
timeout	No	Long	Duration (in milliseconds) at which an alarm is automatically cleared. For example, if an alarm needs to be automatically cleared in one minute, set this parameter to 60000. The default value is 3 days (that is, 3 days x 24 hours x 60 minutes x 1000 ms = 4,320,000 ms).

Parameter	Mandatory	Type	Description
metadata	No	Map<String,String>	Details of an event or alarm. The value is a key-value pair. The following fields are mandatory: <ul style="list-style-type: none">• event_name: event or alarm name, which is a string.• event_severity: event severity, which is an enumerated value with string elements. Options: Critical, Major, Minor, and Info.• event_type: event type, which is an enumerated value with string elements. Options: event and alarm.• resource_provider: name of a cloud service corresponding to an event, which is a string.• resource_type: type of the resource corresponding to an event, which is a string.• resource_id: resource ID corresponding to an event, which is a string.
annotations	No	Map<String,Object>	Additional field for an event or alarm, which can be left blank.
attach_rule	No	Map<String,Object>	Reserved field for an event or alarm, which can be left blank.
id	No	String	Event or alarm ID, which is automatically generated by the system.

Response Parameters

Status code: 400

Table 4-70 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error description.
error_type	String	API call failure type.
trace_id	String	Request ID.

Example Requests

Report an alarm named "test".

```
https://{EndPoint}/v2/{project_id}/push/events
{
  "events": [ {
    "starts_at": 1605232501000,
    "timeout": 60000,
    "metadata": {
      "event_name": "test",
      "event_severity": "Major",
      "event_type": "alarm",
      "resource_provider": "ecs",
      "resource_type": "vm",
      "resource_id": "ecs123"
    },
    "annotations": {
      "alarm_probableCause_zh_cn": "Possible Causes",
      "alarm_fix_suggestion_zh_cn": "Suggestions",
      "message": "Alarm Details"
    },
    "attach_rule": { }
  } ]
}
```

Example Responses

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code": "AOM.0400",
  "error_msg": "parse eventParam failed",
  "error_type": "SC_BAD_REQUEST"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Report an alarm named "test".

```
package com.huaweicloud.sdk.test;
```



```
import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;
import java.util.Map;
import java.util.HashMap;

public class PushEventsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        PushEventsRequest request = new PushEventsRequest();
        EventList body = new EventList();
        Map<String, Object> listEventsAnnotations = new HashMap<>();
        listEventsAnnotations.put("alarm_probableCause_zh_cn", "Possible Causes");
        listEventsAnnotations.put("alarm_fix_suggestion_zh_cn", "Suggestions");
        listEventsAnnotations.put("message", "Alarm Details");
        Map<String, String> listEventsMetadata = new HashMap<>();
        listEventsMetadata.put("event_name", "test");
        listEventsMetadata.put("event_severity", "Major");
        listEventsMetadata.put("event_type", "alarm");
        listEventsMetadata.put("resource_provider", "ecs");
        listEventsMetadata.put("resource_type", "vm");
        listEventsMetadata.put("resource_id", "ecs123");
        List<EventModel> listbodyEvents = new ArrayList<>();
        listbodyEvents.add(
            new EventModel()
                .withStartsAt(1605232501000L)
                .withTimeout(60000L)
                .withMetadata(listEventsMetadata)
                .withAnnotations(listEventsAnnotations)
                .withAttachRule()
        );
        body.withEvents(listbodyEvents);
        request.withBody(body);
        try {
            PushEventsResponse response = client.pushEvents(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
        }
    }
}
```

```
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

Python

Report an alarm named "test".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = PushEventsRequest()
        listAnnotationsEvents = {
            "alarm_probableCause_zh_cn": "Possible Causes",
            "alarm_fix_suggestion_zh_cn": "Suggestions",
            "message": "Alarm Details"
        }
        listMetadataEvents = {
            "event_name": "test",
            "event_severity": "Major",
            "event_type": "alarm",
            "resource_provider": "ecs",
            "resource_type": "vm",
            "resource_id": "ecs123"
        }
        listEventsbody = [
            EventModel(
                starts_at=1605232501000,
                timeout=60000,
                metadata=listMetadataEvents,
                annotations=listAnnotationsEvents,
            )
        ]
        request.body = EventList(
            events=listEventsbody
        )
        response = client.push_events(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Report an alarm named "test".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.PushEventsRequest{}
    var listAnnotationsEvents = map[string]interface{}{
        "alarm_probableCause_zh_cn": "Possible Causes",
        "alarm_fix_suggestion_zh_cn": "Suggestions",
        "message": "Alarm Details",
    }
    var listMetadataEvents = map[string]string{
        "event_name": "test",
        "event_severity": "Major",
        "event_type": "alarm",
        "resource_provider": "ecs",
        "resource_type": "vm",
        "resource_id": "ecs123",
    }
    startsAtEvents := int64(1605232501000)
    timeoutEvents := int64(60000)
    var listEventsbody = []model.EventModel{
        {
            StartsAt: &startsAtEvents,
            Timeout: &timeoutEvents,
            Metadata: listMetadataEvents,
            Annotations: listAnnotationsEvents,
        },
    }
    request.Body = &model.EventList{
        Events: listEventsbody,
    }
    response, err := client.PushEvents(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

```
}  
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.1.8 Obtaining the Alarm Sending Result

Function

This API is used to obtain the alarm sending result.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v2/{project_id}/alarm-notified-histories

Table 4-71 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-72 Query Parameters

Parameter	Mandatory	Type	Description
event_sn	No	String	Alarm serial number.

Request Parameters

Table 4-73 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> • application/json

Response Parameters

Status code: 200

Table 4-74 Response body parameters

Parameter	Type	Description
notified_histories	Array of NotifiedHistoriesResult objects	Historical notification list.

Table 4-75 NotifiedHistoriesResult

Parameter	Type	Description
event_sn	String	Alarm serial number.

Parameter	Type	Description
notifications	Array of Notifications objects	Notification result.

Table 4-76 Notifications

Parameter	Type	Description
action_rule	String	Alarm action rule name.
notifier_channel	String	Notification type. SMN: Simple Message Notification. Enumeration values: <ul style="list-style-type: none"> • SMN
smn_channel	SmnResponse object	Notification result details.

Table 4-77 SmnResponse

Parameter	Type	Description
sent_time	Long	Sending time.
smn_notified_history	Array of SmnInfo objects	Content of a notification.
smn_request_id	String	ID for requesting SMN.
smn_response_body	String	Information returned after the SMN service is invoked.
smn_response_code	String	HTTP status code returned after the SMN service is invoked.
smn_topic	String	SMN topic.

Table 4-78 SmnInfo

Parameter	Type	Description
smn_notified_content	String	SMN message content.
smn_subscription_status	Integer	SMN subscription status.

Parameter	Type	Description
smn_subscription_type	String	SMN subscription type.

Status code: 401**Table 4-79** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403**Table 4-80** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500**Table 4-81** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.
trace_id	String	Response ID.


```
    "smn_topic" : "lhy_test01"  
  }  
}]]  
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{  
  "error_code" : "AOM.0403",  
  "error_msg" : "auth failed.",  
  "error_type" : "AUTH_FAILED",  
  "trace_id" : null  
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{  
  "error_code" : "AOM.0403",  
  "error_msg" : "auth failed.",  
  "error_type" : "AUTH_FAILED",  
  "trace_id" : null  
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{  
  "error_code" : "APM.00000500",  
  "error_msg" : "Internal Server Error",  
  "trace_id" : ""  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v2.region.AomRegion;  
import com.huaweicloud.sdk.aom.v2.*;  
import com.huaweicloud.sdk.aom.v2.model.*;  
  
public class ListNotifiedHistoriesSolution {  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or  
        // environment variables and decrypted during use to ensure security.  
        // In this example, AK and SK are stored in environment variables for authentication. Before running  
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
```

```
String ak = System.getenv("CLOUD_SDK_AK");
String sk = System.getenv("CLOUD_SDK_SK");
String projectId = "{project_id}";

ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
ListNotifiedHistoriesRequest request = new ListNotifiedHistoriesRequest();
try {
    ListNotifiedHistoriesResponse response = client.listNotifiedHistories(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListNotifiedHistoriesRequest()
        response = client.list_notified_histories(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```

package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListNotifiedHistoriesRequest{}
    response, err := client.ListNotifiedHistories(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.9 Deleting a Silence Rule

Function

This API is used to delete a silence rule.

Calling Method

For details, see [Calling APIs](#).

URI

DELETE /v2/{project_id}/alert/mute-rules

Table 4-82 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-83 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> application/json

Table 4-84 Request body parameters

Parameter	Mandatory	Type	Description
[items]	Yes	Array of DeleteMuteRuleName objects	Name of the rule to be deleted.

Table 4-85 DeleteMuteRuleName

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the silence rule to be deleted.

Response Parameters

Status code: 400

Table 4-86 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 401

Table 4-87 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403

Table 4-88 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500

Table 4-89 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.
trace_id	String	Response ID.

Example Requests

Delete silent rule "1112222".

https://{Endpoint}/v2/{project_id}/alert/mute-rules

```
[ {
  "name" : "1112222"
}]
```

Example Responses

Status code: 204

OK: The request is successful.

No Content

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.08015002",
  "error_msg" : "the muteName is not exist",
  "error_type" : "PARAM_INVALID",
  "trace_id" : ""
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.0403",
  "error_msg" : "auth failed.",
  "error_type" : "AUTH_FAILED",
  "trace_id" : null
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.0403",
```

```
"error_msg" : "auth failed.",  
"error_type" : "AUTH_FAILED",  
"trace_id" : null  
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{  
  "error_code" : "AOM.08001500",  
  "error_message" : "internal server error",  
  "error_type" : "INTERNAL_SERVER_ERROR",  
  "trace_id" : ""  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Delete silent rule "1112222".

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v2.region.AomRegion;  
import com.huaweicloud.sdk.aom.v2.*;  
import com.huaweicloud.sdk.aom.v2.model.*;  
  
import java.util.List;  
import java.util.ArrayList;  
  
public class DeleteMuteRulesSolution {  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or  
        // environment variables and decrypted during use to ensure security.  
        // In this example, AK and SK are stored in environment variables for authentication. Before running  
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
        String ak = System.getenv("CLOUD_SDK_AK");  
        String sk = System.getenv("CLOUD_SDK_SK");  
        String projectId = "{project_id}";  
  
        ICredential auth = new BasicCredentials()  
            .withProjectId(projectId)  
            .withAk(ak)  
            .withSk(sk);  
  
        AomClient client = AomClient.newBuilder()  
            .withCredential(auth)  
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))  
            .build();  
        DeleteMuteRulesRequest request = new DeleteMuteRulesRequest();  
        List<DeleteMuteRuleName> listbodyBody = new ArrayList<>();  
        listbodyBody.add(  
            new DeleteMuteRuleName()  
                .withName("1112222")  
        );  
        request.withBody(listbodyBody);  
    }  
}
```

```
try {
    DeleteMuteRulesResponse response = client.deleteMuteRules(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

Delete silent rule "1112222".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteMuteRulesRequest()
        listBodybody = [
            DeleteMuteRuleName(
                name="1112222"
            )
        ]
        request.body = listBodybody
        response = client.delete_mute_rules(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Delete silent rule "1112222".

```
package main
```



```

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteMuteRulesRequest{}
    var listBodybody = []model.DeleteMuteRuleName{
        {
            Name: "1112222",
        },
    }
    request.Body = &listBodybody
    response, err := client.DeleteMuteRules(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.

Status Code	Description
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.10 Adding a Silence Rule

Function

This API is used to add a silence rule.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v2/{project_id}/alert/mute-rules

Table 4-90 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-91 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> • application/json

Table 4-92 Request body parameters

Parameter	Mandatory	Type	Description
create_time	No	Long	Creation time.
desc	No	String	Rule description.
match	Yes	Array<Array< Match >>	Match condition of the rule. Up to 10 serial or parallel conditions can be created.
mute_config	Yes	MuteConfig object	Time when the rule takes effect.
name	Yes	String	Rule name. Enter a maximum of 100 characters and do not start or end with an underscore (_). Only letters, digits, and underscores are allowed.
timezone	Yes	String	Time zone.
update_time	No	Long	Modification time.
user_id	No	String	User ID.

Table 4-93 Match

Parameter	Mandatory	Type	Description
key	Yes	String	Key specified in the metadata for matching.
operate	Yes	String	Match mode. EXIST: Exist. REGEX: Regular expression. EQUALS: Equal to. Enumeration values: <ul style="list-style-type: none"> • EQUALS • REGEX • EXIST

Parameter	Mandatory	Type	Description
value	No	Array of strings	Value corresponding to the key. If operate is set to EXIST, this parameter is left empty.

Table 4-94 MuteConfig

Parameter	Mandatory	Type	Description
ends_at	No	Long	End time of the silence rule.
scope	No	Array of integers	When type is set to WEEKLY or MONTHLY, scope cannot be empty.
starts_at	Yes	Long	Start time of the silence rule.
type	Yes	String	Type of the time for the silence rule to take effect. FIXED: Fixed time. DAILY: Certain time every day. WEEKLY: Certain time every week. MONTHLY: Certain time every month. Enumeration values: <ul style="list-style-type: none">• FIXED• DAILY• WEEKLY• MONTHLY

Response Parameters

Status code: 400

Table 4-95 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 401

Table 4-96 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403

Table 4-97 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500

Table 4-98 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.
trace_id	String	Response ID.

Example Requests

Add a silence rule whose name is "32255" and user ID is "2xxxxxxxxxxxxxxxxxxxxxxxxxxxxcf".

https://{Endpoint}/v2/{project_id}/alert/mute-rules

```
{
  "create_time": 1668147671966,
  "desc": "",
  "match": [ [ {
    "key": "event_severity",
    "operate": "EQUALS",
    "value": [ "Info" ]
  } ] ],
  "mute_config": {
```

```
"ends_at" : 86399,  
"scope" : [],  
"starts_at" : 0,  
"type" : "DAILY"  
},  
"name" : "32255",  
"timezone" : "xxx",  
"update_time" : 1668147671966,  
"user_id" : "2xxxxxxxxxxxxxxxxxxxxxxxxcf"  
}
```

Example Responses

Status code: 204

OK: Operation successful.

No Content

Status code: 400

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{  
  "error_code" : "AOM.08011001",  
  "error_msg" : "the muteName is exist",  
  "error_type" : "PARAM_INVALID",  
  "trace_id" : ""  
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{  
  "error_code" : "AOM.0403",  
  "error_msg" : "auth failed.",  
  "error_type" : "AUTH_FAILED",  
  "trace_id" : null  
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{  
  "error_code" : "AOM.0403",  
  "error_msg" : "auth failed.",  
  "error_type" : "AUTH_FAILED",  
  "trace_id" : null  
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{  
  "error_code" : "APM.00000500",  
  "error_msg" : "Internal Server Error",  
  "trace_id" : ""  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add a silence rule whose name is "32255" and user ID is "2xxxxxxxxxxxxxxxxxxxxxxxxxxxxcf".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;

public class AddMuteRulesSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();

        AddMuteRulesRequest request = new AddMuteRulesRequest();
        MuteRule body = new MuteRule();
        MuteConfig muteConfigbody = new MuteConfig();
        muteConfigbody.withEndsAt(86399L)
            .withStartsAt(0L)
            .withType(MuteConfig.TypeEnum.fromValue("DAILY"));
        List<String> listMatchValue = new ArrayList<>();
        listMatchValue.add("Info");
        List<Match> listMatchMatch = new ArrayList<>();
        listMatchMatch.add(
            new Match()
                .withKey("event_severity")
                .withOperate(Match.OperateEnum.fromValue("EQUALS"))
                .withValue(listMatchValue)
        );
        List<List<Match>> listbodyMatch = new ArrayList<>();
        listbodyMatch.add(listMatchMatch);
        body.withUserId("2xxxxxxxxxxxxxxxxxxxxxxxxxxxxcf");
        body.withUpdateTime(1668147671966L);
        body.withTimezone("xxx");
        body.withName("32255");
        body.withMuteConfig(muteConfigbody);
        body.withMatch(listbodyMatch);
        body.withDesc("");
    }
}
```

```
body.withCreateTime(1668147671966L);
request.withBody(body);
try {
    AddMuteRulesResponse response = client.addMuteRules(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

Add a silence rule whose name is "32255" and user ID is "2xxxxxxxxxxxxxxxxxxxxxxxxxxxxcf".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = AddMuteRulesRequest()
        muteConfigbody = MuteConfig(
            ends_at=86399,
            starts_at=0,
            type="DAILY"
        )
        listValueMatch = [
            "Info"
        ]
        listMatchMatch = [
            Match(
                key="event_severity",
                operate="EQUALS",
                value=listValueMatch
            )
        ]
        listMatchbody = [
            listMatchMatch
        ]
```



```
request.body = MuteRule(  
    user_id="2xxxxxxxxxxxxxxxxxxxxxxxxcf",  
    update_time=1668147671966,  
    timezone="xxx",  
    name="32255",  
    mute_config=muteConfigbody,  
    match=listMatchbody,  
    desc="",  
    create_time=1668147671966  
)  
response = client.add_mute_rules(request)  
print(response)  
except exceptions.ClientRequestException as e:  
    print(e.status_code)  
    print(e.request_id)  
    print(e.error_code)  
    print(e.error_msg)
```

Go

Add a silence rule whose name is "32255" and user ID is "2xxxxxxxxxxxxxxxxxxxxxxxxcf".

```
package main  
  
import (  
    "fmt"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"  
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"  
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"  
)  
  
func main() {  
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    // variables and decrypted during use to ensure security.  
    // In this example, AK and SK are stored in environment variables for authentication. Before running this  
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak := os.Getenv("CLOUD_SDK_AK")  
    sk := os.Getenv("CLOUD_SDK_SK")  
    projectId := "{project_id}"  
  
    auth := basic.NewCredentialsBuilder().  
        WithAk(ak).  
        WithSk(sk).  
        WithProjectId(projectId).  
        Build()  
  
    client := aom.NewAomClient(  
        aom.AomClientBuilder().  
            WithRegion(region.ValueOf("<YOUR REGION>")).  
            WithCredential(auth).  
            Build())  
  
    request := &model.AddMuteRulesRequest{  
        endsAtMuteConfig:= int64(86399)  
        muteConfigbody := &model.MuteConfig{  
            EndsAt: &endsAtMuteConfig,  
            StartsAt: int64(0),  
            Type: model.GetMuteConfigTypeEnum().DAILY,  
        }  
    }  
    var listValueMatch = []string{  
        "Info",  
    }  
    var listMatchMatch = []model.Match{  
        {  
            Key: "event_severity",  
            Operate: model.GetMatchOperateEnum().EQUALS,  
        }  
    }  
}
```

```

        Value: &listValueMatch,
    },
}
}
var listMatchbody = [][](model.Match){
    listMatchMatch,
}
}
userIdMuteRule:= "2xxxxxxxxxxxxxxxxxxxxxxxxxxxxcf"
updateTimeMuteRule:= int64(1668147671966)
descMuteRule:= ""
createTimeMuteRule:= int64(1668147671966)
request.Body = &model.MuteRule{
    UserId: &userIdMuteRule,
    UpdateTime: &updateTimeMuteRule,
    Timezone: "xxx",
    Name: "32255",
    MuteConfig: muteConfigbody,
    Match: listMatchbody,
    Desc: &descMuteRule,
    CreateTime: &createTimeMuteRule,
}
}
response, err := client.AddMuteRules(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	OK: Operation successful.
400	Bad Request: Invalid request. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.11 Modifying a Silence Rule

Function

This API is used to modify a silence rule.

Calling Method

For details, see [Calling APIs](#).

URI

PUT /v2/{project_id}/alert/mute-rules

Table 4-99 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-100 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> • application/json

Table 4-101 Request body parameters

Parameter	Mandatory	Type	Description
create_time	No	Long	Creation time.
desc	No	String	Rule description.
match	Yes	Array<Array< Match >>	Match condition of the rule. Up to 10 serial or parallel conditions can be created.

Parameter	Mandatory	Type	Description
mute_config	Yes	MuteConfig object	Time when the rule takes effect.
name	Yes	String	Rule name. Enter a maximum of 100 characters and do not start or end with an underscore (_). Only letters, digits, and underscores are allowed.
timezone	Yes	String	Time zone.
update_time	No	Long	Modification time.
user_id	No	String	User ID.

Table 4-102 Match

Parameter	Mandatory	Type	Description
key	Yes	String	Key specified in the metadata for matching.
operate	Yes	String	Match mode. EXIST: Exist. REGEX: Regular expression. EQUALS: Equal to. Enumeration values: <ul style="list-style-type: none"> • EQUALS • REGEX • EXIST
value	No	Array of strings	Value corresponding to the key. If operate is set to EXIST, this parameter is left empty.

Table 4-103 MuteConfig

Parameter	Mandatory	Type	Description
ends_at	No	Long	End time of the silence rule.
scope	No	Array of integers	When type is set to WEEKLY or MONTHLY, scope cannot be empty.
starts_at	Yes	Long	Start time of the silence rule.

Parameter	Mandatory	Type	Description
type	Yes	String	Type of the time for the silence rule to take effect. FIXED: Fixed time. DAILY: Certain time every day. WEEKLY: Certain time every week. MONTHLY: Certain time every month. Enumeration values: <ul style="list-style-type: none"> • FIXED • DAILY • WEEKLY • MONTHLY

Response Parameters

Status code: 400

Table 4-104 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 401

Table 4-105 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403

Table 4-106 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500

Table 4-107 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.
trace_id	String	Response ID.

Example Requests

Modify a silence rule whose name is "32255", time zone is "xxx", and user ID is "2xxxxxxxxxxxxxxxxxxxxxxxxxxxxcf".

https://{endpoint}/v2/{project_id}/alert/mute-rules

```
{
  "create_time": 1668147671966,
  "desc": "",
  "match": [ [ {
    "key": "event_severity",
    "operate": "EQUALS",
    "value": [ "Info" ]
  } ] ],
  "mute_config": {
    "ends_at": 86399,
    "scope": [ ],
    "starts_at": 0,
    "type": "DAILY"
  },
  "name": "32255",
  "timezone": "xxx",
  "update_time": 1668147671966,
  "user_id": "2xxxxxxxxxxxxxxxxxxxxxxxxxxxxcf"
}
```

Example Responses

Status code: 204

OK: The request is successful.

No Content

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.08012003",
  "error_msg" : "request insertParma probably has error",
  "error_type" : "PARAM_INVALID",
  "trace_id" : ""
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.0403",
  "error_msg" : "auth failed.",
  "error_type" : "AUTH_FAILED",
  "trace_id" : null
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.0403",
  "error_msg" : "auth failed.",
  "error_type" : "AUTH_FAILED",
  "trace_id" : null
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "APM.00000500",
  "error_msg" : "Internal Server Error",
  "trace_id" : ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Modify a silence rule whose name is "32255", time zone is "xxx", and user ID is "2xxxxxxxxxxxxxxxxxxxxxxxxxxxxcf".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
```

```
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;

public class UpdateMuteRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();

        UpdateMuteRuleRequest request = new UpdateMuteRuleRequest();
        MuteRule body = new MuteRule();
        MuteConfig muteConfigbody = new MuteConfig();
        muteConfigbody.withEndsAt(86399L)
            .withStartsAt(0L)
            .withType(MuteConfig.TypeEnum.fromValue("DAILY"));
        List<String> listMatchValue = new ArrayList<>();
        listMatchValue.add("Info");
        List<Match> listMatchMatch = new ArrayList<>();
        listMatchMatch.add(
            new Match()
                .withKey("event_severity")
                .withOperate(Match.OperateEnum.fromValue("EQUALS"))
                .withValue(listMatchValue)
        );
        List<List<Match>> listbodyMatch = new ArrayList<>();
        listbodyMatch.add(listMatchMatch);
        body.withUserId("2xxxxxxxxxxxxxxxxxxxxxxxxcf");
        body.withUpdateTime(1668147671966L);
        body.withTimezone("xxx");
        body.withName("32255");
        body.withMuteConfig(muteConfigbody);
        body.withMatch(listbodyMatch);
        body.withDesc("");
        body.withCreateTime(1668147671966L);
        request.withBody(body);
        try {
            UpdateMuteRuleResponse response = client.updateMuteRule(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```


Python

Modify a silence rule whose name is "32255", time zone is "xxx", and user ID is "2xxxxxxxxxxxxxxxxxxxxxxxxxxxxcf".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateMuteRuleRequest()
        muteConfigbody = MuteConfig(
            ends_at=86399,
            starts_at=0,
            type="DAILY"
        )
        listValueMatch = [
            "Info"
        ]
        listMatchMatch = [
            Match(
                key="event_severity",
                operate="EQUALS",
                value=listValueMatch
            )
        ]
        listMatchbody = [
            listMatchMatch
        ]
        request.body = MuteRule(
            user_id="2xxxxxxxxxxxxxxxxxxxxxxxxxxxxcf",
            update_time=1668147671966,
            timezone="xxx",
            name="32255",
            mute_config=muteConfigbody,
            match=listMatchbody,
            desc="",
            create_time=1668147671966
        )
        response = client.update_mute_rule(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Modify a silence rule whose name is "32255", time zone is "xxx", and user ID is "2xxxxxxxxxxxxxxxxxxxxxxxxxxxxcf".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateMuteRuleRequest{
        endsAtMuteConfig:= int64(86399)
        muteConfigbody := &model.MuteConfig{
            EndsAt: &endsAtMuteConfig,
            StartsAt: int64(0),
            Type: model.GetMuteConfigTypeEnum().DAILY,
        }
        var listValueMatch = []string{
            "Info",
        }
        var listMatchMatch = []model.Match{
            {
                Key: "event_severity",
                Operate: model.GetMatchOperateEnum().EQUALS,
                Value: &listValueMatch,
            },
        }
        var listMatchbody = [][](model.Match){
            listMatchMatch,
        }
        userIdMuteRule:= "2xxxxxxxxxxxxxxxxxxxxxxxxxxxxcf"
        updateTimeMuteRule:= int64(1668147671966)
        descMuteRule:= ""
        createTimeMuteRule:= int64(1668147671966)
        request.Body = &model.MuteRule{
            UserId: &userIdMuteRule,
            UpdateTime: &updateTimeMuteRule,
            Timezone: "xxx",
            Name: "32255",
            MuteConfig: muteConfigbody,
            Match: listMatchbody,
            Desc: &descMuteRule,
        }
    }
```

```

        CreateTime: &createTimeMuteRule,
    }
    response, err := client.UpdateMuteRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.12 Obtaining the Silence Rule List

Function

This API is used to obtain the silence rule list.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v2/{project_id}/alert/mute-rules

Table 4-108 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-109 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> • application/json

Response Parameters

Status code: 200

Table 4-110 Response body parameters

Parameter	Type	Description
[items]	Array of MuteRule objects	Silence rule.

Table 4-111 MuteRule

Parameter	Type	Description
create_time	Long	Creation time.
desc	String	Rule description.
match	Array<Array< Match >>	Match condition of the rule. Up to 10 serial or parallel conditions can be created.
mute_config	MuteConfig object	Time when the rule takes effect.

Parameter	Type	Description
name	String	Rule name. Enter a maximum of 100 characters and do not start or end with an underscore (_). Only letters, digits, and underscores are allowed.
timezone	String	Time zone.
update_time	Long	Modification time.
user_id	String	User ID.

Table 4-112 Match

Parameter	Type	Description
key	String	Key specified in the metadata for matching.
operate	String	Match mode. EXIST: Exist. REGEX: Regular expression. EQUALS: Equal to. Enumeration values: <ul style="list-style-type: none">• EQUALS• REGEX• EXIST
value	Array of strings	Value corresponding to the key. If operate is set to EXIST, this parameter is left empty.

Table 4-113 MuteConfig

Parameter	Type	Description
ends_at	Long	End time of the silence rule.
scope	Array of integers	When type is set to WEEKLY or MONTHLY, scope cannot be empty.
starts_at	Long	Start time of the silence rule.

Parameter	Type	Description
type	String	Type of the time for the silence rule to take effect. FIXED: Fixed time. DAILY: Certain time every day. WEEKLY: Certain time every week. MONTHLY: Certain time every month. Enumeration values: <ul style="list-style-type: none">• FIXED• DAILY• WEEKLY• MONTHLY

Status code: 401**Table 4-114** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403**Table 4-115** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500

Table 4-116 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.
trace_id	String	Response ID.

Example Requests

Obtain the silence rule list.

```
https://{Endpoint}/v2/{project_id}/alert/mute-rules
```

Example Responses

Status code: 200

OK: The request is successful.

```
[ {
  "create_time": 1668147671966,
  "desc": "",
  "match": [ [ {
    "key": "event_severity",
    "operate": "EQUALS",
    "value": [ "Info" ]
  } ] ],
  "mute_config": {
    "ends_at": 86399,
    "scope": [ ],
    "starts_at": 0,
    "type": "DAILY"
  },
  "name": "32255",
  "timezone": "xxx",
  "update_time": 1668147671966,
  "user_id": "2a473356cca5487f8373be891bffc1cf"
} ]
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code": "AOM.0403",
  "error_msg": "auth failed.",
  "error_type": "AUTH_FAILED",
  "trace_id": null
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "error_code": "AOM.0403",
  "error_msg": "auth failed.",
  "error_type": "AUTH_FAILED",
}
```

```
"trace_id" : null
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "APM.00000500",
  "error_msg" : "Internal Server Error",
  "trace_id" : ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListMuteRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListMuteRuleRequest request = new ListMuteRuleRequest();
        try {
            ListMuteRuleResponse response = client.listMuteRule(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```



```
}  
}
```

Python

```
# coding: utf-8  
  
import os  
from huaweicloudsdkcore.auth.credentials import BasicCredentials  
from huaweicloudsdaom.v2.region.aom_region import AomRegion  
from huaweicloudsdkcore.exceptions import exceptions  
from huaweicloudsdaom.v2 import *  
  
if __name__ == "__main__":  
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    variables and decrypted during use to ensure security.  
    # In this example, AK and SK are stored in environment variables for authentication. Before running this  
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak = os.environ["CLOUD_SDK_AK"]  
    sk = os.environ["CLOUD_SDK_SK"]  
    projectId = "{project_id}"  
  
    credentials = BasicCredentials(ak, sk, projectId)  
  
    client = AomClient.new_builder() \  
        .with_credentials(credentials) \  
        .with_region(AomRegion.value_of("<YOUR REGION>")) \  
        .build()  
  
    try:  
        request = ListMuteRuleRequest()  
        response = client.list_mute_rule(request)  
        print(response)  
    except exceptions.ClientRequestException as e:  
        print(e.status_code)  
        print(e.request_id)  
        print(e.error_code)  
        print(e.error_msg)
```

Go

```
package main  
  
import (  
    "fmt"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"  
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"  
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"  
)  
  
func main() {  
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    variables and decrypted during use to ensure security.  
    // In this example, AK and SK are stored in environment variables for authentication. Before running this  
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak := os.Getenv("CLOUD_SDK_AK")  
    sk := os.Getenv("CLOUD_SDK_SK")  
    projectId := "{project_id}"  
  
    auth := basic.NewCredentialsBuilder().  
        WithAk(ak).  
        WithSk(sk).  
        WithProjectId(projectId).  
        Build()  
  
    client := aom.NewAomClient(  

```

```

aom.AomClientBuilder().
    WithRegion(region.ValueOf("<YOUR REGION>")).
    WithCredential(auth).
    Build()

request := &model.ListMuteRuleRequest{}
response, err := client.ListMuteRule(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.13 Querying an Alarm Action Rule Based on Rule Name

Function

This API is used to query an alarm action rule based on the rule name.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v2/{project_id}/alert/action-rules/{rule_name}

Table 4-117 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
rule_name	Yes	String	Alarm rule name.

Request Parameters

Table 4-118 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none">• application/json

Response Parameters

Status code: 200

Table 4-119 Response body parameters

Parameter	Type	Description
rule_name	String	Rule name. Enter a maximum of 100 characters and do not start or end with a special character. Only letters, digits, and underscores (_) are allowed.
project_id	String	Project ID.
user_name	String	Member account name.
desc	String	Rule description. Enter a maximum of 1024 characters and do not start or end with an underscore (_). Only digits, letters, underscores (_), asterisk (*), and spaces are allowed.

Parameter	Type	Description
type	String	Action type. Default: Notification. Enumeration values: <ul style="list-style-type: none"> • 1 • 2
notification_template	String	Message template.
create_time	Long	Creation time.
update_time	Long	Modification time
time_zone	String	Time zone.
smn_topics	Array of SmnTopics objects	SMN topic. The total number of topics cannot exceed 5.

Table 4-120 SmnTopics

Parameter	Type	Description
display_name	String	Topic display name, which will be the name of an email sender. Max.: 192 bytes. This parameter is left blank by default.
name	String	Name of the topic. Enter 1 to 255 characters starting with a letter or digit. Only letters, digits, hyphens (-), and underscores (_) are allowed.
push_policy	Integer	SMN message push policy. Options: 0 and 1.
status	Integer	Status of the topic subscriber. 0: The topic has been deleted or the subscription list of this topic is empty. 1: The subscription object is in the subscribed state. 2: The subscription object is in the unsubscribed or canceled state. Enumeration values: <ul style="list-style-type: none"> • 0 • 1 • 2
topic_urn	String	Unique resource identifier of the topic.

Status code: 400**Table 4-121** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.
trace_id	String	Response ID.

Status code: 401**Table 4-122** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403**Table 4-123** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500**Table 4-124** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.

Parameter	Type	Description
trace_id	String	Response ID.

Example Requests

Query the details of the alarm action rule named 1112222.

```
https://{Endpoint}/v2/{project_id}/alert/action-rules/1112222
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "create_time": 1665991889597,
  "notification_template": "aom.built-in.template.zh",
  "project_id": "2xxxxxxxxxxxxxxxxxxxxxf",
  "rule_name": "1112222",
  "smn_topics": [ {
    "display_name": "",
    "name": "gxxxxxt",
    "push_policy": 0,
    "status": 0,
    "topic_urn": "urn:smn:xxx:2xxxxxxxxxxxxxxxxxxxxxf:gxxxxxt"
  } ],
  "time_zone": "xxx",
  "type": "1",
  "update_time": 1665991889597,
  "user_name": "kxxxxxt"
}
```

Status code: 400

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{
  "error_code": "AOM.08001001",
  "error_msg": "bad request",
  "trace_id": ""
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code": "AOM.0403",
  "error_msg": "auth failed.",
  "error_type": "AUTH_FAILED",
  "trace_id": null
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "error_code": "AOM.0403",
```

```
"error_msg" : "auth failed.",  
"error_type" : "AUTH_FAILED",  
"trace_id" : null  
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{  
  "error_code" : "APM.00000500",  
  "error_msg" : "Internal Server Error",  
  "trace_id" : ""  
}
```

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: Invalid request. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.14 Adding an Alarm Action Rule

Function

This API is used to add an alarm action rule.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v2/{project_id}/alert/action-rules

Table 4-125 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-126 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> application/json

Table 4-127 Request body parameters

Parameter	Mandatory	Type	Description
rule_name	Yes	String	Rule name. Enter a maximum of 100 characters and do not start or end with a special character. Only letters, digits, and underscores (_) are allowed.
project_id	Yes	String	Project ID.
user_name	Yes	String	Member account name.
desc	No	String	Rule description. Enter a maximum of 1024 characters and do not start or end with an underscore (_). Only digits, letters, underscores (_), asterisk (*), and spaces are allowed.

Parameter	Mandatory	Type	Description
type	Yes	String	Action type. Default: Notification. Enumeration values: <ul style="list-style-type: none">• 1• 2
notification_template	Yes	String	Message template.
create_time	No	Long	Creation time.
update_time	No	Long	Modification time
time_zone	No	String	Time zone.
smn_topics	Yes	Array of SmnTopics objects	SMN topic. The total number of topics cannot exceed 5.

Table 4-128 SmnTopics

Parameter	Mandatory	Type	Description
display_name	No	String	Topic display name, which will be the name of an email sender. Max.: 192 bytes. This parameter is left blank by default.
name	Yes	String	Name of the topic. Enter 1 to 255 characters starting with a letter or digit. Only letters, digits, hyphens (-), and underscores (_) are allowed.
push_policy	Yes	Integer	SMN message push policy. Options: 0 and 1.

Parameter	Mandatory	Type	Description
status	No	Integer	Status of the topic subscriber. 0: The topic has been deleted or the subscription list of this topic is empty. 1: The subscription object is in the subscribed state. 2: The subscription object is in the unsubscribed or canceled state. Enumeration values: <ul style="list-style-type: none">• 0• 1• 2
topic_urn	Yes	String	Unique resource identifier of the topic.

Response Parameters

Status code: 400

Table 4-129 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.
trace_id	String	Response ID.

Status code: 401

Table 4-130 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403

Table 4-131 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500

Table 4-132 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.
trace_id	String	Response ID.

Example Requests

Add an alarm action rule whose name is "66666", username is "kxxxxxxx", user ID is "21axxxxxxxxxxxxxxxxx47c", and notification template is "aom.built-in.template.en".

```
https://{Endpoint}/v2/{project_id}/alert/action-rules
{
  "desc": "1111",
  "notification_template": "aom.built-in.template.zh",
  "project_id": "21axxxxxxxxxxxxxxxxx47c",
  "rule_name": "66666",
  "smn_topics": [ {
    "display_name": "",
    "name": "xiaohama",
    "push_policy": 0,
    "status": 0,
    "topic_urn": "urn:smn:xxx:21axxxxxxxxxxxxxxxxx47c:xiaohama"
  } ],
  "type": "1",
  "user_name": "kxxxxxxx",
  "time_zone": "xxx"
}
```

Example Responses

Status code: 400

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{
  "error_code": "AOM.08018012",
```

```
"error_msg" : "actionRule already exists",  
"trace_id" : ""  
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{  
  "error_code" : "AOM.0403",  
  "error_msg" : "auth failed.",  
  "error_type" : "AUTH_FAILED",  
  "trace_id" : null  
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{  
  "error_code" : "AOM.0403",  
  "error_msg" : "auth failed.",  
  "error_type" : "AUTH_FAILED",  
  "trace_id" : null  
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{  
  "error_code" : "APM.00000500",  
  "error_msg" : "Internal Server Error",  
  "trace_id" : ""  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add an alarm action rule whose name is "66666", username is "kxxxxxxxxt", user ID is "21axxxxxxxxxxxxxxxxx47c", and notification template is "aom.built-in.template.en".

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v2.region.AomRegion;  
import com.huaweicloud.sdk.aom.v2.*;  
import com.huaweicloud.sdk.aom.v2.model.*;  
  
import java.util.List;  
import java.util.ArrayList;  
  
public class AddActionRuleSolution {  
    public static void main(String[] args) {
```

```
// The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
environment variables and decrypted during use to ensure security.
// In this example, AK and SK are stored in environment variables for authentication. Before running
this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
String ak = System.getenv("CLOUD_SDK_AK");
String sk = System.getenv("CLOUD_SDK_SK");
String projectId = "{project_id}";

ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
AddActionRuleRequest request = new AddActionRuleRequest();
ActionRule body = new ActionRule();
List<SmnTopics> listbodySmnTopics = new ArrayList<>();
listbodySmnTopics.add(
    new SmnTopics()
        .withDisplayName("")
        .withName("xiaohama")
        .withPushPolicy(0)
        .withStatus(SmnTopics.StatusEnum.NUMBER_0)
        .withTopicUrn("urn:smn:xxx:21axxxxxxxxxxxxxxxxx47c:xiaohama")
);
body.withSmnTopics(listbodySmnTopics);
body.withTimeZone("xxx");
body.withNotificationTemplate("aom.built-in.template.zh");
body.withType(ActionRule.TypeEnum.fromValue("1"));
body.withDesc("1111");
body.withUserName("kxxxxxxxxt");
body.withProjectId("21axxxxxxxxxxxxxxxxx47c");
body.withRuleName("66666");
request.withBody(body);
try {
    AddActionRuleResponse response = client.addActionRule(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

Add an alarm action rule whose name is "66666", username is "kxxxxxxxxt", user ID is "21axxxxxxxxxxxxxxxxx47c", and notification template is "aom.built-in.template.en".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdfaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdfaom.v2 import *
```

```
if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = AddActionRuleRequest()
        listSmnTopicsbody = [
            SmnTopics(
                display_name="",
                name="xiaohama",
                push_policy=0,
                status=0,
                topic_urn="urn:smn:xxx:21axxxxxxxxxxxxxxxxx47c:xiaohama"
            )
        ]
        request.body = ActionRule(
            smn_topics=listSmnTopicsbody,
            time_zone="xxx",
            notification_template="aom.built-in.template.zh",
            type="1",
            desc="1111",
            user_name="kxxxxxxt",
            project_id="21axxxxxxxxxxxxxxxxx47c",
            rule_name="66666"
        )
        response = client.add_action_rule(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Add an alarm action rule whose name is "66666", username is "kxxxxxxt", user ID is "21axxxxxxxxxxxxxxxxx47c", and notification template is "aom.built-in.template.en".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
```

```

example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
ak := os.Getenv("CLOUD_SDK_AK")
sk := os.Getenv("CLOUD_SDK_SK")
projectId := "{project_id}"

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    WithProjectId(projectId).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.AddActionRuleRequest{
    displayNameSmnTopics:= ""
    statusSmnTopics:= model.GetSmnTopicsStatusEnum().E_0
    var listSmnTopicsbody = []model.SmnTopics{
        {
            DisplayName: &displayNameSmnTopics,
            Name: "xiaohama",
            PushPolicy: int32(0),
            Status: &statusSmnTopics,
            TopicUrn: "urn:smn:xxx:21axxxxxxxxxxxxxxxxx47c:xiaohama",
        },
    }
    timeZoneActionRule:= "xxx"
    descActionRule:= "1111"
    request.Body = &model.ActionRule{
        SmnTopics: listSmnTopicsbody,
        TimeZone: &timeZoneActionRule,
        NotificationTemplate: "aom.built-in.template.zh",
        Type: model.GetActionRuleTypeEnum().E_1,
        Desc: &descActionRule,
        UserName: "kxxxxxxxxt",
        ProjectId: "21axxxxxxxxxxxxxxxxx47c",
        RuleName: "66666",
    }
    response, err := client.AddActionRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: Operation successful.
400	Bad Request: Invalid request. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.

Status Code	Description
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.15 Deleting an Alarm Action Rule

Function

This API is used to delete an alarm action rule.

Calling Method

For details, see [Calling APIs](#).

URI

DELETE /v2/{project_id}/alert/action-rules

Table 4-133 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-134 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> • application/json

Table 4-135 Request body parameters

Parameter	Mandatory	Type	Description
[items]	Yes	Array of strings	Name of the rule to be deleted.

Response Parameters

Status code: 400

Table 4-136 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.
trace_id	String	Response ID.

Status code: 401

Table 4-137 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403

Table 4-138 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500

Table 4-139 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.
trace_id	String	Response ID.

Example Requests

Delete alarm action rule 1112222.

```
https://{Endpoint}/v2/{project_id}/alert/action-rules
[ "1112222" ]
```

Example Responses

Status code: 204

OK: The request is successful.

No Content

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.08020006",
  "error_msg" : "The action rule does not exist",
  "trace_id" : ""
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.0403",
  "error_msg" : "auth failed.",
}
```

```
"error_type" : "AUTH_FAILED",  
"trace_id" : null  
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{  
  "error_code" : "AOM.0403",  
  "error_msg" : "auth failed.",  
  "error_type" : "AUTH_FAILED",  
  "trace_id" : null  
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{  
  "error_code" : "AOM.08020500",  
  "error_msg" : "internal server error",  
  "error_type" : "INTERNAL_SERVER_ERROR",  
  "trace_id" : ""  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Delete alarm action rule 1112222.

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v2.region.AomRegion;  
import com.huaweicloud.sdk.aom.v2.*;  
import com.huaweicloud.sdk.aom.v2.model.*;  
  
import java.util.List;  
import java.util.ArrayList;  
  
public class DeleteActionRuleSolution {  
  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or  
        // environment variables and decrypted during use to ensure security.  
        // In this example, AK and SK are stored in environment variables for authentication. Before running  
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
        String ak = System.getenv("CLOUD_SDK_AK");  
        String sk = System.getenv("CLOUD_SDK_SK");  
        String projectId = "{project_id}";  
  
        ICredential auth = new BasicCredentials()  
            .withProjectId(projectId)  
            .withAk(ak)
```

```
        .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
DeleteActionRuleRequest request = new DeleteActionRuleRequest();
List<String> listbodyBody = new ArrayList<>();
listbodyBody.add("112222");
request.withBody(listbodyBody);
try {
    DeleteActionRuleResponse response = client.deleteActionRule(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

Delete alarm action rule 1112222.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteActionRuleRequest()
        listBodybody = [
            "112222"
        ]
        request.body = listBodybody
        response = client.delete_action_rule(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Delete alarm action rule 1112222.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteActionRuleRequest{}
    var listBodybody = []string{
        "1112222",
    }
    request.Body = &listBodybody
    response, err := client.DeleteActionRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.

Status Code	Description
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.16 Modifying an Alarm Action Rule

Function

This API is used to modify an alarm action rule.

Calling Method

For details, see [Calling APIs](#).

URI

PUT /v2/{project_id}/alert/action-rules

Table 4-140 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-141 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> • application/json

Table 4-142 Request body parameters

Parameter	Mandatory	Type	Description
rule_name	Yes	String	Rule name. Enter a maximum of 100 characters and do not start or end with a special character. Only letters, digits, and underscores (_) are allowed.
project_id	Yes	String	Project ID.
user_name	Yes	String	Member account name.
desc	No	String	Rule description. Enter a maximum of 1024 characters and do not start or end with an underscore (_). Only digits, letters, underscores (_), asterisk (*), and spaces are allowed.
type	Yes	String	Action type. Default: Notification. Enumeration values: <ul style="list-style-type: none"> • 1 • 2
notification_template	Yes	String	Message template.
create_time	No	Long	Creation time.
update_time	No	Long	Modification time
time_zone	No	String	Time zone.
smn_topics	Yes	Array of SmnTopics objects	SMN topic. The total number of topics cannot exceed 5.

Table 4-143 SmnTopics

Parameter	Mandatory	Type	Description
display_name	No	String	Topic display name, which will be the name of an email sender. Max.: 192 bytes. This parameter is left blank by default.
name	Yes	String	Name of the topic. Enter 1 to 255 characters starting with a letter or digit. Only letters, digits, hyphens (-), and underscores (_) are allowed.
push_policy	Yes	Integer	SMN message push policy. Options: 0 and 1.
status	No	Integer	Status of the topic subscriber. 0: The topic has been deleted or the subscription list of this topic is empty. 1: The subscription object is in the subscribed state. 2: The subscription object is in the unsubscribed or canceled state. Enumeration values: <ul style="list-style-type: none"> • 0 • 1 • 2
topic_urn	Yes	String	Unique resource identifier of the topic.

Response Parameters

Status code: 400

Table 4-144 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.
trace_id	String	Response ID.

Status code: 401

Table 4-145 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403

Table 4-146 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500

Table 4-147 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.
trace_id	String	Response ID.

Example Requests

Modify the alarm action rule whose name is "lhy_test01" and user ID is "2xxxxxxxxxxxxxxxxxxcf".

https://{endpoint}/v2/{project_id}/alert/action-rules

```
{
  "project_id": "2xxxxxxxxxxxxxxxxxxcf",
  "rule_name": "222",
  "desc": "222",
  "type": "1",
  "smn_topics": [ {
    "display_name": "",
    "name": "lhy_test01",
    "push_policy": 0,
  } ]
}
```

```
"topic_urn" : "urn:smn:xxx:2xxxxxxxxxxxxxxxxxxxxcf:lhy_test01"
}],
"user_name" : "kxxxxxxx",
"notification_template" : "aom.built-in.template.zh",
"time_zone" : "xxx",
"create_time" : 1667316727451,
"update_time" : 1667316727451
}
```

Example Responses

Status code: 204

OK: The request is successful.

No Content

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.08019006",
  "error_msg" : "The action rule does not exist",
  "trace_id" : ""
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.0403",
  "error_msg" : "auth failed.",
  "error_type" : "AUTH_FAILED",
  "trace_id" : null
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.0403",
  "error_msg" : "auth failed.",
  "error_type" : "AUTH_FAILED",
  "trace_id" : null
}
```

Status code: 500

Internal Server Error

The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "APM.00000500",
  "error_msg" : "Internal Server Error",
  "trace_id" : ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Modify the alarm action rule whose name is "lhy_test01" and user ID is "2xxxxxxxxxxxxxxxxxxxxcf".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;

public class UpdateActionRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();

        UpdateActionRuleRequest request = new UpdateActionRuleRequest();
        ActionRule body = new ActionRule();
        List<SmnTopics> listbodySmnTopics = new ArrayList<>();
        listbodySmnTopics.add(
            new SmnTopics()
                .withDisplayName("")
                .withName("lhy_test01")
                .withPushPolicy(0)
                .withTopicUrn("urn:smn:xxx:2xxxxxxxxxxxxxxxxxxxxcf:lhy_test01")
        );
        body.withSmnTopics(listbodySmnTopics);
        body.withTimezone("xxx");
        body.withUpdateTime(1667316727451L);
        body.withCreateTime(1667316727451L);
        body.withNotificationTemplate("aom.built-in.template.zh");
        body.withType(ActionRule.TypeEnum.fromValue("1"));
        body.withDesc("222");
        body.withUserName("kxxxxxxxxt");
        body.withProjectId("2xxxxxxxxxxxxxxxxxxxxcf");
        body.withRuleName("222");
        request.withBody(body);
        try {
            UpdateActionRuleResponse response = client.updateActionRule(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
        }
    }
}
```

```
e.printStackTrace();
System.out.println(e.getStatusCode());
System.out.println(e.getRequestId());
System.out.println(e.getErrorCode());
System.out.println(e.getErrorMsg());
    }
}
}
```

Python

Modify the alarm action rule whose name is "lhy_test01" and user ID is "2xxxxxxxxxxxxxxxxxxcf".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateActionRuleRequest()
        listSmnTopicsbody = [
            SmnTopics(
                display_name="",
                name="lhy_test01",
                push_policy=0,
                topic_urn="urn:smn:xxx:2xxxxxxxxxxxxxxxxxxcf:lhy_test01"
            )
        ]
        request.body = ActionRule(
            smn_topics=listSmnTopicsbody,
            time_zone="xxx",
            update_time=1667316727451,
            create_time=1667316727451,
            notification_template="aom.built-in.template.zh",
            type="1",
            desc="222",
            user_name="kxxxxxxt",
            project_id="2xxxxxxxxxxxxxxxxxxcf",
            rule_name="222"
        )
        response = client.update_action_rule(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Modify the alarm action rule whose name is "lhy_test01" and user ID is "2xxxxxxxxxxxxxxxxxxxxcf".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateActionRuleRequest{
        displayNameSmnTopics:= ""
        var listSmnTopicsbody = []model.SmnTopics{
            {
                DisplayName: &displayNameSmnTopics,
                Name: "lhy_test01",
                PushPolicy: int32(0),
                TopicUrn: "urn:smn:xxx:2xxxxxxxxxxxxxxxxxxxxcf:lhy_test01",
            },
        },
        timeZoneActionRule:= "xxx"
        updateTimeActionRule:= int64(1667316727451)
        createTimeActionRule:= int64(1667316727451)
        descActionRule:= "222"
        request.Body = &model.ActionRule{
            SmnTopics: listSmnTopicsbody,
            TimeZone: &timeZoneActionRule,
            UpdateTime: &updateTimeActionRule,
            CreateTime: &createTimeActionRule,
            NotificationTemplate: "aom.built-in.template.zh",
            Type: model.GetActionRuleTypeEnum().E_1,
            Desc: &descActionRule,
            UserName: "xxxxxxxxxt",
            ProjectId: "2xxxxxxxxxxxxxxxxxxxxcf",
            RuleName: "222",
        }
    }
    response, err := client.UpdateActionRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

```
}  
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.17 Querying the Alarm Action Rule List

Function

This API is used to query the alarm action rule list.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v2/{project_id}/alert/action-rules

Table 4-148 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-149 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none">• application/json

Response Parameters

Status code: 200

Table 4-150 Response body parameters

Parameter	Type	Description
action_rules	Array of ActionRule objects	Alarm action rule list.

Table 4-151 ActionRule

Parameter	Type	Description
rule_name	String	Rule name. Enter a maximum of 100 characters and do not start or end with a special character. Only letters, digits, and underscores (_) are allowed.
project_id	String	Project ID.
user_name	String	Member account name.

Parameter	Type	Description
desc	String	Rule description. Enter a maximum of 1024 characters and do not start or end with an underscore (_). Only digits, letters, underscores (_), asterisk (*), and spaces are allowed.
type	String	Action type. Default: Notification. Enumeration values: <ul style="list-style-type: none">• 1• 2
notification_template	String	Message template.
create_time	Long	Creation time.
update_time	Long	Modification time
time_zone	String	Time zone.
smn_topics	Array of SmnTopics objects	SMN topic. The total number of topics cannot exceed 5.

Table 4-152 SmnTopics

Parameter	Type	Description
display_name	String	Topic display name, which will be the name of an email sender. Max.: 192 bytes. This parameter is left blank by default.
name	String	Name of the topic. Enter 1 to 255 characters starting with a letter or digit. Only letters, digits, hyphens (-), and underscores (_) are allowed.
push_policy	Integer	SMN message push policy. Options: 0 and 1.

Parameter	Type	Description
status	Integer	Status of the topic subscriber. 0: The topic has been deleted or the subscription list of this topic is empty. 1: The subscription object is in the subscribed state. 2: The subscription object is in the unsubscribed or canceled state. Enumeration values: <ul style="list-style-type: none">• 0• 1• 2
topic_urn	String	Unique resource identifier of the topic.

Status code: 401**Table 4-153** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 403**Table 4-154** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500

Table 4-155 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Response message.
trace_id	String	Response ID.

Example Requests

Query all alarm action rules.

```
https://{Endpoint}/v2/{project_id}/alert/action-rules
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "action_rules" : [ {
    "create_time" : 1665991889597,
    "desc" : "",
    "notification_template" : "aom.built-in.template.zh",
    "project_id" : "2xxxxxxxxxxxxxxxxxxxxxf",
    "rule_name" : "1112222",
    "smn_topics" : [ {
      "display_name" : "",
      "name" : "gcmtest",
      "push_policy" : 0,
      "status" : 0,
      "topic_urn" : "urn:smn:xxx:2xxxxxxxxxxxxxxxxxxxxxf:gcmtest"
    } ],
    "time_zone" : "xxx",
    "type" : "1",
    "update_time" : 1665991889597,
    "user_name" : "kxxxxt"
  } ]
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.0403",
  "error_msg" : "auth failed.",
  "error_type" : "AUTH_FAILED",
  "trace_id" : null
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.0403",
  "error_msg" : "auth failed.",
}
```

```
"error_type" : "AUTH_FAILED",  
"trace_id" : null  
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{  
  "error_code" : "APM.00000500",  
  "error_msg" : "Internal Server Error",  
  "trace_id" : ""  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v2.region.AomRegion;  
import com.huaweicloud.sdk.aom.v2.*;  
import com.huaweicloud.sdk.aom.v2.model.*;  
  
public class ListActionRuleSolution {  
  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or  
        // environment variables and decrypted during use to ensure security.  
        // In this example, AK and SK are stored in environment variables for authentication. Before running  
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
        String ak = System.getenv("CLOUD_SDK_AK");  
        String sk = System.getenv("CLOUD_SDK_SK");  
        String projectId = "{project_id}";  
  
        ICredential auth = new BasicCredentials()  
            .withProjectId(projectId)  
            .withAk(ak)  
            .withSk(sk);  
  
        AomClient client = AomClient.newBuilder()  
            .withCredential(auth)  
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))  
            .build();  
        ListActionRuleRequest request = new ListActionRuleRequest();  
        try {  
            ListActionRuleResponse response = client.listActionRule(request);  
            System.out.println(response.toString());  
        } catch (ConnectionException e) {  
            e.printStackTrace();  
        } catch (RequestTimeoutException e) {  
            e.printStackTrace();  
        } catch (ServiceResponseException e) {  
            e.printStackTrace();  
            System.out.println(e.getStatusCode());  
            System.out.println(e.getRequestId());  
            System.out.println(e.getErrorCode());  
            System.out.println(e.getErrorMsg());  
        }  
    }  
}
```

```
}  
}  
}
```

Python

```
# coding: utf-8  
  
import os  
from huaweicloudsdkcore.auth.credentials import BasicCredentials  
from huaweicloudsdkaom.v2.region.aom_region import AomRegion  
from huaweicloudsdkcore.exceptions import exceptions  
from huaweicloudsdkaom.v2 import *  
  
if __name__ == "__main__":  
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    # variables and decrypted during use to ensure security.  
    # In this example, AK and SK are stored in environment variables for authentication. Before running this  
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak = os.environ["CLOUD_SDK_AK"]  
    sk = os.environ["CLOUD_SDK_SK"]  
    projectId = "{project_id}"  
  
    credentials = BasicCredentials(ak, sk, projectId)  
  
    client = AomClient.new_builder() \  
        .with_credentials(credentials) \  
        .with_region(AomRegion.value_of("<YOUR REGION>")) \  
        .build()  
  
    try:  
        request = ListActionRuleRequest()  
        response = client.list_action_rule(request)  
        print(response)  
    except exceptions.ClientRequestException as e:  
        print(e.status_code)  
        print(e.request_id)  
        print(e.error_code)  
        print(e.error_msg)
```

Go

```
package main  
  
import (  
    "fmt"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"  
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"  
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"  
)  
  
func main() {  
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    // variables and decrypted during use to ensure security.  
    // In this example, AK and SK are stored in environment variables for authentication. Before running this  
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak := os.Getenv("CLOUD_SDK_AK")  
    sk := os.Getenv("CLOUD_SDK_SK")  
    projectId := "{project_id}"  
  
    auth := basic.NewCredentialsBuilder().  
        WithAk(ak).  
        WithSk(sk).  
        WithProjectId(projectId).  
        Build()
```

```

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.ListActionRuleRequest{}
response, err := client.ListActionRule(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.18 Querying Metric or Event Alarm Rules

Function

This API is used to query metric or event alarm rules. (Note: This API is available in CN East-Shanghai1.)

Calling Method

For details, see [Calling APIs](#).

URI

GET /v4/{project_id}/alarm-rules

Table 4-156 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-157 Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Alarm rule name.
limit	No	String	Number of records that can be returned.
offset	No	String	Start position for a pagination query, which must be a non-negative integer.
sort_by	No	String	Whether to sort alarms by alarm rule name or alarm creation time. <ul style="list-style-type: none">alarm_rule_name.ascalarm_create_time.desc
event_source	No	String	Source of an event alarm rule. <ul style="list-style-type: none">RDSEVSCCELTSAOM
event_severity	No	String	Alarm severity. <ul style="list-style-type: none">CriticalMajorMinorInfo

Parameter	Mandatory	Type	Description
alarm_rule_status	No	String	Alarm rule status. <ul style="list-style-type: none">• OK: normal• alarm: threshold-crossing• Effective: in use• Invalid: not in use Enumeration values: <ul style="list-style-type: none">• OK• alarm• Effective• Invalid
alarm_rule_type	No	String	Alarm rule type. <ul style="list-style-type: none">• metric: metric alarm rule• event: event alarm rule Enumeration values: <ul style="list-style-type: none">• metric• event
prom_instance_id	No	String	Prometheus instance ID.
bind_notification_rule_id	No	String	Name of the bound alarm action rule.
related_cce_clusters	No	String	CCE cluster ID.

Request Parameters

Table 4-158 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Parameter	Mandatory	Type	Description
Enterprise-Project-Id	No	String	Enterprise project ID. <ul style="list-style-type: none"> To query instances in an enterprise project, enter the enterprise project ID. To query instances in all enterprise projects, enter all_granted_eps.

Response Parameters

Status code: 200

Table 4-159 Response body parameters

Parameter	Type	Description
alarm_rules	Array of AlarmParamForV4Db objects	Alarm rule list.
metadata	Object	Metadata information.
count	Integer	Number of alarm rules.

Table 4-160 AlarmParamForV4Db

Parameter	Type	Description
alarm_create_time	Long	Time when an alarm rule was created.
alarm_update_time	Long	Time when an alarm rule was modified.
alarm_rule_name	String	Alarm rule name.
alarm_rule_id	Long	Alarm rule ID.
enterprise_project_id	String	Enterprise project ID.
prom_instance_id	String	Prometheus instance ID.
alarm_rule_description	String	Alarm rule description.
alarm_rule_enable	Boolean	Enabled or not.

Parameter	Type	Description
alarm_rule_status	String	Alarm status. <ul style="list-style-type: none"> OK: normal alarm: threshold-crossing Effective: in use Invalid: not in use
alarm_rule_type	String	Rule type. <ul style="list-style-type: none"> metric: metric alarm rule event: event alarm rule Enumeration values: <ul style="list-style-type: none"> metric event
metric_alarm_spec	MetricAlarmSpec object	Structure of a metric alarm rule.
event_alarm_spec	EventAlarmSpec object	Structure of an event alarm rule.
alarm_notifications	AlarmNotifications object	Alarm notification module.
user_id	String	User ID.

Table 4-161 MetricAlarmSpec

Parameter	Type	Description
monitor_type	String	Monitoring type. <ul style="list-style-type: none"> all_metric: Select metrics from all metrics. promql: Select metrics using PromQL. resource (unavailable soon): Select metrics by resource type. Enumeration values: <ul style="list-style-type: none"> all_metric promql resource
no_data_conditions	Array of NoDataCondition objects	Action taken for insufficient data.

Parameter	Type	Description
alarm_tags	Array of AlarmTags objects	Alarm tags.
monitor_objects	Array of Map<String,String> objects	List of monitored objects.
recovery_conditions	RecoveryCondition object	Alarm clearance condition.
trigger_conditions	Array of TriggerCondition objects	Trigger conditions.
alarm_rule_template_bind_enable	Boolean	(Deprecated) Whether to bind an alarm rule template.
alarm_rule_template_id	String	(Deprecated) ID of the alarm rule template.

Table 4-162 NoDataCondition

Parameter	Type	Description
no_data_timeframe	Integer	Number of periods without data.
no_data_alert_state	String	Status of the threshold rule when the data is insufficient. <ul style="list-style-type: none"> no_data: A notification indicating insufficient data is sent. alerting: An alarm is triggered. ok: No exception occurs. pre_state: Retain the previous state. Enumeration values: <ul style="list-style-type: none"> no_data alerting ok pre_state
notify_no_data	Boolean	Whether to send a notification when data is insufficient.

Table 4-163 AlarmTags

Parameter	Type	Description
auto_tags	Array of strings	Automatic tag.
custom_tags	Array of strings	Custom tag.
custom_annotations	Array of strings	Alarm annotation.

Table 4-164 RecoveryCondition

Parameter	Type	Description
recovery_timeframe	Integer	Number of consecutive periods for which the trigger condition is not met to clear an alarm.

Table 4-165 TriggerCondition

Parameter	Type	Description
metric_query_mode	String	Metric query mode. <ul style="list-style-type: none"> • AOM: native AOM • PROM: AOM Prometheus • NATIVE_PROM: native Prometheus Enumeration values: <ul style="list-style-type: none"> • AOM • PROM • NATIVE_PROM
metric_namespace	String	Metric namespace.
metric_name	String	Metric name.
metric_unit	String	Metric unit.
metric_labels	Array of strings	Metric dimension.
promql	String	Prometheus statement.
promql_expr	Array of strings	Prometheus statement template.
trigger_times	String	Number of consecutive periods.

Parameter	Type	Description
trigger_interval	String	<p>Check interval.</p> <ul style="list-style-type: none"> If trigger_type is set to HOURLY*, set this parameter to "". If trigger_type is set to DAILY, set 00:00–23:00. Example: 03:00. If trigger_type is set to WEEKLY, select a day in a week and then select 00:00–23:00. Example: "**1 03:00" indicates 03:00 on every Monday. If trigger_type is set to CRON, specify a standard cron expression. If trigger_type is set to FIXED_RATE, select 15s, 30s, 1–59 min, or 1–24 h.
trigger_type	String	<p>Trigger type.</p> <ul style="list-style-type: none"> FIXED_RATE: fixed interval HOURLY: every hour DAILY: every day WEEKLY: every week CRON: Cron expression <p>Enumeration values:</p> <ul style="list-style-type: none"> FIXED_RATE HOURLY DAILY WEEKLY CRON
promql_for	String	Native Prometheus monitoring duration.
aggregation_type	String	<p>Statistical mode.</p> <ul style="list-style-type: none"> average minimum maximum sum sampleCount
operator	String	Operator. Options: >, <, =, >=, and <=.
thresholds	Map<String,String >	Key-value pair. The key indicates the alarm severity while the value indicates the alarm threshold.

Parameter	Type	Description
aggregation_window	String	Statistical period. <ul style="list-style-type: none"> • 15s • 30s • 1m • 5m • 15m • 1h
cmdb	CmdbInfo object	CMDB information.
query_match	String	Query filter criteria.
query_param	String	Query parameters.
aom_monitor_level	String	Monitoring layer.
aggregate_type	String	Aggregation mode. <ul style="list-style-type: none"> • by: not grouped • avg • max • min • sum Enumeration values: <ul style="list-style-type: none"> • by • avg • max • min • sum
metric_statistic_method	String	Metric statistics method to be used when you set Configuration Mode to Select from all metrics during alarm rule setting. <ul style="list-style-type: none"> • single: single metric • mix: multi-metric combined operations Enumeration values: <ul style="list-style-type: none"> • single • mix
expression	String	Expression of a combined operation.
mix_promql	String	PromQL of a combined operation.

Table 4-166 CmdbInfo

Parameter	Type	Description
app_id	String	Application ID.
node_ids	Array of NodeInfo objects	Node information list.

Table 4-167 NodeInfo

Parameter	Type	Description
node_type	String	Node type.
node_id	String	Node ID.

Table 4-168 EventAlarmSpec

Parameter	Type	Description
alarm_source	String	Alarm rule source. <ul style="list-style-type: none"> systemEvent customEvent Enumeration values: <ul style="list-style-type: none"> systemEvent customEvent
event_source	String	Alarm source. <ul style="list-style-type: none"> RDS EVS CCE LTS AOM
monitor_objects	Array of Map<String,String> objects	List of monitored objects. Key-value pair. <ul style="list-style-type: none"> event_type: notification type event_severity: alarm severity event_name: event name namespace: namespace clusterId: cluster ID customField: user-defined field

Parameter	Type	Description
trigger_conditions	Array of EventTriggerCondition objects	Trigger conditions.
alarm_rule_template_bind_enable	Boolean	(Deprecated) Whether to bind an alarm rule template.
alarm_rule_template_id	String	(Deprecated) ID of the alarm rule template.

Table 4-169 EventTriggerCondition

Parameter	Type	Description
event_name	String	Event name.
trigger_type	String	Trigger mode. <ul style="list-style-type: none"> immediately: An alarm is triggered immediately if the alarm condition is met. accumulative: An alarm is triggered if the alarm condition is met for a specified number of times. Enumeration values: <ul style="list-style-type: none"> immediately accumulative
aggregation_window	Long	Statistical period, in seconds. For example, 3600 indicates one hour. Leave this parameter empty if trigger_type is set to immediately .
operator	String	Operator. Options: >, <, =, >=, and <=. Leave this parameter empty if trigger_type is set to immediately .
thresholds	Map<String,Integer>	Key-value pair. The key indicates the alarm severity while the value indicates the number of accumulated trigger times. Leave this parameter empty if trigger_type is set to immediately .

Parameter	Type	Description
frequency	String	<p>Event alarm notification frequency. Leave this parameter empty if trigger_type is set to immediately.</p> <ul style="list-style-type: none"> • 0: alarm sent only once • 300: every 5 minutes • 600: every 10 minutes • 900: every 15 minutes • 1800: every 30 minutes • 3600: every hour • 10800: every 3 hours • 21600: every 6 hours • 43200: every 12 hours • 86400: every day

Table 4-170 AlarmNotification

Parameter	Type	Description
notification_type	String	<p>Notification type.</p> <ul style="list-style-type: none"> • direct: direct alarm reporting • alarm_policy: alarm reporting after noise reduction <p>Enumeration values:</p> <ul style="list-style-type: none"> • direct • alarm_policy
route_group_enable	Boolean	<p>Whether to enable a grouping rule.</p> <ul style="list-style-type: none"> • If the notification type is alarm_policy, set this parameter to true. • If the notification type is direct, set this parameter to false. <p>NOTE If both notify_triggered and notify_resolved are set to false, route_group_enable must be set to false.</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> • true • false

Parameter	Type	Description
route_group_rule	String	Grouping rule name. <ul style="list-style-type: none"> If route_group_enable is set to true, enter a grouping rule name. If route_group_enable is set to false, enter "".
notification_enable	Boolean	Whether to enable an alarm action rule. <ul style="list-style-type: none"> If the notification type is direct, set this parameter to true. If the notification type is alarm_policy, set this parameter to false. <p>NOTE If both notify_triggered and notify_resolved are set to false, notification_enable must be set to false.</p>
bind_notification_rule_id	String	Alarm action rule ID. <ul style="list-style-type: none"> If notification_enable is set to true, enter an alarm action rule ID. If notification_enable is set to false, enter "".
notify_resolved	Boolean	Whether to send a notification when an alarm is cleared. <ul style="list-style-type: none"> true: Send a notification. false: Do not send any notification. <p>Enumeration values:</p> <ul style="list-style-type: none"> true false
notify_triggered	Boolean	Whether to send a notification when an alarm is triggered. <ul style="list-style-type: none"> true: Send a notification. false: Do not send any notification. <p>Enumeration values:</p> <ul style="list-style-type: none"> true false

Parameter	Type	Description
notify_frequency	Integer	<p>Notification frequency.</p> <ul style="list-style-type: none"> If the notification type is alarm_policy, set this parameter to -1. If the notification type is direct, set this parameter to any of the following: <ul style="list-style-type: none"> 0: alarm sent only once 300: every 5 minutes 600: every 10 minutes 900: every 15 minutes 1800: every 30 minutes 3600: every hour 10800: every 3 hours 21600: every 6 hours 43200: every 12 hours 86400: every day

Status code: 500

Table 4-171 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Example Requests

Query metric or event alarm rules.

```
https://{Endpoint}/v4/{project_id}/alarm-rules?limit=100&offset=0
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "alarm_rules": [ {
```

```

"alarm_create_time" : 1713929265429,
"alarm_notifications" : {
  "bind_notification_rule_id" : "aom_notification_rule",
  "notification_enable" : true,
  "notification_type" : "direct",
  "notify_frequency" : -1,
  "notify_resolved" : false,
  "notify_triggered" : false,
  "route_group_enable" : false,
  "route_group_rule" : ""
},
"alarm_rule_description" : "",
"alarm_rule_enable" : true,
"alarm_rule_id" : 0,
"alarm_rule_name" : "aom_alarm_rule",
"alarm_rule_status" : "Effective",
"alarm_rule_type" : "event",
"alarm_update_time" : 0,
"enterprise_project_id" : "0",
"event_alarm_spec" : {
  "alarm_rule_template_bind_enable" : false,
  "alarm_rule_template_id" : "",
  "alarm_source" : "systemEvent",
  "event_source" : "CCE",
  "monitor_objects" : [ {
    "clusterId" : "a4****6b-f**9-1**e-a**d-02****10***a",
    "event_type" : "event"
  } ],
  "trigger_conditions" : [ {
    "aggregation_window" : 300,
    "event_name" : "",
    "frequency" : "1",
    "operator" : ">=",
    "thresholds" : {
      "Critical" : 2
    }
  },
  "trigger_type" : "immediately"
} ]
},
"user_id" : "2a****56****48****73****1b****cf"
}, {
"alarm_create_time" : 1711458243395,
"alarm_notifications" : {
  "bind_notification_rule_id" : "",
  "notification_enable" : false,
  "notification_type" : "direct",
  "notify_frequency" : 0,
  "notify_resolved" : false,
  "notify_triggered" : false,
  "route_group_enable" : false,
  "route_group_rule" : ""
},
"alarm_rule_description" : "",
"alarm_rule_enable" : false,
"alarm_rule_id" : 1,
"alarm_rule_name" : "aom_alarm_rule_1",
"alarm_rule_status" : "Invalid",
"alarm_rule_type" : "metric",
"alarm_update_time" : 0,
"enterprise_project_id" : "0",
"metric_alarm_spec" : {
  "alarm_rule_template_bind_enable" : false,
  "alarm_rule_template_id" : "",
  "alarm_tags" : [ {
    "auto_tags" : [ ],
    "custom_annotations" : [ ],
    "custom_tags" : [ ]
  } ],
  "monitor_objects" : [ ],

```

```

"monitor_type" : "all_metric",
"no_data_conditions" : [ {
  "no_data_timeframe" : 0,
  "notify_no_data" : false
}],
"recovery_conditions" : {
  "recovery_timeframe" : 1
},
"trigger_conditions" : [ {
  "aggregate_type" : "by",
  "aggregation_type" : "average",
  "aggregation_window" : "30s",
  "aom_monitor_level" : "",
  "cmdb" : {
    "app_id" : "",
    "node_ids" : [ ]
  },
  "expression" : "",
  "metric_labels" : [ ],
  "metric_name" : "container_memory_rss",
  "metric_namespace" : "",
  "metric_query_mode" : "PROM",
  "metric_statistic_method" : "single",
  "metric_unit" : "",
  "mix_promql" : "",
  "operator" : ">",
  "promql" : "label_replace(container_memory_rss{node=\"172.***.206\"},\"_name_
\", \"container_memory_rss\", \"\", \"\") or label_replace(avg_over_time(container_memory_rss{node=
\"172.***.206\"}[29999ms]),\"_name_\", \"container_memory_rss\", \"\", \"\")",
  "promql_for" : "1m",
  "query_match" : "[{\"conditionList\":[{\"name\":\"172.***.206\"},{\"name
\": \"172.***.133\"}],\"addMode\":\"first\", \"conditionValue\":[{\"name\":\"172.***.206\"}],\"id\":\"first
\", \"conditionCompare\":\"=\", \"dimension\":\"node\"}]",
  "query_param" : {
    "apmMetricReg" : "",
    "code" : "a"
  },
  "thresholds" : {
    "Critical" : "1"
  },
  "trigger_interval" : "15s",
  "trigger_times" : 1,
  "trigger_type" : "FIXED_RATE"
} ]
},
"prom_instance_id" : "90e***88-1**4-4**9-9**3-1f*****cd3",
"user_id" : "2a***56***48***73***1b***cf"
}],
"count" : 29,
"metadata" : {
  "alarm_rule_template_id" : [ ],
  "bind_notification_rule_id" : [ "aom_notification_rule", "1", "00*****qq", "00*****3", "m***m" ],
  "event_source" : [ "CCE", "DCS", "ES", "AOM" ],
  "prom_instance_id" : [ "0", "796***7d-1**8-4**9-a**0-99*****ca0", "6cc***c8-f**f-4**4-9**2-90*****cf",
"90e***88-1**4-4**9-9**3-1f*****cd3" ],
  "resource_kind" : [ "HC:DCS:REDIS_3.0", "CCE", "HC:ES:METRICS", "AOM" ]
}
}

```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```

{
  "error_code" : "AOM.02022500",
  "error_msg" : "internal server error",
  "error_type" : "INTERNAL_SERVER_ERROR",
  "trace_id" : ""
}

```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListMetricOrEventAlarmRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListMetricOrEventAlarmRuleRequest request = new ListMetricOrEventAlarmRuleRequest();
        try {
            ListMetricOrEventAlarmRuleResponse response = client.listMetricOrEventAlarmRule(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
```

```
# The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
# In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
ak = os.environ["CLOUD_SDK_AK"]
sk = os.environ["CLOUD_SDK_SK"]
projectId = "{project_id}"

credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = ListMetricOrEventAlarmRuleRequest()
    response = client.list_metric_or_event_alarm_rule(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListMetricOrEventAlarmRuleRequest{}
    response, err := client.ListMetricOrEventAlarmRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.19 Adding or Modifying Metric or Event Alarm Rules

Function

This API is used to add or modify metric or event alarm rules. (Note: This API is available in CN East-Shanghai1.)

Calling Method

For details, see [Calling APIs](#).

URI

POST /v4/{project_id}/alarm-rules

Table 4-172 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-173 Query Parameters

Parameter	Mandatory	Type	Description
action_id	Yes	String	Alarm rule ID. <ul style="list-style-type: none"> To add an alarm rule, enter add-alarm-action. To modify an alarm rule, enter update-alarm-action.

Request Parameters

Table 4-174 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.
Enterprise-Project-Id	No	String	Enterprise project ID. <ul style="list-style-type: none"> To query instances in an enterprise project, enter the enterprise project ID. To query instances in all enterprise projects, enter all_granted_eps.

Table 4-175 Request body parameters

Parameter	Mandatory	Type	Description
alarm_notifications	No	AlarmNotification object	Alarm notification module.
alarm_rule_description	No	String	Alarm rule description.
alarm_rule_enabled	No	Boolean	Enabled or not. Enumeration values: <ul style="list-style-type: none"> true false
alarm_rule_name	Yes	String	Alarm rule name.

Parameter	Mandatory	Type	Description
alarm_rule_type	Yes	String	Alarm rule type. <ul style="list-style-type: none"> metric: metric alarm rule event: event alarm rule Enumeration values: <ul style="list-style-type: none"> metric event
event_alarm_spec	No	EventAlarmSpec object	Structure of an event alarm rule.
metric_alarm_spec	No	MetricAlarmSpec object	Structure of a metric alarm rule.
prom_instance_id	No	String	Prometheus instance ID.

Table 4-176 AlarmNotification

Parameter	Mandatory	Type	Description
notification_type	Yes	String	Notification type. <ul style="list-style-type: none"> direct: direct alarm reporting alarm_policy: alarm reporting after noise reduction Enumeration values: <ul style="list-style-type: none"> direct alarm_policy
route_group_enable	Yes	Boolean	Whether to enable a grouping rule. <ul style="list-style-type: none"> If the notification type is alarm_policy, set this parameter to true. If the notification type is direct, set this parameter to false. NOTE If both notify_triggered and notify_resolved are set to false , route_group_enable must be set to false . Enumeration values: <ul style="list-style-type: none"> true false

Parameter	Mandatory	Type	Description
route_group_rule	Yes	String	<p>Grouping rule name.</p> <ul style="list-style-type: none"> If route_group_enable is set to true, enter a grouping rule name. If route_group_enable is set to false, enter "".
notification_enable	No	Boolean	<p>Whether to enable an alarm action rule.</p> <ul style="list-style-type: none"> If the notification type is direct, set this parameter to true. If the notification type is alarm_policy, set this parameter to false. <p>NOTE If both notify_triggered and notify_resolved are set to false, notification_enable must be set to false.</p>
bind_notification_rule_id	No	String	<p>Alarm action rule ID.</p> <ul style="list-style-type: none"> If notification_enable is set to true, enter an alarm action rule ID. If notification_enable is set to false, enter "".
notify_resolved	No	Boolean	<p>Whether to send a notification when an alarm is cleared.</p> <ul style="list-style-type: none"> true: Send a notification. false: Do not send any notification. <p>Enumeration values:</p> <ul style="list-style-type: none"> true false
notify_triggered	No	Boolean	<p>Whether to send a notification when an alarm is triggered.</p> <ul style="list-style-type: none"> true: Send a notification. false: Do not send any notification. <p>Enumeration values:</p> <ul style="list-style-type: none"> true false

Parameter	Mandatory	Type	Description
notify_frequency	No	Integer	<p>Notification frequency.</p> <ul style="list-style-type: none"> • If the notification type is alarm_policy, set this parameter to -1. • If the notification type is direct, set this parameter to any of the following: <ul style="list-style-type: none"> • 0: alarm sent only once • 300: every 5 minutes • 600: every 10 minutes • 900: every 15 minutes • 1800: every 30 minutes • 3600: every hour • 10800: every 3 hours • 21600: every 6 hours • 43200: every 12 hours • 86400: every day

Table 4-177 EventAlarmSpec

Parameter	Mandatory	Type	Description
alarm_source	No	String	<p>Alarm rule source.</p> <ul style="list-style-type: none"> • systemEvent • customEvent <p>Enumeration values:</p> <ul style="list-style-type: none"> • systemEvent • customEvent
event_source	No	String	<p>Alarm source.</p> <ul style="list-style-type: none"> • RDS • EVS • CCE • LTS • AOM

Parameter	Mandatory	Type	Description
monitor_objects	No	Array of Map<String,String> objects	List of monitored objects. Key-value pair. <ul style="list-style-type: none"> event_type: notification type event_severity: alarm severity event_name: event name namespace: namespace clusterId: cluster ID customField: user-defined field
trigger_conditions	No	Array of EventTriggerCondition objects	Trigger conditions.
alarm_rule_template_bind_enable	No	Boolean	(Deprecated) Whether to bind an alarm rule template.
alarm_rule_template_id	No	String	(Deprecated) ID of the alarm rule template.

Table 4-178 EventTriggerCondition

Parameter	Mandatory	Type	Description
event_name	No	String	Event name.
trigger_type	No	String	Trigger mode. <ul style="list-style-type: none"> immediately: An alarm is triggered immediately if the alarm condition is met. accumulative: An alarm is triggered if the alarm condition is met for a specified number of times. Enumeration values: <ul style="list-style-type: none"> immediately accumulative

Parameter	Mandatory	Type	Description
aggregation_window	No	Long	Statistical period, in seconds. For example, 3600 indicates one hour. Leave this parameter empty if trigger_type is set to immediately .
operator	No	String	Operator. Options: >, <, =, >=, and <=. Leave this parameter empty if trigger_type is set to immediately .
thresholds	No	Map<String,Integer>	Key-value pair. The key indicates the alarm severity while the value indicates the number of accumulated trigger times. Leave this parameter empty if trigger_type is set to immediately .
frequency	No	String	Event alarm notification frequency. Leave this parameter empty if trigger_type is set to immediately . <ul style="list-style-type: none"> ● 0: alarm sent only once ● 300: every 5 minutes ● 600: every 10 minutes ● 900: every 15 minutes ● 1800: every 30 minutes ● 3600: every hour ● 10800: every 3 hours ● 21600: every 6 hours ● 43200: every 12 hours ● 86400: every day

Table 4-179 MetricAlarmSpec

Parameter	Mandatory	Type	Description
monitor_type	Yes	String	Monitoring type. <ul style="list-style-type: none"> all_metric: Select metrics from all metrics. promql: Select metrics using PromQL. resource (unavailable soon): Select metrics by resource type. Enumeration values: <ul style="list-style-type: none"> all_metric promql resource
no_data_conditions	No	Array of NoDataCondition objects	Action taken for insufficient data.
alarm_tags	Yes	Array of AlarmTags objects	Alarm tags.
monitor_objects	No	Array of Map<String,String> objects	List of monitored objects.
recovery_conditions	Yes	RecoveryCondition object	Alarm clearance condition.
trigger_conditions	Yes	Array of TriggerCondition objects	Trigger conditions.
alarm_rule_template_bind_enable	No	Boolean	(Deprecated) Whether to bind an alarm rule template.
alarm_rule_template_id	No	String	(Deprecated) ID of the alarm rule template.

Table 4-180 NoDataCondition

Parameter	Mandatory	Type	Description
no_data_timeframe	No	Integer	Number of periods without data.

Parameter	Mandatory	Type	Description
no_data_alert_state	No	String	Status of the threshold rule when the data is insufficient. <ul style="list-style-type: none"> no_data: A notification indicating insufficient data is sent. alerting: An alarm is triggered. ok: No exception occurs. pre_state: Retain the previous state. Enumeration values: <ul style="list-style-type: none"> no_data alerting ok pre_state
notify_no_data	No	Boolean	Whether to send a notification when data is insufficient.

Table 4-181 AlarmTags

Parameter	Mandatory	Type	Description
auto_tags	No	Array of strings	Automatic tag.
custom_tags	No	Array of strings	Custom tag.
custom_annotations	No	Array of strings	Alarm annotation.

Table 4-182 RecoveryCondition

Parameter	Mandatory	Type	Description
recovery_timeframe	No	Integer	Number of consecutive periods for which the trigger condition is not met to clear an alarm.

Table 4-183 TriggerCondition

Parameter	Mandatory	Type	Description
metric_query_mode	Yes	String	Metric query mode. <ul style="list-style-type: none"> • AOM: native AOM • PROM: AOM Prometheus • NATIVE_PROM: native Prometheus Enumeration values: <ul style="list-style-type: none"> • AOM • PROM • NATIVE_PROM
metric_namespace	Yes	String	Metric namespace.
metric_name	Yes	String	Metric name.
metric_unit	Yes	String	Metric unit.
metric_labels	Yes	Array of strings	Metric dimension.
promql	Yes	String	Prometheus statement.
promql_expr	No	Array of strings	Prometheus statement template.
trigger_times	No	String	Number of consecutive periods.
trigger_interval	No	String	Check interval. <ul style="list-style-type: none"> • If trigger_type is set to HOURLY*, set this parameter to "". • If trigger_type is set to DAILY, set 00:00–23:00. Example: 03:00. • If trigger_type is set to WEEKLY, select a day in a week and then select 00:00–23:00. Example: **1 03:00" indicates 03:00 on every Monday. • If trigger_type is set to CRON, specify a standard cron expression. • If trigger_type is set to FIXED_RATE, select 15s, 30s, 1–59 min, or 1–24 h.

Parameter	Mandatory	Type	Description
trigger_type	No	String	Trigger type. <ul style="list-style-type: none"> FIXED_RATE: fixed interval HOURLY: every hour DAILY: every day WEEKLY: every week CRON: Cron expression Enumeration values: <ul style="list-style-type: none"> FIXED_RATE HOURLY DAILY WEEKLY CRON
promql_for	No	String	Native Prometheus monitoring duration.
aggregation_type	No	String	Statistical mode. <ul style="list-style-type: none"> average minimum maximum sum sampleCount
operator	No	String	Operator. Options: >, <, =, >=, and <=.
thresholds	No	Map<String,String>	Key-value pair. The key indicates the alarm severity while the value indicates the alarm threshold.
aggregation_window	No	String	Statistical period. <ul style="list-style-type: none"> 15s 30s 1m 5m 15m 1h
cmdb	No	CmdbInfo object	CMDB information.
query_match	No	String	Query filter criteria.
query_param	Yes	String	Query parameters.

Parameter	Mandatory	Type	Description
aom_monitor_level	No	String	Monitoring layer.
aggregate_type	No	String	Aggregation mode. <ul style="list-style-type: none"> • by: not grouped • avg • max • min • sum Enumeration values: <ul style="list-style-type: none"> • by • avg • max • min • sum
metric_statistics_method	No	String	Metric statistics method to be used when you set Configuration Mode to Select from all metrics during alarm rule setting. <ul style="list-style-type: none"> • single: single metric • mix: multi-metric combined operations Enumeration values: <ul style="list-style-type: none"> • single • mix
expression	No	String	Expression of a combined operation.
mix_promql	No	String	PromQL of a combined operation.

Table 4-184 CmdbInfo

Parameter	Mandatory	Type	Description
app_id	No	String	Application ID.
node_ids	No	Array of NodeInfo objects	Node information list.

Table 4-185 NodeInfo

Parameter	Mandatory	Type	Description
node_type	No	String	Node type.
node_id	No	String	Node ID.

Response Parameters

Status code: 200

Table 4-186 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_message	String	Error message.
alarm_rules	Array of AddOrUpdateAlarmRuleV4ItemResult objects	Alarm rule list.

Table 4-187 AddOrUpdateAlarmRuleV4ItemResult

Parameter	Type	Description
alarm_rule_name	String	Alarm rule name.
result	String	Whether an alarm rule is successfully added or modified.

Status code: 400

Table 4-188 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500

Table 4-189 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Example Requests

- Add a metric alarm rule.

`https://{Endpoint}/v4/{project_id}/alarm-rules?action_id=add-alarm-action`

```
{
  "alarm_notifications": {
    "bind_notification_rule_id": "",
    "notification_enable": false,
    "notification_type": "alarm_policy",
    "notify_frequency": -1,
    "notify_resolved": true,
    "notify_triggered": true,
    "route_group_enable": true,
    "route_group_rule": "aom_route_group_rule"
  },
  "alarm_rule_description": "aom_alarm_rule",
  "alarm_rule_enable": true,
  "alarm_rule_name": "aom_alarm_rule",
  "alarm_rule_type": "metric",
  "metric_alarm_spec": {
    "alarm_rule_template_bind_enable": false,
    "alarm_rule_template_id": "",
    "alarm_tags": [ {
      "auto_tags": [ ],
      "custom_annotations": [ "333=rrr" ],
      "custom_tags": [ "333=rrr" ]
    } ],
    "monitor_objects": [ ],
    "monitor_type": "all_metric",
    "no_data_conditions": [ {
      "no_data_alert_state": "no_data",
      "no_data_timeframe": 3,
      "notify_no_data": true
    } ],
    "recovery_conditions": {
      "recovery_timeframe": 2
    },
    "trigger_conditions": [ {
      "aggregate_type": "by",
      "aggregation_type": "average",
      "aggregation_window": "5m",
      "aom_monitor_level": "",
      "cmdb": {
        "app_id": "",
        "node_ids": [ ]
      },
      "expression": "",
      "metric_labels": [ ],
      "metric_name": "aom_metrics_total",
      "metric_namespace": "",
      "metric_query_mode": "PROM",
      "metric_statistic_method": "single",
```

```

"metric_unit" : "",
"mix_promql" : "",
"operator" : ">",
"promql" : "label_replace(avg_over_time(aom_metrics_total{instance=\"1117919565\"}
[59999ms]),\"__name__\", \"aom_metrics_total\", \"\", \"\", \"\")",
"query_match" : [ {
  "addMode" : "first",
  "conditionCompare" : "=",
  "conditionList" : [ {
    "name" : "1117919565"
  } ],
  "conditionValue" : [ {
    "name" : "1117919565"
  } ],
  "dimension" : "instance",
  "id" : "first",
  "regExpress" : null
} ],
"query_param" : { },
"thresholds" : {
  "Info" : "100"
},
"trigger_interval" : "15m",
"trigger_times" : 4,
"trigger_type" : "FIXED_RATE"
} ]
},
"prom_instance_id" : "0"
}

```

- **Modify a metric alarm rule.**

https://{Endpoint}/v4/{project_id}/alarm-rules?action_id=update-alarm-action

```

{
  "alarm_notifications" : {
    "bind_notification_rule_id" : "",
    "notification_enable" : false,
    "notification_type" : "alarm_policy",
    "notify_frequency" : -1,
    "notify_resolved" : true,
    "notify_triggered" : true,
    "route_group_enable" : true,
    "route_group_rule" : "aom_route_group_rule"
  },
  "alarm_rule_description" : "aom_alarm_rule",
  "alarm_rule_enable" : true,
  "alarm_rule_name" : "aom_alarm_rule",
  "alarm_rule_type" : "metric",
  "metric_alarm_spec" : {
    "alarm_rule_template_bind_enable" : false,
    "alarm_rule_template_id" : "",
    "alarm_tags" : [ {
      "auto_tags" : [ ],
      "custom_annotations" : [ "333=rrr" ],
      "custom_tags" : [ "333=rrr" ]
    } ],
    "monitor_objects" : [ ],
    "monitor_type" : "all_metric",
    "no_data_conditions" : [ {
      "no_data_alert_state" : "no_data",
      "no_data_timeframe" : 3,
      "notify_no_data" : true
    } ],
    "recovery_conditions" : {
      "recovery_timeframe" : 2
    },
    "trigger_conditions" : [ {
      "aggregate_type" : "by",
      "aggregation_type" : "average",
      "aggregation_window" : "5m",

```

```

"aom_monitor_level": "",
"cmdb": {
  "app_id": "",
  "node_ids": [ ]
},
"expression": "",
"metric_labels": [ ],
"metric_name": "aom_metrics_total",
"metric_namespace": "",
"metric_query_mode": "PROM",
"metric_statistic_method": "single",
"metric_unit": "",
"mix_promql": "",
"operator": ">",
"promql": "label_replace(avg_over_time(aom_metrics_total{instance=\"1117919565\"}
[59999ms]),\"__name__\", \"aom_metrics_total\", \"\", \"\")",
"query_match": [ {
  "addMode": "first",
  "conditionCompare": "=",
  "conditionList": [ {
    "name": "1117919565"
  } ],
  "conditionValue": [ {
    "name": "1117919565"
  } ],
  "dimension": "instance",
  "id": "first",
  "regExpress": null
} ],
"query_param": { },
"thresholds": {
  "Info": "100"
},
"trigger_interval": "15m",
"trigger_times": 4,
"trigger_type": "FIXED_RATE"
} ]
},
"prom_instance_id": "0"
}

```

- Add an event alarm rule.

https://{Endpoint}/v4/{project_id}/alarm-rules?action_id=add-alarm-action

```

{
  "alarm_notifications": {
    "bind_notification_rule_id": "aom_event_notification_rule",
    "notification_enable": true,
    "notification_type": "direct",
    "notify_frequency": "-1",
    "notify_resolved": false,
    "notify_triggered": false,
    "route_group_enable": false,
    "route_group_rule": ""
  },
  "alarm_rule_description": "aom_alarm_event_rule",
  "alarm_rule_enable": true,
  "alarm_rule_name": "aom_event_alarm_rule",
  "alarm_rule_type": "event",
  "event_alarm_spec": {
    "alarm_source": "systemEvent",
    "event_source": "CCE",
    "monitor_objects": [ {
      "event_name": "ScaleUpTimedOut; VolumeResizeFailed",
      "event_type": "event"
    } ],
  },
  "trigger_conditions": [ {
    "aggregation_window": 300,
    "event_name": "ScaleUpTimedOut",
    "frequency": "-1",
  } ]
}

```

```

    "operator" : ">",
    "thresholds" : {
      "Critical" : 1
    },
    "trigger_type" : "accumulative"
  }, {
    "event_name" : "VolumeResizeFailed",
    "thresholds" : {
      "Critical" : 1
    },
    "trigger_type" : "immediately"
  }
]
}
}

```

- **Modify an event alarm rule.**

https://{Endpoint}/v4/{project_id}/alarm-rules?action_id=update-alarm-action

```

{
  "alarm_notifications" : {
    "bind_notification_rule_id" : "aom_event_notification_rule",
    "notification_enable" : true,
    "notification_type" : "direct",
    "notify_frequency" : "-1",
    "notify_resolved" : false,
    "notify_triggered" : false,
    "route_group_enable" : false,
    "route_group_rule" : ""
  },
  "alarm_rule_description" : "aom_alarm_event_rule",
  "alarm_rule_enable" : true,
  "alarm_rule_name" : "aom_event_alarm_rule",
  "alarm_rule_type" : "event",
  "event_alarm_spec" : {
    "alarm_source" : "systemEvent",
    "event_source" : "CCE",
    "monitor_objects" : [ {
      "event_name" : "ScaleUpTimedOut; VolumeResizeFailed",
      "event_type" : "event"
    } ],
    "trigger_conditions" : [ {
      "aggregation_window" : 300,
      "event_name" : "ScaleUpTimedOut",
      "frequency" : "-1",
      "operator" : ">",
      "thresholds" : {
        "Critical" : 1
      },
      "trigger_type" : "accumulative"
    }, {
      "event_name" : "VolumeResizeFailed",
      "thresholds" : {
        "Critical" : 2
      },
      "trigger_type" : "immediately"
    } ]
  }
}
}

```

Example Responses

Status code: 200

OK: The request is successful.

```

{
  "alarm_rules" : [ {
    "alarm_rule_name" : "aom_alarm_rule",
    "result" : "success"
  } ]
}

```

```
    } ],  
    "error_code" : "200",  
    "error_message" : "success"  
  }  
}
```

Status code: 400

Bad Request: Invalid request. The client should not repeat this request without modification.

```
{  
  "error_code" : "AOM.02021006",  
  "error_msg" : "This rule actionId is invalid",  
  "error_type" : "PARAM_INVALID",  
  "trace_id" : "58ef0f7c107a2b577f78b9cc7f48b46f"  
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{  
  "error_code" : "AOM.02021500",  
  "error_msg" : "internal server error",  
  "error_type" : "INTERNAL_SERVER_ERROR",  
  "trace_id" : ""  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

- Add a metric alarm rule.

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v2.region.AomRegion;  
import com.huaweicloud.sdk.aom.v2.*;  
import com.huaweicloud.sdk.aom.v2.model.*;  
  
import java.util.List;  
import java.util.ArrayList;  
import java.util.Map;  
import java.util.HashMap;  
  
public class AddOrUpdateMetricOrEventAlarmRuleSolution {  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or  
        // environment variables and decrypted during use to ensure security.  
        // In this example, AK and SK are stored in environment variables for authentication. Before  
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local  
        // environment  
        String ak = System.getenv("CLOUD_SDK_AK");  
        String sk = System.getenv("CLOUD_SDK_SK");  
        String projectId = "{project_id}";  
  
        ICredential auth = new BasicCredentials()
```



```
.withProjectId(projectId)
.withAk(ak)
.withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
AddOrUpdateMetricOrEventAlarmRuleRequest request = new
AddOrUpdateMetricOrEventAlarmRuleRequest();
AddOrUpdateAlarmRuleV4RequestBody body = new AddOrUpdateAlarmRuleV4RequestBody();
CmdbInfo cmdbTriggerConditions = new CmdbInfo();
cmdbTriggerConditions.withAppld("");
Map<String, String> listTriggerConditionsThresholds = new HashMap<>();
listTriggerConditionsThresholds.put("Info", "100");
List<TriggerCondition> listMetricAlarmSpecTriggerConditions = new ArrayList<>();
listMetricAlarmSpecTriggerConditions.add(
    new TriggerCondition()
        .withMetricQueryMode(TriggerCondition.MetricQueryModeEnum.fromValue("PROM"))
        .withMetricNamespace("")
        .withMetricName("aom_metrics_total")
        .withMetricUnit("")
        .withMetricLabels()
        .withPromql("label_replace(avg_over_time(aom_metrics_total{instance=\"1117919565\"}
[59999ms]),\"_name_\",\"aom_metrics_total\", \"\", \"\")")
        .withTriggerTimes("4")
        .withTriggerInterval("15m")
        .withTriggerType(TriggerCondition.TriggerTypeEnum.fromValue("FIXED_RATE"))
        .withAggregationType("average")
        .withOperator(">")
        .withThresholds(listTriggerConditionsThresholds)
        .withAggregationWindow("5m")
        .withCmdb(cmdbTriggerConditions)
        .withQueryMatch("[{addMode=first, conditionCompare==,
conditionList=[{name=1117919565}], conditionValue=[{name=1117919565}], dimension=instance,
id=first, regExpress=null}])")
        .withQueryParam("{}")
        .withAomMonitorLevel("")
        .withAggregateType(TriggerCondition.AggregateTypeEnum.fromValue("by"))
        .withMetricStatisticMethod(TriggerCondition.MetricStatisticMethodEnum.fromValue("single
"))
        .withExpression("")
        .withMixPromql("")
    );
RecoveryCondition recoveryConditionsMetricAlarmSpec = new RecoveryCondition();
recoveryConditionsMetricAlarmSpec.withRecoveryTimeframe(2);
List<String> listAlarmTagsCustomAnnotations = new ArrayList<>();
listAlarmTagsCustomAnnotations.add("333=rrr");
List<String> listAlarmTagsCustomTags = new ArrayList<>();
listAlarmTagsCustomTags.add("333=rrr");
List<AlarmTags> listMetricAlarmSpecAlarmTags = new ArrayList<>();
listMetricAlarmSpecAlarmTags.add(
    new AlarmTags()
        .withAutoTags()
        .withCustomTags(listAlarmTagsCustomTags)
        .withCustomAnnotations(listAlarmTagsCustomAnnotations)
    );
List<NoDataCondition> listMetricAlarmSpecNoDataConditions = new ArrayList<>();
listMetricAlarmSpecNoDataConditions.add(
    new NoDataCondition()
        .withNoDataTimeframe(3)
        .withNoDataAlertState(NoDataCondition.NoDataAlertStateEnum.fromValue("no_data"))
        .withNotifyNoData(true)
    );
MetricAlarmSpec metricAlarmSpecbody = new MetricAlarmSpec();

metricAlarmSpecbody.withMonitorType(MetricAlarmSpec.MonitorTypeEnum.fromValue("all_metric"))
    .withNoDataConditions(listMetricAlarmSpecNoDataConditions)
    .withAlarmTags(listMetricAlarmSpecAlarmTags)
```

```
.withRecoveryConditions(recoveryConditionsMetricAlarmSpec)
.withTriggerConditions(listMetricAlarmSpecTriggerConditions)
.withAlarmRuleTemplateBindEnable(false)
.withAlarmRuleTemplateId("");
AlarmNotification alarmNotificationsbody = new AlarmNotification();

alarmNotificationsbody.withNotificationType(AlarmNotification.NotificationTypeEnum.fromValue("alarm_policy"))
.withRouteGroupEnable(true)
.withRouteGroupRule("aom_route_group_rule")
.withNotificationEnable(false)
.withBindNotificationRuleId("")
.withNotifyResolved(true)
.withNotifyTriggered(true)
.withNotifyFrequency(-1);
body.withPromInstanceld("0");
body.withMetricAlarmSpec(metricAlarmSpecbody);

body.withAlarmRuleType(AddOrUpdateAlarmRuleV4RequestBody.AlarmRuleTypeEnum.fromValue("metric"));
body.withAlarmRuleName("aom_alarm_rule");
body.withAlarmRuleEnable(true);
body.withAlarmRuleDescription("aom_alarm_rule");
body.withAlarmNotifications(alarmNotificationsbody);
request.withBody(body);
try {
    AddOrUpdateMetricOrEventAlarmRuleResponse response =
client.addOrUpdateMetricOrEventAlarmRule(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

- **Modify a metric alarm rule.**

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;
import java.util.Map;
import java.util.HashMap;

public class AddOrUpdateMetricOrEventAlarmRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
```

```
String sk = System.getenv("CLOUD_SDK_SK");
String projectId = "{project_id}";

ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
AddOrUpdateMetricOrEventAlarmRuleRequest request = new
AddOrUpdateMetricOrEventAlarmRuleRequest();
AddOrUpdateAlarmRuleV4RequestBody body = new AddOrUpdateAlarmRuleV4RequestBody();
CmdblInfo cmdbTriggerConditions = new CmdblInfo();
cmdbTriggerConditions.withAppld("");
Map<String, String> listTriggerConditionsThresholds = new HashMap<>();
listTriggerConditionsThresholds.put("Info", "100");
List<TriggerCondition> listMetricAlarmSpecTriggerConditions = new ArrayList<>();
listMetricAlarmSpecTriggerConditions.add(
    new TriggerCondition()
        .withMetricQueryMode(TriggerCondition.MetricQueryModeEnum.fromValue("PROM"))
        .withMetricNamespace("")
        .withMetricName("aom_metrics_total")
        .withMetricUnit("")
        .withMetricLabels()
        .withPromql("label_replace(avg_over_time(aom_metrics_total{instance=\"1117919565\"}
[59999ms]),\"_name_\",\"aom_metrics_total\",\",\",\"\")")
        .withTriggerTimes("4")
        .withTriggerInterval("15m")
        .withTriggerType(TriggerCondition.TriggerTypeEnum.fromValue("FIXED_RATE"))
        .withAggregationType("average")
        .withOperator(">")
        .withThresholds(listTriggerConditionsThresholds)
        .withAggregationWindow("5m")
        .withCmdb(cmdbTriggerConditions)
        .withQueryMatch("[{addMode=first, conditionCompare==,
conditionList=[{name=1117919565}], conditionValue=[{name=1117919565}], dimension=instance,
id=first, regExpress=null}]")
        .withQueryParam("{}")
        .withAomMonitorLevel("")
        .withAggregateType(TriggerCondition.AggregateTypeEnum.fromValue("by"))
        .withMetricStatisticMethod(TriggerCondition.MetricStatisticMethodEnum.fromValue("single
"))
        .withExpression("")
        .withMixPromql(""))
);
RecoveryCondition recoveryConditionsMetricAlarmSpec = new RecoveryCondition();
recoveryConditionsMetricAlarmSpec.withRecoveryTimeframe(2);
List<String> listAlarmTagsCustomAnnotations = new ArrayList<>();
listAlarmTagsCustomAnnotations.add("333=rrr");
List<String> listAlarmTagsCustomTags = new ArrayList<>();
listAlarmTagsCustomTags.add("333=rrr");
List<AlarmTags> listMetricAlarmSpecAlarmTags = new ArrayList<>();
listMetricAlarmSpecAlarmTags.add(
    new AlarmTags()
        .withAutoTags()
        .withCustomTags(listAlarmTagsCustomTags)
        .withCustomAnnotations(listAlarmTagsCustomAnnotations)
);
List<NoDataCondition> listMetricAlarmSpecNoDataConditions = new ArrayList<>();
listMetricAlarmSpecNoDataConditions.add(
    new NoDataCondition()
        .withNoDataTimeframe(3)
        .withNoDataAlertState(NoDataCondition.NoDataAlertStateEnum.fromValue("no_data"))
        .withNotifyNoData(true)
);
MetricAlarmSpec metricAlarmSpecbody = new MetricAlarmSpec();
```

```
metricAlarmSpecbody.withMonitorType(MetricAlarmSpec.MonitorTypeEnum.fromValue("all_metric"))
    .withNoDataConditions(listMetricAlarmSpecNoDataConditions)
    .withAlarmTags(listMetricAlarmSpecAlarmTags)
    .withRecoveryConditions(recoveryConditionsMetricAlarmSpec)
    .withTriggerConditions(listMetricAlarmSpecTriggerConditions)
    .withAlarmRuleTemplateBindEnable(false)
    .withAlarmRuleTemplateId("");
AlarmNotification alarmNotificationsbody = new AlarmNotification();

alarmNotificationsbody.withNotificationType(AlarmNotification.NotificationTypeEnum.fromValue("alarm_policy"))
    .withRouteGroupEnable(true)
    .withRouteGroupRule("aom_route_group_rule")
    .withNotificationEnable(false)
    .withBindNotificationRuleId("")
    .withNotifyResolved(true)
    .withNotifyTriggered(true)
    .withNotifyFrequency(-1);
body.withPromInstanceid("0");
body.withMetricAlarmSpec(metricAlarmSpecbody);

body.withAlarmRuleType(AddOrUpdateAlarmRuleV4RequestBody.AlarmRuleTypeEnum.fromValue("metric"));
body.withAlarmRuleName("aom_alarm_rule");
body.withAlarmRuleEnable(true);
body.withAlarmRuleDescription("aom_alarm_rule");
body.withAlarmNotifications(alarmNotificationsbody);
request.withBody(body);
try {
    AddOrUpdateMetricOrEventAlarmRuleResponse response =
client.addOrUpdateMetricOrEventAlarmRule(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
}
```

- Add an event alarm rule.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;
import java.util.Map;
import java.util.HashMap;

public class AddOrUpdateMetricOrEventAlarmRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        environment variables and decrypted during use to ensure security.
    }
}
```

```
// In this example, AK and SK are stored in environment variables for authentication. Before
running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
environment
String ak = System.getenv("CLOUD_SDK_AK");
String sk = System.getenv("CLOUD_SDK_SK");
String projectId = "{project_id}";

ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();

AddOrUpdateMetricOrEventAlarmRuleRequest request = new
AddOrUpdateMetricOrEventAlarmRuleRequest();
AddOrUpdateAlarmRuleV4RequestBody body = new AddOrUpdateAlarmRuleV4RequestBody();
Map<String, Integer> listTriggerConditionsThresholds = new HashMap<>();
listTriggerConditionsThresholds.put("Critical", 1);
Map<String, Integer> listTriggerConditionsThresholds1 = new HashMap<>();
listTriggerConditionsThresholds1.put("Critical", 1);
List<EventAlarmSpecTriggerCondition> listEventAlarmSpecTriggerConditions = new ArrayList<>();
listEventAlarmSpecTriggerConditions.add(
    new EventTriggerCondition()
        .withEventName("ScaleUpTimedOut")
        .withTriggerType(EventTriggerCondition.TriggerTypeEnum.fromValue("accumulative"))
        .withAggregationWindow(300L)
        .withOperator(">")
        .withThresholds(listTriggerConditionsThresholds1)
        .withFrequency("-1")
);
listEventAlarmSpecTriggerConditions.add(
    new EventTriggerCondition()
        .withEventName("VolumeResizeFailed")
        .withTriggerType(EventTriggerCondition.TriggerTypeEnum.fromValue("immediately"))
        .withThresholds(listTriggerConditionsThresholds)
);
Map<String, String> listMonitorObjectsMonitorObjects = new HashMap<>();
listMonitorObjectsMonitorObjects.put("event_name", "ScaleUpTimedOut; VolumeResizeFailed");
listMonitorObjectsMonitorObjects.put("event_type", "event");
List<Map<String, String>> listEventAlarmSpecMonitorObjects = new ArrayList<>();
listEventAlarmSpecMonitorObjects.add(listMonitorObjectsMonitorObjects);
EventAlarmSpec eventAlarmSpecbody = new EventAlarmSpec();

eventAlarmSpecbody.withAlarmSource(EventAlarmSpec.AlarmSourceEnum.fromValue("systemEvent"))
    .withEventSource("CCE")
    .withMonitorObjects(listEventAlarmSpecMonitorObjects)
    .withTriggerConditions(listEventAlarmSpecTriggerConditions);
AlarmNotification alarmNotificationsbody = new AlarmNotification();

alarmNotificationsbody.withNotificationType(AlarmNotification.NotificationTypeEnum.fromValue("dire
ct"))
    .withRouteGroupEnable(false)
    .withRouteGroupRule("")
    .withNotificationEnable(true)
    .withBindNotificationRuleId("aom_event_notification_rule")
    .withNotifyResolved(false)
    .withNotifyTriggered(false)
    .withNotifyFrequency(-1);
body.withEventAlarmSpec(eventAlarmSpecbody);

body.withAlarmRuleType(AddOrUpdateAlarmRuleV4RequestBody.AlarmRuleTypeEnum.fromValue("eve
nt"));
body.withAlarmRuleName("aom_event_alarm_rule");
body.withAlarmRuleEnable(true);
body.withAlarmRuleDescription("aom_alarm_event_rule");
body.withAlarmNotifications(alarmNotificationsbody);
```

```
request.withBody(body);
try {
    AddOrUpdateMetricOrEventAlarmRuleResponse response =
client.addOrUpdateMetricOrEventAlarmRule(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

- **Modify an event alarm rule.**

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;
import java.util.Map;
import java.util.HashMap;

public class AddOrUpdateMetricOrEventAlarmRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        AddOrUpdateMetricOrEventAlarmRuleRequest request = new
AddOrUpdateMetricOrEventAlarmRuleRequest();
        AddOrUpdateAlarmRuleV4RequestBody body = new AddOrUpdateAlarmRuleV4RequestBody();
        Map<String, Integer> listTriggerConditionsThresholds = new HashMap<>();
        listTriggerConditionsThresholds.put("Critical", 2);
        Map<String, Integer> listTriggerConditionsThresholds1 = new HashMap<>();
        listTriggerConditionsThresholds1.put("Critical", 1);
        List<EventTriggerCondition> listEventAlarmSpecTriggerConditions = new ArrayList<>();
        listEventAlarmSpecTriggerConditions.add(
            new EventTriggerCondition()
                .withEventName("ScaleUpTimedOut")
                .withTriggerType(EventTriggerCondition.TriggerTypeEnum.fromValue("accumulative"))
        );
    }
}
```

```
.withAggregationWindow(300L)
.withOperator(">")
.withThresholds(listTriggerConditionsThresholds1)
.withFrequency("-1")
);
listEventAlarmSpecTriggerConditions.add(
    new EventTriggerCondition()
        .withEventName("VolumeResizeFailed")
        .withTriggerType(EventTriggerCondition.TriggerTypeEnum.fromValue("immediately"))
        .withThresholds(listTriggerConditionsThresholds)
);
Map<String, String> listMonitorObjectsMonitorObjects = new HashMap<>();
listMonitorObjectsMonitorObjects.put("event_name", "ScaleUpTimedOut; VolumeResizeFailed");
listMonitorObjectsMonitorObjects.put("event_type", "event");
List<Map<String, String>> listEventAlarmSpecMonitorObjects = new ArrayList<>();
listEventAlarmSpecMonitorObjects.add(listMonitorObjectsMonitorObjects);
EventAlarmSpec eventAlarmSpecbody = new EventAlarmSpec();

eventAlarmSpecbody.withAlarmSource(EventAlarmSpec.AlarmSourceEnum.fromValue("systemEvent"))
    .withEventSource("CCE")
    .withMonitorObjects(listEventAlarmSpecMonitorObjects)
    .withTriggerConditions(listEventAlarmSpecTriggerConditions);
AlarmNotification alarmNotificationsbody = new AlarmNotification();

alarmNotificationsbody.withNotificationType(AlarmNotification.NotificationTypeEnum.fromValue("direct"))
    .withRouteGroupEnable(false)
    .withRouteGroupRule("")
    .withNotificationEnable(true)
    .withBindNotificationRuleId("aom_event_notification_rule")
    .withNotifyResolved(false)
    .withNotifyTriggered(false)
    .withNotifyFrequency(-1);
body.withEventAlarmSpec(eventAlarmSpecbody);

body.withAlarmRuleType(AddOrUpdateAlarmRuleV4RequestBody.AlarmRuleTypeEnum.fromValue("event"));
body.withAlarmRuleName("aom_event_alarm_rule");
body.withAlarmRuleEnable(true);
body.withAlarmRuleDescription("aom_alarm_event_rule");
body.withAlarmNotifications(alarmNotificationsbody);
request.withBody(body);
try {
    AddOrUpdateMetricOrEventAlarmRuleResponse response =
client.addOrUpdateMetricOrEventAlarmRule(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

- Add a metric alarm rule.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
```

```
from huaweicloudsckaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = AddOrUpdateMetricOrEventAlarmRuleRequest()
        cmdbTriggerConditions = CmdbInfo(
            app_id=""
        )
        listThresholdsTriggerConditions = {
            "Info": "100"
        }
        listTriggerConditionsMetricAlarmSpec = [
            TriggerCondition(
                metric_query_mode="PROM",
                metric_namespace="",
                metric_name="aom_metrics_total",
                metric_unit="",
                promql="label_replace(avg_over_time(aom_metrics_total{instance=\"1117919565\"}
[59999ms]),\"_name_\",\"aom_metrics_total\",\"\",\"\"),
                trigger_times="4",
                trigger_interval="15m",
                trigger_type="FIXED_RATE",
                aggregation_type="average",
                operator=">",
                thresholds=listThresholdsTriggerConditions,
                aggregation_window="5m",
                cmdb=cmdbTriggerConditions,
                query_match="[addMode=first, conditionCompare==,
conditionList=[{name=1117919565}], conditionValue=[{name=1117919565}], dimension=instance,
id=first, regExpress=null]",
                query_param="{",
                aom_monitor_level="",
                aggregate_type="by",
                metric_statistic_method="single",
                expression="",
                mix_promql=""
            )
        ]
        recoveryConditionsMetricAlarmSpec = RecoveryCondition(
            recovery_timeframe=2
        )
        listCustomAnnotationsAlarmTags = [
            "333=rrr"
        ]
        listCustomTagsAlarmTags = [
            "333=rrr"
        ]
        listAlarmTagsMetricAlarmSpec = [
            AlarmTags(
                custom_tags=listCustomTagsAlarmTags,
                custom_annotations=listCustomAnnotationsAlarmTags
            )
        ]
```



```

]
listNoDataConditionsMetricAlarmSpec = [
    NoDataCondition(
        no_data_timeframe=3,
        no_data_alert_state="no_data",
        notify_no_data=True
    )
]
metricAlarmSpecbody = MetricAlarmSpec(
    monitor_type="all_metric",
    no_data_conditions=listNoDataConditionsMetricAlarmSpec,
    alarm_tags=listAlarmTagsMetricAlarmSpec,
    recovery_conditions=recoveryConditionsMetricAlarmSpec,
    trigger_conditions=listTriggerConditionsMetricAlarmSpec,
    alarm_rule_template_bind_enable=False,
    alarm_rule_template_id=""
)
alarmNotificationsbody = AlarmNotification(
    notification_type="alarm_policy",
    route_group_enable=True,
    route_group_rule="aom_route_group_rule",
    notification_enable=False,
    bind_notification_rule_id="",
    notify_resolved=True,
    notify_triggered=True,
    notify_frequency=-1
)
request.body = AddOrUpdateAlarmRuleV4RequestBody(
    prom_instance_id="0",
    metric_alarm_spec=metricAlarmSpecbody,
    alarm_rule_type="metric",
    alarm_rule_name="aom_alarm_rule",
    alarm_rule_enable=True,
    alarm_rule_description="aom_alarm_rule",
    alarm_notifications=alarmNotificationsbody
)
response = client.add_or_update_metric_or_event_alarm_rule(request)
print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)

```

- **Modify a metric alarm rule.**

```

# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudskaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

```



```
        route_group_enable=True,
        route_group_rule="aom_route_group_rule",
        notification_enable=False,
        bind_notification_rule_id="",
        notify_resolved=True,
        notify_triggered=True,
        notify_frequency=-1
    )
    request.body = AddOrUpdateAlarmRuleV4RequestBody(
        prom_instance_id="0",
        metric_alarm_spec=metricAlarmSpecbody,
        alarm_rule_type="metric",
        alarm_rule_name="aom_alarm_rule",
        alarm_rule_enable=True,
        alarm_rule_description="aom_alarm_rule",
        alarm_notifications=alarmNotificationsbody
    )
    response = client.add_or_update_metric_or_event_alarm_rule(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

- Add an event alarm rule.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudskaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = AddOrUpdateMetricOrEventAlarmRuleRequest()
        listThresholdsTriggerConditions = {
            "Critical": 1
        }
        listThresholdsTriggerConditions1 = {
            "Critical": 1
        }
        listTriggerConditionsEventAlarmSpec = [
            EventTriggerCondition(
                event_name="ScaleUpTimedOut",
                trigger_type="accumulative",
                aggregation_window=300,
                operator=">",
                thresholds=listThresholdsTriggerConditions1,
                frequency="-1"
            ),
            EventTriggerCondition(
```

```
        event_name="VolumeResizeFailed",
        trigger_type="immediately",
        thresholds=listThresholdsTriggerConditions
    )
]
listMonitorObjectsMonitorObjects = {
    "event_name": "ScaleUpTimedOut; VolumeResizeFailed",
    "event_type": "event"
}
listMonitorObjectsEventAlarmSpec = [
    listMonitorObjectsMonitorObjects
]
eventAlarmSpecbody = EventAlarmSpec(
    alarm_source="systemEvent",
    event_source="CCE",
    monitor_objects=listMonitorObjectsEventAlarmSpec,
    trigger_conditions=listTriggerConditionsEventAlarmSpec
)
alarmNotificationsbody = AlarmNotification(
    notification_type="direct",
    route_group_enable=False,
    route_group_rule="",
    notification_enable=True,
    bind_notification_rule_id="aom_event_notification_rule",
    notify_resolved=False,
    notify_triggered=False,
    notify_frequency=-1
)
request.body = AddOrUpdateAlarmRuleV4RequestBody(
    event_alarm_spec=eventAlarmSpecbody,
    alarm_rule_type="event",
    alarm_rule_name="aom_event_alarm_rule",
    alarm_rule_enable=True,
    alarm_rule_description="aom_alarm_event_rule",
    alarm_notifications=alarmNotificationsbody
)
response = client.add_or_update_metric_or_event_alarm_rule(request)
print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

- **Modify an event alarm rule.**

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudskaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()
```

```
try:
    request = AddOrUpdateMetricOrEventAlarmRuleRequest()
    listThresholdsTriggerConditions = {
        "Critical": 2
    }
    listThresholdsTriggerConditions1 = {
        "Critical": 1
    }
    listTriggerConditionsEventAlarmSpec = [
        EventTriggerCondition(
            event_name="ScaleUpTimedOut",
            trigger_type="accumulative",
            aggregation_window=300,
            operator=">",
            thresholds=listThresholdsTriggerConditions1,
            frequency="-1"
        ),
        EventTriggerCondition(
            event_name="VolumeResizeFailed",
            trigger_type="immediately",
            thresholds=listThresholdsTriggerConditions
        )
    ]
    listMonitorObjectsMonitorObjects = {
        "event_name": "ScaleUpTimedOut; VolumeResizeFailed",
        "event_type": "event"
    }
    listMonitorObjectsEventAlarmSpec = [
        listMonitorObjectsMonitorObjects
    ]
    eventAlarmSpecbody = EventAlarmSpec(
        alarm_source="systemEvent",
        event_source="CCE",
        monitor_objects=listMonitorObjectsEventAlarmSpec,
        trigger_conditions=listTriggerConditionsEventAlarmSpec
    )
    alarmNotificationsbody = AlarmNotification(
        notification_type="direct",
        route_group_enable=False,
        route_group_rule="",
        notification_enable=True,
        bind_notification_rule_id="aom_event_notification_rule",
        notify_resolved=False,
        notify_triggered=False,
        notify_frequency=-1
    )
    request.body = AddOrUpdateAlarmRuleV4RequestBody(
        event_alarm_spec=eventAlarmSpecbody,
        alarm_rule_type="event",
        alarm_rule_name="aom_event_alarm_rule",
        alarm_rule_enable=True,
        alarm_rule_description="aom_alarm_event_rule",
        alarm_notifications=alarmNotificationsbody
    )
    response = client.add_or_update_metric_or_event_alarm_rule(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

- Add a metric alarm rule.

```
package main
```

```
import (
```



```
    QueryMatch: &queryMatchTriggerConditions,
    QueryParam: "{}",
    AomMonitorLevel: &aomMonitorLevelTriggerConditions,
    AggregateType: &aggregateTypeTriggerConditions,
    MetricStatisticMethod: &metricStatisticMethodTriggerConditions,
    Expression: &expressionTriggerConditions,
    MixPromql: &mixPromqlTriggerConditions,
  },
}
recoveryTimeframeRecoveryConditions:= int32(2)
recoveryConditionsMetricAlarmSpec := &model.RecoveryCondition{
  RecoveryTimeframe: &recoveryTimeframeRecoveryConditions,
}
var listCustomAnnotationsAlarmTags = []string{
  "333=rrr",
}
var listCustomTagsAlarmTags = []string{
  "333=rrr",
}
var listAlarmTagsMetricAlarmSpec = []model.AlarmTags{
  {
    CustomTags: &listCustomTagsAlarmTags,
    CustomAnnotations: &listCustomAnnotationsAlarmTags,
  },
}
noDataTimeframeNoDataConditions:= int32(3)
noDataAlertStateNoDataConditions:=
model.GetNoDataConditionNoDataAlertStateEnum().NO_DATA
notifyNoDataNoDataConditions:= true
var listNoDataConditionsMetricAlarmSpec = []model.NoDataCondition{
  {
    NoDataTimeframe: &noDataTimeframeNoDataConditions,
    NoDataAlertState: &noDataAlertStateNoDataConditions,
    NotifyNoData: &notifyNoDataNoDataConditions,
  },
}
alarmRuleTemplateBindEnableMetricAlarmSpec:= false
alarmRuleTemplateIdMetricAlarmSpec:= ""
metricAlarmSpecbody := &model.MetricAlarmSpec{
  MonitorType: model.GetMetricAlarmSpecMonitorTypeEnum().ALL_METRIC,
  NoDataConditions: &listNoDataConditionsMetricAlarmSpec,
  AlarmTags: listAlarmTagsMetricAlarmSpec,
  RecoveryConditions: recoveryConditionsMetricAlarmSpec,
  TriggerConditions: listTriggerConditionsMetricAlarmSpec,
  AlarmRuleTemplateBindEnable: &alarmRuleTemplateBindEnableMetricAlarmSpec,
  AlarmRuleTemplateId: &alarmRuleTemplateIdMetricAlarmSpec,
}
notificationEnableAlarmNotifications:= false
bindNotificationRuleIdAlarmNotifications:= ""
notifyResolvedAlarmNotifications:= true
notifyTriggeredAlarmNotifications:= true
notifyFrequencyAlarmNotifications:= int32(-1)
alarmNotificationsbody := &model.AlarmNotification{
  NotificationType: model.GetAlarmNotificationNotificationTypeEnum().ALARM_POLICY,
  RouteGroupEnable: true,
  RouteGroupRule: "aom_route_group_rule",
  NotificationEnable: &notificationEnableAlarmNotifications,
  BindNotificationRuleId: &bindNotificationRuleIdAlarmNotifications,
  NotifyResolved: &notifyResolvedAlarmNotifications,
  NotifyTriggered: &notifyTriggeredAlarmNotifications,
  NotifyFrequency: &notifyFrequencyAlarmNotifications,
}
promInstanceIdAddOrUpdateAlarmRuleV4RequestBody:= "0"
alarmRuleEnableAddOrUpdateAlarmRuleV4RequestBody:= true
alarmRuleDescriptionAddOrUpdateAlarmRuleV4RequestBody:= "aom_alarm_rule"
request.Body = &model.AddOrUpdateAlarmRuleV4RequestBody{
  PromInstanceId: &promInstanceIdAddOrUpdateAlarmRuleV4RequestBody,
  MetricAlarmSpec: metricAlarmSpecbody,
  AlarmRuleType:
```

```
model.GetAddOrUpdateAlarmRuleV4RequestBodyAlarmRuleTypeEnum()).METRIC,  
    AlarmRuleName: "aom_alarm_rule",  
    AlarmRuleEnable: &alarmRuleEnableAddOrUpdateAlarmRuleV4RequestBody,  
    AlarmRuleDescription: &alarmRuleDescriptionAddOrUpdateAlarmRuleV4RequestBody,  
    AlarmNotifications: alarmNotificationsbody,  
    }  
    response, err := client.AddOrUpdateMetricOrEventAlarmRule(request)  
    if err == nil {  
        fmt.Printf("%+v\n", response)  
    } else {  
        fmt.Println(err)  
    }  
}
```

- **Modify a metric alarm rule.**

```
package main  
  
import (  
    "fmt"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"  
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"  
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"  
)  
  
func main() {  
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or  
    // environment variables and decrypted during use to ensure security.  
    // In this example, AK and SK are stored in environment variables for authentication. Before  
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local  
    // environment  
    ak := os.Getenv("CLOUD_SDK_AK")  
    sk := os.Getenv("CLOUD_SDK_SK")  
    projectId := "{project_id}"  
  
    auth := basic.NewCredentialsBuilder().  
        WithAk(ak).  
        WithSk(sk).  
        WithProjectId(projectId).  
        Build()  
  
    client := aom.NewAomClient(  
        aom.AomClientBuilder().  
            WithRegion(region.ValueOf("<YOUR REGION>")).  
            WithCredential(auth).  
            Build())  
  
    request := &model.AddOrUpdateMetricOrEventAlarmRuleRequest{  
        appldCmdb:= ""  
        cmdbTriggerConditions := &model.CmdbInfo{  
            Appld: &appldCmdb,  
        }  
        var listThresholdsTriggerConditions = map[string]string{  
            "Info": "100",  
        }  
        triggerTimesTriggerConditions:= "4"  
        triggerIntervalTriggerConditions:= "15m"  
        triggerTypeTriggerConditions:= model.GetTriggerConditionTriggerTypeEnum().FIXED_RATE  
        aggregationTypeTriggerConditions:= "average"  
        operatorTriggerConditions:= ">"  
        aggregationWindowTriggerConditions:= "5m"  
        queryMatchTriggerConditions:= "[{addMode=first, conditionCompare=,  
        conditionList=[{name=1117919565}], conditionValue=[{name=1117919565}], dimension=instance,  
        id=first, regExpress=null])"  
        aomMonitorLevelTriggerConditions:= ""  
        aggregateTypeTriggerConditions:= model.GetTriggerConditionAggregateTypeEnum().BY  
        metricStatisticMethodTriggerConditions:=  
        model.GetTriggerConditionMetricStatisticMethodEnum().SINGLE  
        expressionTriggerConditions:= ""  
    }  
}
```



```

mixPromqlTriggerConditions:= ""
var listTriggerConditionsMetricAlarmSpec = []model.TriggerCondition{
    {
        MetricQueryMode: model.GetTriggerConditionMetricQueryModeEnum().PROM,
        MetricNamespace: "",
        MetricName: "aom_metrics_total",
        MetricUnit: "",
        Promql: "label_replace(avg_over_time(aom_metrics_total{instance=\"1117919565\"}
[59999ms]),\"_name_\",\"aom_metrics_total\",\"\");",
        TriggerTimes: &triggerTimesTriggerConditions,
        TriggerInterval: &triggerIntervalTriggerConditions,
        TriggerType: &triggerTypeTriggerConditions,
        AggregationType: &aggregationTypeTriggerConditions,
        Operator: &operatorTriggerConditions,
        Thresholds: listThresholdsTriggerConditions,
        AggregationWindow: &aggregationWindowTriggerConditions,
        Cmdb: cmdbTriggerConditions,
        QueryMatch: &queryMatchTriggerConditions,
        QueryParam: "{}",
        AomMonitorLevel: &aomMonitorLevelTriggerConditions,
        AggregateType: &aggregateTypeTriggerConditions,
        MetricStatisticMethod: &metricStatisticMethodTriggerConditions,
        Expression: &expressionTriggerConditions,
        MixPromql: &mixPromqlTriggerConditions,
    },
}
recoveryTimeframeRecoveryConditions:= int32(2)
recoveryConditionsMetricAlarmSpec := &model.RecoveryCondition{
    RecoveryTimeframe: &recoveryTimeframeRecoveryConditions,
}
var listCustomAnnotationsAlarmTags = []string{
    "333=rrr",
}
var listCustomTagsAlarmTags = []string{
    "333=rrr",
}
var listAlarmTagsMetricAlarmSpec = []model.AlarmTags{
    {
        CustomTags: &listCustomTagsAlarmTags,
        CustomAnnotations: &listCustomAnnotationsAlarmTags,
    },
}
noDataTimeframeNoDataConditions:= int32(3)
noDataAlertStateNoDataConditions:=
model.GetNoDataConditionNoDataAlertStateEnum().NO_DATA
notifyNoDataNoDataConditions:= true
var listNoDataConditionsMetricAlarmSpec = []model.NoDataCondition{
    {
        NoDataTimeframe: &noDataTimeframeNoDataConditions,
        NoDataAlertState: &noDataAlertStateNoDataConditions,
        NotifyNoData: &notifyNoDataNoDataConditions,
    },
}
alarmRuleTemplateBindEnableMetricAlarmSpec:= false
alarmRuleTemplateIdMetricAlarmSpec:= ""
metricAlarmSpecbody := &model.MetricAlarmSpec{
    MonitorType: model.GetMetricAlarmSpecMonitorTypeEnum().ALL_METRIC,
    NoDataConditions: &listNoDataConditionsMetricAlarmSpec,
    AlarmTags: listAlarmTagsMetricAlarmSpec,
    RecoveryConditions: recoveryConditionsMetricAlarmSpec,
    TriggerConditions: listTriggerConditionsMetricAlarmSpec,
    AlarmRuleTemplateBindEnable: &alarmRuleTemplateBindEnableMetricAlarmSpec,
    AlarmRuleTemplateId: &alarmRuleTemplateIdMetricAlarmSpec,
}
notificationEnableAlarmNotifications:= false
bindNotificationRuleIdAlarmNotifications:= ""
notifyResolvedAlarmNotifications:= true
notifyTriggeredAlarmNotifications:= true
notifyFrequencyAlarmNotifications:= int32(-1)

```

```

alarmNotificationsbody := &model.AlarmNotification{
    NotificationType: model.GetAlarmNotificationNotificationTypeEnum().ALARM_POLICY,
    RouteGroupEnable: true,
    RouteGroupRule: "aom_route_group_rule",
    NotificationEnable: &notificationEnableAlarmNotifications,
    BindNotificationRuleId: &bindNotificationRuleIdAlarmNotifications,
    NotifyResolved: &notifyResolvedAlarmNotifications,
    NotifyTriggered: &notifyTriggeredAlarmNotifications,
    NotifyFrequency: &notifyFrequencyAlarmNotifications,
}
promInstanceIdAddOrUpdateAlarmRuleV4RequestBody:= "0"
alarmRuleEnableAddOrUpdateAlarmRuleV4RequestBody:= true
alarmRuleDescriptionAddOrUpdateAlarmRuleV4RequestBody:= "aom_alarm_rule"
request.Body = &model.AddOrUpdateAlarmRuleV4RequestBody{
    PromInstanceId: &promInstanceIdAddOrUpdateAlarmRuleV4RequestBody,
    MetricAlarmSpec: metricAlarmSpecbody,
    AlarmRuleType:
model.GetAddOrUpdateAlarmRuleV4RequestBodyAlarmRuleTypeEnum().METRIC,
    AlarmRuleName: "aom_alarm_rule",
    AlarmRuleEnable: &alarmRuleEnableAddOrUpdateAlarmRuleV4RequestBody,
    AlarmRuleDescription: &alarmRuleDescriptionAddOrUpdateAlarmRuleV4RequestBody,
    AlarmNotifications: alarmNotificationsbody,
}
response, err := client.AddOrUpdateMetricOrEventAlarmRule(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}

```

- Add an event alarm rule.

```

package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AddOrUpdateMetricOrEventAlarmRuleRequest{}
    var listThresholdsTriggerConditions = map[string]int32{
        "Critical": int32(1),
    }
    var listThresholdsTriggerConditions1 = map[string]int32{

```

```
    "Critical": int32(1),
  }
  eventNameTriggerConditions:= "ScaleUpTimedOut"
  triggerTypeTriggerConditions:= model.GetEventTriggerConditionTriggerTypeEnum().ACCUMULATIVE
  aggregationWindowTriggerConditions:= int64(300)
  operatorTriggerConditions:= ">"
  frequencyTriggerConditions:= "-1"
  eventNameTriggerConditions1:= "VolumeResizeFailed"
  triggerTypeTriggerConditions1:= model.GetEventTriggerConditionTriggerTypeEnum().IMMEDIATELY
  var listTriggerConditionsEventAlarmSpec = []model.EventTriggerCondition{
    {
      EventName: &eventNameTriggerConditions,
      TriggerType: &triggerTypeTriggerConditions,
      AggregationWindow: &aggregationWindowTriggerConditions,
      Operator: &operatorTriggerConditions,
      Thresholds: listThresholdsTriggerConditions1,
      Frequency: &frequencyTriggerConditions,
    },
    {
      EventName: &eventNameTriggerConditions1,
      TriggerType: &triggerTypeTriggerConditions1,
      Thresholds: listThresholdsTriggerConditions,
    },
  }
  var listMonitorObjectsMonitorObjects = map[string]string{
    "event_name": "ScaleUpTimedOut; VolumeResizeFailed",
    "event_type": "event",
  }
  var listMonitorObjectsEventAlarmSpec = []map[string]string{
    listMonitorObjectsMonitorObjects,
  }
  alarmSourceEventAlarmSpec:= model.GetEventAlarmSpecAlarmSourceEnum().SYSTEM_EVENT
  eventSourceEventAlarmSpec:= "CCE"
  eventAlarmSpecbody := &model.EventAlarmSpec{
    AlarmSource: &alarmSourceEventAlarmSpec,
    EventSource: &eventSourceEventAlarmSpec,
    MonitorObjects: &listMonitorObjectsEventAlarmSpec,
    TriggerConditions: &listTriggerConditionsEventAlarmSpec,
  }
  notificationEnableAlarmNotifications:= true
  bindNotificationRuleIdAlarmNotifications:= "aom_event_notification_rule"
  notifyResolvedAlarmNotifications:= false
  notifyTriggeredAlarmNotifications:= false
  notifyFrequencyAlarmNotifications:= int32(-1)
  alarmNotificationsbody := &model.AlarmNotification{
    NotificationType: model.GetAlarmNotificationNotificationTypeEnum().DIRECT,
    RouteGroupEnable: false,
    RouteGroupRule: "",
    NotificationEnable: &notificationEnableAlarmNotifications,
    BindNotificationRuleId: &bindNotificationRuleIdAlarmNotifications,
    NotifyResolved: &notifyResolvedAlarmNotifications,
    NotifyTriggered: &notifyTriggeredAlarmNotifications,
    NotifyFrequency: &notifyFrequencyAlarmNotifications,
  }
  alarmRuleEnableAddOrUpdateAlarmRuleV4RequestBody:= true
  alarmRuleDescriptionAddOrUpdateAlarmRuleV4RequestBody:= "aom_alarm_event_rule"
  request.Body = &model.AddOrUpdateAlarmRuleV4RequestBody{
    EventAlarmSpec: eventAlarmSpecbody,
    AlarmRuleType: model.GetAddOrUpdateAlarmRuleV4RequestBodyAlarmRuleTypeEnum().EVENT,
    AlarmRuleName: "aom_event_alarm_rule",
    AlarmRuleEnable: &alarmRuleEnableAddOrUpdateAlarmRuleV4RequestBody,
    AlarmRuleDescription: &alarmRuleDescriptionAddOrUpdateAlarmRuleV4RequestBody,
    AlarmNotifications: alarmNotificationsbody,
  }
  response, err := client.AddOrUpdateMetricOrEventAlarmRule(request)
  if err == nil {
    fmt.Printf("%+v\n", response)
  } else {
    fmt.Println(err)
  }
}
```

- **Modify an event alarm rule.**

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AddOrUpdateMetricOrEventAlarmRuleRequest{}
    var listThresholdsTriggerConditions = map[string]int32{
        "Critical": int32(2),
    }
    var listThresholdsTriggerConditions1 = map[string]int32{
        "Critical": int32(1),
    }
    eventNameTriggerConditions:= "ScaleUpTimedOut"
    triggerTypeTriggerConditions:= model.GetEventTriggerConditionTriggerTypeEnum().ACCUMULATIVE
    aggregationWindowTriggerConditions:= int64(300)
    operatorTriggerConditions:= ">"
    frequencyTriggerConditions:= "-1"
    eventNameTriggerConditions1:= "VolumeResizeFailed"
    triggerTypeTriggerConditions1:= model.GetEventTriggerConditionTriggerTypeEnum().IMMEDIATELY
    var listTriggerConditionsEventAlarmSpec = []model.EventTriggerCondition{
        {
            EventName: &eventNameTriggerConditions,
            TriggerType: &triggerTypeTriggerConditions,
            AggregationWindow: &aggregationWindowTriggerConditions,
            Operator: &operatorTriggerConditions,
            Thresholds: listThresholdsTriggerConditions1,
            Frequency: &frequencyTriggerConditions,
        },
        {
            EventName: &eventNameTriggerConditions1,
            TriggerType: &triggerTypeTriggerConditions1,
            Thresholds: listThresholdsTriggerConditions,
        },
    }
    var listMonitorObjectsMonitorObjects = map[string]string{
        "event_name": "ScaleUpTimedOut; VolumeResizeFailed",
        "event_type": "event",
    }
}
```

```

var listMonitorObjectsEventAlarmSpec = []map[string]string{
    listMonitorObjectsMonitorObjects,
}
alarmSourceEventAlarmSpec:= model.GetEventAlarmSpecAlarmSourceEnum().SYSTEM_EVENT
eventSourceEventAlarmSpec:= "CCE"
eventAlarmSpecbody := &model.EventAlarmSpec{
    AlarmSource: &alarmSourceEventAlarmSpec,
    EventSource: &eventSourceEventAlarmSpec,
    MonitorObjects: &listMonitorObjectsEventAlarmSpec,
    TriggerConditions: &listTriggerConditionsEventAlarmSpec,
}
notificationEnableAlarmNotifications:= true
bindNotificationRuleIdAlarmNotifications:= "aom_event_notification_rule"
notifyResolvedAlarmNotifications:= false
notifyTriggeredAlarmNotifications:= false
notifyFrequencyAlarmNotifications:= int32(-1)
alarmNotificationsbody := &model.AlarmNotification{
    NotificationType: model.GetAlarmNotificationNotificationTypeEnum().DIRECT,
    RouteGroupEnable: false,
    RouteGroupRule: "",
    NotificationEnable: &notificationEnableAlarmNotifications,
    BindNotificationRuleId: &bindNotificationRuleIdAlarmNotifications,
    NotifyResolved: &notifyResolvedAlarmNotifications,
    NotifyTriggered: &notifyTriggeredAlarmNotifications,
    NotifyFrequency: &notifyFrequencyAlarmNotifications,
}
alarmRuleEnableAddOrUpdateAlarmRuleV4RequestBody:= true
alarmRuleDescriptionAddOrUpdateAlarmRuleV4RequestBody:= "aom_alarm_event_rule"
request.Body = &model.AddOrUpdateAlarmRuleV4RequestBody{
    EventAlarmSpec: eventAlarmSpecbody,
    AlarmRuleType: model.GetAddOrUpdateAlarmRuleV4RequestBodyAlarmRuleTypeEnum().EVENT,
    AlarmRuleName: "aom_event_alarm_rule",
    AlarmRuleEnable: &alarmRuleEnableAddOrUpdateAlarmRuleV4RequestBody,
    AlarmRuleDescription: &alarmRuleDescriptionAddOrUpdateAlarmRuleV4RequestBody,
    AlarmNotifications: alarmNotificationsbody,
}
response, err := client.AddOrUpdateMetricOrEventAlarmRule(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: Invalid request. The client should not repeat this request without modification.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.1.20 Deleting Metric or Event Alarm Rules

Function

This API is used to delete metric or event alarm rules. (Note: This API is available in CN East-Shanghai1.)

Calling Method

For details, see [Calling APIs](#).

URI

DELETE /v4/{project_id}/alarm-rules

Table 4-190 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-191 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Table 4-192 Request body parameters

Parameter	Mandatory	Type	Description
alarm_rules	Yes	Array of strings	Alarm rule name list.

Response Parameters

Status code: 200

Table 4-193 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_message	String	Error message.
resources	Array of ItemResult objects	Resource list.

Table 4-194 ItemResult

Parameter	Type	Description
alarm_rule_name	String	Alarm rule name.

Status code: 400

Table 4-195 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Status code: 500

Table 4-196 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Example Requests

- Delete a metric or event alarm rule.

```
https://{Endpoint}/v4/{project_id}/alarm-rules
```

```
{  
  "alarm_rules" : [ "aom_alarm_rule" ]  
}
```

- Delete multiple metric or event alarm rules.

```
https://{Endpoint}/v4/{project_id}/alarm-rules
```

```
{  
  "alarm_rules" : [ "aom_alarm_rule", "aom_alarm_rule2" ]  
}
```

Example Responses

Status code: 200

OK: The request is successful.

```
{  
  "error_code" : "200",  
  "error_message" : "success",  
  "resources" : [ {  
    "alarm_rule_name" : "aom_alarm_rule"  
  } ]  
}
```

Status code: 400

Bad Request: Invalid request. The client should not repeat this request without modification.

```
{  
  "error_code" : "AOM.02024016",  
  "error_msg" : "delete alarm rule name is empty",  
  "trace_id" : ""  
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{  
  "error_code" : "APM.00000500",  
  "error_msg" : "Internal Server Error",  
  "trace_id" : ""  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

- Delete a metric or event alarm rule.

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;
```



```
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;

public class DeleteMetricOrEventAlarmRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();

        DeleteMetricOrEventAlarmRuleRequest request = new DeleteMetricOrEventAlarmRuleRequest();
        DeleteAlarmRuleV4RequestBody body = new DeleteAlarmRuleV4RequestBody();
        List<String> listbodyAlarmRules = new ArrayList<>();
        listbodyAlarmRules.add("aom_alarm_rule");
        body.withAlarmRules(listbodyAlarmRules);
        request.withBody(body);
        try {
            DeleteMetricOrEventAlarmRuleResponse response =
                client.deleteMetricOrEventAlarmRule(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

- Delete multiple metric or event alarm rules.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;
```

```
public class DeleteMetricOrEventAlarmRuleSolution {
    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        DeleteMetricOrEventAlarmRuleRequest request = new DeleteMetricOrEventAlarmRuleRequest();
        DeleteAlarmRuleV4RequestBody body = new DeleteAlarmRuleV4RequestBody();
        List<String> listbodyAlarmRules = new ArrayList<>();
        listbodyAlarmRules.add("aom_alarm_rule");
        listbodyAlarmRules.add("aom_alarm_rule2");
        body.withAlarmRules(listbodyAlarmRules);
        request.withBody(body);
        try {
            DeleteMetricOrEventAlarmRuleResponse response =
            client.deleteMetricOrEventAlarmRule(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

- Delete a metric or event alarm rule.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"
```

```
credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = DeleteMetricOrEventAlarmRuleRequest()
    listAlarmRulesbody = [
        "aom_alarm_rule"
    ]
    request.body = DeleteAlarmRuleV4RequestBody(
        alarm_rules=listAlarmRulesbody
    )
    response = client.delete_metric_or_event_alarm_rule(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

- Delete multiple metric or event alarm rules.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteMetricOrEventAlarmRuleRequest()
        listAlarmRulesbody = [
            "aom_alarm_rule",
            "aom_alarm_rule2"
        ]
        request.body = DeleteAlarmRuleV4RequestBody(
            alarm_rules=listAlarmRulesbody
        )
        response = client.delete_metric_or_event_alarm_rule(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

- Delete a metric or event alarm rule.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteMetricOrEventAlarmRuleRequest{}
    var listAlarmRulesbody = []string{
        "aom_alarm_rule",
    }
    request.Body = &model.DeleteAlarmRuleV4RequestBody{
        AlarmRules: listAlarmRulesbody,
    }
    response, err := client.DeleteMetricOrEventAlarmRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

- Delete multiple metric or event alarm rules.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
```

```
ak := os.Getenv("CLOUD_SDK_AK")
sk := os.Getenv("CLOUD_SDK_SK")
projectId := "{project_id}"

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    WithProjectId(projectId).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.DeleteMetricOrEventAlarmRuleRequest{}
var listAlarmRulesbody = []string{
    "aom_alarm_rule",
    "aom_alarm_rule2",
}
request.Body = &model.DeleteAlarmRuleV4RequestBody{
    AlarmRules: listAlarmRulesbody,
}
response, err := client.DeleteMetricOrEventAlarmRule(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: Invalid request. The client should not repeat this request without modification.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.2 Monitoring

4.2.1 Querying Time Series Objects

Function

This API is used to query the time series objects that can be monitored in the system. You can specify a namespace, name, dimension, and resource ID (format: resType_resId). You can also specify the start position and the maximum number of returned records for a pagination query.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v2/{project_id}/series

Table 4-197 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-198 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	String	Maximum number of returned records. Value range: 1–1000. Default value: 1000.
offset	No	String	Start position of a pagination query. The value is a non-negative integer.

Request Parameters

Table 4-199 Request body parameters

Parameter	Mandatory	Type	Description
series	Yes	Array of QuerySeriesOptionParam objects	Array for querying time series objects.

Table 4-200 QuerySeriesOptionParam

Parameter	Mandatory	Type	Description
namespace	Yes	String	<p>Namespace of time series objects.</p> <p>Value range: PAAS.CONTAINER, PAAS.NODE, PAAS.SLA, PAAS.AGGR, or CUSTOMMETRICS.</p> <p>PAAS.CONTAINER: namespace of application time series objects.</p> <p>PAAS.NODE: namespace of node time series objects.</p> <p>PAAS.SLA: namespace of SLA time series objects.</p> <p>PAAS.AGGR: namespace of cluster time series objects.</p> <p>CUSTOMMETRICS: namespace of custom time series objects.</p>
metric_name	No	String	<p>Time series name. Length: 1 to 255 characters.</p> <p>Values: cpuUsage: CPU usage. cpuCoreUsed: used CPU cores. Custom time series names.</p>
dimensions	No	Array of DimensionSeries objects	<p>List of time series dimensions.</p> <p>You can call the <code>/v2/{project_id}/series</code> API to query the time series dimension list by namespace and metric_name.</p>

Table 4-201 DimensionSeries

Parameter	Mandatory	Type	Description
name	No	String	Dimension name.
value	No	String	Dimension value.

Response Parameters

Status code: 200

Table 4-202 Response body parameters

Parameter	Type	Description
series	Array of SeriesQueryItem-Result objects	List of time series objects.
meta_data	MetaDataSet object	Metadata, including pagination information.

Table 4-203 SeriesQueryItemResult

Parameter	Type	Description
namespace	String	Namespace.
dimensions	Array of DimensionSeries objects	Dimension list.
metric_name	String	Time series name.
unit	String	Time series unit.
dimension_value_hash	String	Time series hash value.

Table 4-204 DimensionSeries

Parameter	Type	Description
name	String	Dimension name.
value	String	Dimension value.

Table 4-205 MetaDataSet

Parameter	Type	Description
count	Integer	Number of returned records.
offset	Integer	Start of the next page, which is used for pagination. null: No more data.
total	Integer	Total number of records.
nextToken	Integer	Offset.

Status code: 400

Table 4-206 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Request ID.

Example Requests

Query time series objects by namespace and metric_name.

```
https://{Endpoint}/v2/{project_id}/series
{
  "series": [ {
    "namespace": "PAAS.CONTAINER",
    "metric_name": "aom_process_cpu_usage"
  } ]
}
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "meta_data": {
    "count": 1,
    "offset": null,
    "total": 1,
    "nextToken": 0
  },
  "series": [ {
    "namespace": "PAAS.CONTAINER",
    "metric_name": "cpuUsage",
    "unit": "Percent",
    "dimensions": [ {
      "name": "appName",
      "value": "appValue"
    } ],
    "dimension_value_hash": null
  } ]
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code": "AOM.04007101",
  "error_msg": "Invalid namespace",
  "error_type": "BAD_REQUEST",
  "trace_id": ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query time series objects by namespace and metric_name.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;

public class ListSeriesSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListSeriesRequest request = new ListSeriesRequest();
        SeriesAPIQueryItemParam body = new SeriesAPIQueryItemParam();
        List<QuerySeriesOptionParam> listbodySeries = new ArrayList<>();
        listbodySeries.add(
            new QuerySeriesOptionParam()
                .withNamespace("PAAS.CONTAINER")
                .withMetricName("aom_process_cpu_usage")
        );
        body.withSeries(listbodySeries);
        request.withBody(body);
        try {
            ListSeriesResponse response = client.listSeries(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

```
}  
}
```

Python

Query time series objects by namespace and metric_name.

```
# coding: utf-8  
  
import os  
from huaweicloudsdkcore.auth.credentials import BasicCredentials  
from huaweicloudsdfaom.v2.region.aom_region import AomRegion  
from huaweicloudsdkcore.exceptions import exceptions  
from huaweicloudsdfaom.v2 import *  
  
if __name__ == "__main__":  
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    variables and decrypted during use to ensure security.  
    # In this example, AK and SK are stored in environment variables for authentication. Before running this  
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak = os.environ["CLOUD_SDK_AK"]  
    sk = os.environ["CLOUD_SDK_SK"]  
    projectId = "{project_id}"  
  
    credentials = BasicCredentials(ak, sk, projectId)  
  
    client = AomClient.new_builder() \  
        .with_credentials(credentials) \  
        .with_region(AomRegion.value_of("<YOUR REGION>")) \  
        .build()  
  
    try:  
        request = ListSeriesRequest()  
        listSeriesbody = [  
            QuerySeriesOptionParam(  
                namespace="PAAS.CONTAINER",  
                metric_name="aom_process_cpu_usage"  
            )  
        ]  
        request.body = SeriesAPIQueryItemParam(  
            series=listSeriesbody  
        )  
        response = client.list_series(request)  
        print(response)  
    except exceptions.ClientRequestException as e:  
        print(e.status_code)  
        print(e.request_id)  
        print(e.error_code)  
        print(e.error_msg)
```

Go

Query time series objects by namespace and metric_name.

```
package main  
  
import (  
    "fmt"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"  
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"  
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"  
)  
  
func main() {  
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
```

```

variables and decrypted during use to ensure security.
// In this example, AK and SK are stored in environment variables for authentication. Before running this
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
ak := os.Getenv("CLOUD_SDK_AK")
sk := os.Getenv("CLOUD_SDK_SK")
projectId := "{project_id}"

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    WithProjectId(projectId).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.ListSeriesRequest{
    metricNameSeries:= "aom_process_cpu_usage"
    var listSeriesbody = []model.QuerySeriesOptionParam{
        {
            Namespace: "PAAS.CONTAINER",
            MetricName: &metricNameSeries,
        },
    }
    request.Body = &model.SeriesApiQueryItemParam{
        Series: listSeriesbody,
    }
    response, err := client.ListSeries(request)
    if err == nil {
        fmt.Printf("%v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Status Code	Description
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.2.2 Querying Time Series Data

Function

This API is used to query time series data within a specified period. You can specify a dimension or period to query.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v2/{project_id}/samples

Table 4-207 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-208 Query Parameters

Parameter	Mandatory	Type	Description
fill_value	No	String	Value filled for breakpoints in time series data. Default value: -1. -1: Breakpoints are filled with -1. 0: Breakpoints are filled with 0. null: Breakpoints are filled with null. average: Breakpoints are filled with the average value of the adjacent valid data. If there is no valid data, breakpoints are filled with null.

Request Parameters

Table 4-209 Request body parameters

Parameter	Mandatory	Type	Description
samples	Yes	Array of QuerySample objects	List of time series objects. A JSON array can contain up to 20 objects.
statistics	Yes	Array of strings	Statistic. Values: maximum, minimum, sum, average, and sampleCount.
period	Yes	Integer	Granularity for monitoring data, which is an enumerated value. Values: 60: The data monitoring granularity is 1 minute. 300: The data monitoring granularity is 5 minutes. 900: The data monitoring granularity is 15 minutes. 3600: The data monitoring granularity is 1 hour.

Parameter	Mandatory	Type	Description
time_range	Yes	String	<p>Time range specified to query data of the last N minutes when the client time is inconsistent with the server time. It can also be used to accurately query the data of a specified period.</p> <p>Example:</p> <ul style="list-style-type: none"> -1.-1.60: indicates that the data of the latest 60 minutes is queried. This query is based on the server time regardless of the current client time. 1650852000000.1650852300000.5: indicates the five minutes from 10:00:00 to 10:05:00 on April 25, 2022 GMT+08:00. <p>Format: startTimeInMillis.endTimeInMillis.durationInMinutes</p> <p>Parameter description:</p> <ul style="list-style-type: none"> startTimeInMillis: Start time of the query, in milliseconds. If this parameter is set to -1, the server calculates the start time as follows: endTimeInMillis – durationInMinutes x 60 x 1000. For example, -1.1650852300000.5 is equivalent to 1650852000000.1650852300000.5. endTimeInMillis: End time of the query, in milliseconds. If this parameter is set to -1, the server calculates the end time as follows: startTimeInMillis + durationInMinutes x 60 x 1000. If the calculated end time is later than the current system time, the current system time is used.

Parameter	Mandatory	Type	Description
			<p>For example, 1650852000000.-1.5 is equivalent to 1650852000000.1650852300000.5.</p> <ul style="list-style-type: none"> • durationInMinutes: Time span, in minutes. The value must be greater than 0 and greater than or equal to the result of "(endTimeInMillis - startTimeInMillis)/(60 x 1000) - 1". If both the start time and end time are set to -1, the system sets the end time to the current UTC time (in milliseconds) and calculates the start time as follows: endTimeInMillis - durationInMinutes x 60 x 1000. For example, -1.-1.60 indicates the latest 60 minutes. <p>Constraint: In a single request, the following condition must be met: durationInMinutes x 60 / period ≤ 1440</p>

Table 4-210 QuerySample

Parameter	Mandatory	Type	Description
namespace	Yes	String	<p>Namespace of time series objects.</p> <p>Value range: PAAS.CONTAINER, PAAS.NODE, PAAS.SLA, PAAS.AGGR, or CUSTOMMETRICS.</p> <p>PAAS.CONTAINER: namespace of application time series objects.</p> <p>PAAS.NODE: namespace of node time series objects.</p> <p>PAAS.SLA: namespace of SLA time series objects.</p> <p>PAAS.AGGR: namespace of cluster time series objects.</p> <p>CUSTOMMETRICS: namespace of custom time series objects.</p>
dimensions	Yes	Array of DimensionSeries objects	List of time series dimensions. You can call the <code>/v2/{project_id}/series</code> API to query the time series dimension list by namespace and metric_name.
metric_name	Yes	String	<p>Time series name. Length: 1 to 255 characters.</p> <p>Values: cpuUsage: CPU usage. cpuCoreUsed: used CPU cores. Custom time series names.</p>

Table 4-211 DimensionSeries

Parameter	Mandatory	Type	Description
name	No	String	Dimension name.
value	No	String	Dimension value.

Response Parameters

Status code: 200

Table 4-212 Response body parameters

Parameter	Type	Description
samples	Array of SampleDataValue objects	List of time series objects.

Table 4-213 SampleDataValue

Parameter	Type	Description
sample	QuerySample object	List of time series objects.
data_points	Array of MetricDataPoints objects	Time series data.

Table 4-214 QuerySample

Parameter	Type	Description
namespace	String	<p>Namespace of time series objects.</p> <p>Value range: PAAS.CONTAINER, PAAS.NODE, PAAS.SLA, PAAS.AGGR, or CUSTOMMETRICS.</p> <p>PAAS.CONTAINER: namespace of application time series objects.</p> <p>PAAS.NODE: namespace of node time series objects.</p> <p>PAAS.SLA: namespace of SLA time series objects.</p> <p>PAAS.AGGR: namespace of cluster time series objects.</p> <p>CUSTOMMETRICS: namespace of custom time series objects.</p>
dimensions	Array of DimensionSeries objects	List of time series dimensions.You can call the /v2/{project_id}/series API to query the time series dimension list by namespace and metric_name.

Parameter	Type	Description
metric_name	String	Time series name. Length: 1 to 255 characters. Values: cpuUsage: CPU usage. cpuCoreUsed: used CPU cores. Custom time series names.

Table 4-215 DimensionSeries

Parameter	Type	Description
name	String	Dimension name.
value	String	Dimension value.

Table 4-216 MetricDataPoints

Parameter	Type	Description
statistics	Array of StatisticValue objects	Statistic.
timestamp	Long	Timestamp.
unit	String	Time series unit.

Table 4-217 StatisticValue

Parameter	Type	Description
statistic	String	Statistic.
value	Double	Statistical result.

Status code: 400

Table 4-218 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.

Parameter	Type	Description
error_type	String	Error type.
trace_id	String	Request ID.

Example Requests

Query time series data in the last five minutes by namespace, metric_name, and dimensions.

```
https://{Endpoint}/v2/{project_id}/samples
{
  "samples": [
    {
      "namespace": "PAAS.CONTAINER",
      "metric_name": "aom_process_cpu_usage",
      "dimensions": [
        {
          "name": "appName",
          "value": "aomApp"
        }
      ]
    }
  ],
  "period": 60,
  "time_range": "-1.-1.5", // Last 5 minutes
  "statistics": [
    "sum"
  ]
}
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "samples": [ {
    "sample": {
      "namespace": "PAAS.CONTAINER",
      "metric_name": "aom_process_cpu_usage",
      "dimensions": [ {
        "name": "appName",
        "value": "aomApp"
      } ]
    }
  },
  "data_points": [ {
    "timestamp": 1694673300000,
    "unit": "Percent",
    "statistics": [ {
      "statistic": "sum",
      "value": "23"
    } ]
  } ]
} ]
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.04008105",
  "error_msg" : "Query metric data samples is invalid",
  "error_type" : "BAD_REQUEST",
  "trace_id" : ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query time series data in the last five minutes by namespace, metric_name, and dimensions.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;

public class ListSampleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListSampleRequest request = new ListSampleRequest();
        QuerySampleParam body = new QuerySampleParam();
        List<String> listbodyStatistics = new ArrayList<>();
        listbodyStatistics.add("sum");
        List<DimensionSeries> listSamplesDimensions = new ArrayList<>();
        listSamplesDimensions.add(
            new DimensionSeries()
                .withName("appName")
                .withValue("aomApp")
        );
        List<QuerySample> listbodySamples = new ArrayList<>();
        listbodySamples.add(
            new QuerySample()
```

```
        .withNamespace("PAAS.CONTAINER")
        .withDimensions(listSamplesDimensions)
        .withMetricName("aom_process_cpu_usage")
    );
    body.withTimeRange("-1.-1.5");
    body.withPeriod(60);
    body.withStatistics(listbodyStatistics);
    body.withSamples(listbodySamples);
    request.withBody(body);
    try {
        ListSampleResponse response = client.listSample(request);
        System.out.println(response.toString());
    } catch (ConnectionException e) {
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

Python

Query time series data in the last five minutes by namespace, metric_name, and dimensions.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListSampleRequest()
        listStatisticsbody = [
            "sum"
        ]
        listDimensionsSamples = [
            DimensionSeries(
                name="appName",
                value="aomApp"
            )
        ]
        listSamplesbody = [
            QuerySample(
```

```
        namespace="PAAS.CONTAINER",
        dimensions=listDimensionsSamples,
        metric_name="aom_process_cpu_usage"
    )
]
request.body = QuerySampleParam(
    time_range="-1.-1.5",
    period=60,
    statistics=listStatisticsbody,
    samples=listSamplesbody
)
response = client.list_sample(request)
print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Query time series data in the last five minutes by namespace, metric_name, and dimensions.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListSampleRequest{}
    var listStatisticsbody = []string{
        "sum",
    }
    nameDimensions:= "appName"
    valueDimensions:= "aomApp"
    var listDimensionsSamples = []model.DimensionSeries{
        {
            Name: &nameDimensions,
            Value: &valueDimensions,
        },
    }
    var listSamplesbody = []model.QuerySample{
```

```

    {
      Namespace: "PAAS.CONTAINER",
      Dimensions: listDimensionsSamples,
      MetricName: "aom_process_cpu_usage",
    },
  }
  request.Body = &model.QuerySampleParam{
    TimeRange: "-1.-1.5",
    Period: int32(60),
    Statistics: listStatisticsbody,
    Samples: listSamplesbody,
  }
  response, err := client.ListSample(request)
  if err == nil {
    fmt.Printf("%+v\n", response)
  } else {
    fmt.Println(err)
  }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.2.3 Querying Metrics

Function

This API is used to query the metrics that can be monitored in the system. You can query specific metrics by specifying a namespace, metric name, dimension, and

resource ID (format: resType_resId). You can also specify the start position and the maximum number of returned records for a pagination query.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/ams/metrics

Table 4-219 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-220 Query Parameters

Parameter	Mandatory	Type	Description
type	No	String	Metric query mode.
limit	No	String	Maximum number of returned records. Value range: 1-1000. Default value: 1000.
start	No	String	Start position of a pagination query. The value is a non-negative integer.

Request Parameters

Table 4-221 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> • application/json

Table 4-222 Request body parameters

Parameter	Mandatory	Type	Description
inventoryId	No	String	Resource ID, which must be in the format of resType_resId. Enumerated values of resType: host, application, instance, container, process, network, storage, and volume. When type (a URI parameter) is inventory, this parameter instead of metricItems is used for associated metric queries.
metricItems	No	Array of QueryMetricItemOptionParam objects	If the value of type in the URI is not inventory, metrics are queried based on the information carried by metricItems.

Table 4-223 QueryMetricItemOptionParam

Parameter	Mandatory	Type	Description
dimensions	No	Array of Dimension objects	List of metric dimensions.
metricName	No	String	Metric name. Length: 1 to 255 characters. Value range: cpuUsage, cpuCoreUsed, and other basic metrics provided by AOM. cpuUsage: CPU usage. cpuCoreUsed: used CPU cores. Custom metrics.

Parameter	Mandatory	Type	Description
namespace	Yes	String	Metric namespace. Values: PAAS.CONTAINER: namespace of component, instance, process, and container metrics. PAAS.NODE: namespace of host, network, disk, and file system metrics. PAAS.SLA: namespace of SLA metrics. PAAS.AGGR: namespace of cluster metrics. CUSTOMMETRICS: default namespace of custom metrics. Enumeration values: <ul style="list-style-type: none"> ● PAAS.CONTAINER ● PAAS.NODE ● PAAS.SLA ● PAAS.AGGR ● CUSTOMMETRICS

Table 4-224 Dimension

Parameter	Mandatory	Type	Description
name	Yes	String	Dimension name.
value	Yes	String	Dimension value.

Response Parameters

Status code: 200

Table 4-225 Response body parameters

Parameter	Type	Description
metaData	MetaDataSet object	Metadata, including pagination information.
metrics	Array of MetricItemResultAPI objects	Metric list.

Table 4-226 MetaDataSeries

Parameter	Type	Description
count	Integer	Number of returned records.
offset	Integer	Start of the next page, which is used for pagination. null: No more data.
total	Integer	Total number of records.
nextToken	Integer	Offset.

Table 4-227 MetricItemResultAPI

Parameter	Type	Description
dimensions	Array of Dimension objects	List of metric dimensions.
dimensionvaluehash	String	Metric hash value.
metricName	String	Metric name.
namespace	String	Namespace.
unit	String	Metric unit.

Table 4-228 Dimension

Parameter	Type	Description
name	String	Dimension name.
value	String	Dimension value.

Example Requests

- Query metrics by inventory ID.
`https://{Endpoint}/v1/{project_id}/ams/metrics`

```
{
  "metricItems": [ {
    "namespace": "PAAS.CONTAINER",
    "dimensions": [ {
      "name": "appName",
      "value": "aomApp"
    }, {
      "name": "clusterName",
      "value": "aomCluster"
    }
  ]
} ]
}
```

- Query metrics by namespace, appName, and clusterName.

```
https://{Endpoint}/v1/{project_id}/ams/metrics?type=inventory  
  
{  
  "inventoryId" : "application_xxxxxxxx-xxxx-xxxx-xxxx-xxxxx3fee10"  
}
```

Example Responses

Status code: 200

OK: The request is successful.

```
{  
  "errorCode" : "SVCSTG_AMS_2000000",  
  "errorMessage" : "success",  
  "metaData" : {  
    "count" : 1,  
    "offset" : 1,  
    "nextToken" : null,  
    "total" : 1  
  },  
  "metrics" : [ {  
    "namespace" : "PAAS.CONTAINER",  
    "metricName" : "aom_process_cpu_usage",  
    "unit" : "Percent",  
    "dimensions" : [ {  
      "name" : "appName",  
      "value" : "aomApp"  
    } ]  
  } ]  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

- Query metrics by inventory ID.

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v2.region.AomRegion;  
import com.huaweicloud.sdk.aom.v2.*;  
import com.huaweicloud.sdk.aom.v2.model.*;  
  
import java.util.List;  
import java.util.ArrayList;  
  
public class ListMetricItemsSolution {  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or  
        // environment variables and decrypted during use to ensure security.  
        // In this example, AK and SK are stored in environment variables for authentication. Before  
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local  
        // environment  
        String ak = System.getenv("CLOUD_SDK_AK");  
        String sk = System.getenv("CLOUD_SDK_SK");  
        String projectId = "{project_id}";
```

```
ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
ListMetricItemsRequest request = new ListMetricItemsRequest();
MetricAPIQueryItemParam body = new MetricAPIQueryItemParam();
List<Dimension> listMetricItemsDimensions = new ArrayList<>();
listMetricItemsDimensions.add(
    new Dimension()
        .withName("appName")
        .withValue("aomApp")
);
listMetricItemsDimensions.add(
    new Dimension()
        .withName("clusterName")
        .withValue("aomCluster")
);
List<QueryMetricItemOptionParam> listbodyMetricItems = new ArrayList<>();
listbodyMetricItems.add(
    new QueryMetricItemOptionParam()
        .withDimensions(listMetricItemsDimensions)
        .withNamespace(QueryMetricItemOptionParam.NamespaceEnum.fromValue("PAAS.CONTAINER"))
);
body.withMetricItems(listbodyMetricItems);
request.withBody(body);
try {
    ListMetricItemsResponse response = client.listMetricItems(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

- Query metrics by namespace, appName, and clusterName.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListMetricItemsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
```

```
environment
String ak = System.getenv("CLOUD_SDK_AK");
String sk = System.getenv("CLOUD_SDK_SK");
String projectId = "{project_id}";

ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
ListMetricItemsRequest request = new ListMetricItemsRequest();
MetricAPIQueryItemParam body = new MetricAPIQueryItemParam();
body.withInventoryId("application_XXXXXXXX-XXXX-XXXX-XXXX-XXXX3fee10");
request.withBody(body);
try {
    ListMetricItemsResponse response = client.listMetricItems(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

- Query metrics by inventory ID.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListMetricItemsRequest()
        listDimensionsMetricItems = [
            Dimension(
                name="appName",
```

```
        value="aomApp"
    ),
    Dimension(
        name="clusterName",
        value="aomCluster"
    )
]
listMetricItemsbody = [
    QueryMetricItemOptionParam(
        dimensions=listDimensionsMetricItems,
        namespace="PAAS.CONTAINER"
    )
]
request.body = MetricAPIQueryItemParam(
    metric_items=listMetricItemsbody
)
response = client.list_metric_items(request)
print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

- Query metrics by namespace, appName, and clusterName.

coding: utf-8

```
import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudskaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListMetricItemsRequest()
        request.body = MetricAPIQueryItemParam(
            inventory_id="application_XXXXXXXX-XXXX-XXXX-XXXX-XXXX3fee10"
        )
        response = client.list_metric_items(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

- Query metrics by inventory ID.

package main


```
import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListMetricItemsRequest{}
    var listDimensionsMetricItems = []model.Dimension{
        {
            Name: "appName",
            Value: "aomApp",
        },
        {
            Name: "clusterName",
            Value: "aomCluster",
        },
    }
    var listMetricItemsbody = []model.QueryMetricItemOptionParam{
        {
            Dimensions: &listDimensionsMetricItems,
            Namespace: model.GetQueryMetricItemOptionParamNamespaceEnum().PAAS_CONTAINER,
        },
    }
    request.Body = &model.MetricApiQueryItemParam{
        MetricItems: &listMetricItemsbody,
    }
    response, err := client.ListMetricItems(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

- Query metrics by namespace, appName, and clusterName.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)
```

```
func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListMetricItemsRequest{
        inventoryIdMetricApiQueryItemParam:= "application_XXXXXXXX-XXXX-XXXX-XXXX-XXXXX3fee10"
        request.Body = &model.MetricApiQueryItemParam{
            InventoryId: &inventoryIdMetricApiQueryItemParam,
        }
    }
    response, err := client.ListMetricItems(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Status Code	Description
503	Service Unavailable The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.2.4 Querying Monitoring Data

Function

This API is used to query monitoring data of metrics within a specified period. You can specify a dimension or period to query.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/ams/metricdata

Table 4-229 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-230 Query Parameters

Parameter	Mandatory	Type	Description
fillValue	No	String	<p>Value filled for breakpoints in monitoring data. Default value: -1.</p> <p>-1: Breakpoints are filled with -1.</p> <p>0: Breakpoints are filled with 0.</p> <p>null: Breakpoints are filled with null.</p> <p>average: Breakpoints are filled with the average value of the adjacent valid data. If there is no valid data, breakpoints are filled with null.</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> • -1 • 0 • null • average

Request Parameters

Table 4-231 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	<p>Content type, which is application/json.</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> • application/json

Table 4-232 Request body parameters

Parameter	Mandatory	Type	Description
metrics	Yes	Array of MetricQuery MetricParam objects	Metric list. A JSON array can contain up to 20 objects.

Parameter	Mandatory	Type	Description
period	Yes	Integer	Granularity for monitoring data, which is an enumerated value. Values: 60: The data monitoring granularity is 1 minute. 300: The data monitoring granularity is 5 minutes. 900: The data monitoring granularity is 15 minutes. 3600: The data monitoring granularity is 1 hour.
statistics	Yes	Array of strings	Statistic. Values: maximum, minimum, sum, average, and sampleCount.

Parameter	Mandatory	Type	Description
timerange	Yes	String	<p>Time range specified to query data of the last N minutes when the client time is inconsistent with the server time. It can also be used to accurately query the data of a specified period.</p> <p>Example:</p> <ul style="list-style-type: none"> -1.-1.60: indicates that the data of the latest 60 minutes is queried. This query is based on the server time regardless of the current client time. 1650852000000.1650852300000.5: indicates the five minutes from 10:00:00 to 10:05:00 on April 25, 2022 GMT+08:00. <p>Format: startTimeInMillis.endTimeInMillis.durationInMinutes</p> <p>Parameter description:</p> <ul style="list-style-type: none"> startTimeInMillis: Start time of the query, in milliseconds. If this parameter is set to -1, the server calculates the start time as follows: endTimeInMillis – durationInMinutes x 60 x 1000. For example, -1.1650852300000.5 is equivalent to 1650852000000.1650852300000.5. endTimeInMillis: End time of the query, in milliseconds. If this parameter is set to -1, the server calculates the end time as follows: startTimeInMillis + durationInMinutes x 60 x 1000. If the calculated end time is later than the current system time, the current system time is used.

Parameter	Mandatory	Type	Description
			<p>For example, 1650852000000.-1.5 is equivalent to 1650852000000.1650852300000.5.</p> <ul style="list-style-type: none"> durationInMinutes: Time span, in minutes. The value must be greater than 0 and greater than or equal to the result of "(endTimeInMillis - startTimeInMillis)/(60 x 1000) - 1". If both the start time and end time are set to -1, the system sets the end time to the current UTC time (in milliseconds) and calculates the start time as follows: endTimeInMillis - durationInMinutes x 60 x 1000. For example, -1.-1.60 indicates the latest 60 minutes. <p>Constraint: In a single request, the following condition must be met: durationInMinutes x 60 / period ≤ 1440</p>

Table 4-233 MetricQueryMetricParam

Parameter	Mandatory	Type	Description
dimensions	Yes	Array of Dimension objects	List of metric dimensions. Neither the array nor the name or value of any dimension in the array can be left blank.

Parameter	Mandatory	Type	Description
metricName	Yes	String	Metric name. Length: 1 to 255 characters. Value range: cpuUsage, cpuCoreUsed, and other basic metrics provided by AOM. cpuUsage: CPU usage. cpuCoreUsed: used CPU cores. Custom metrics.
namespace	Yes	String	Metric namespace. Values: PAAS.CONTAINER: namespace of component, instance, process, and container metrics. PAAS.NODE: namespace of host, network, disk, and file system metrics. PAAS.SLA: namespace of SLA metrics. PAAS.AGGR: namespace of cluster metrics. CUSTOMMETRICS: default namespace of custom metrics.

Table 4-234 Dimension

Parameter	Mandatory	Type	Description
name	Yes	String	Dimension name.
value	Yes	String	Dimension value.

Response Parameters

Status code: 200

Table 4-235 Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.

Parameter	Type	Description
metrics	Array of MetricDataValue objects	Metric list.

Table 4-236 MetricDataValue

Parameter	Type	Description
dataPoints	Array of MetricDataPoints objects	Key metric.
metric	MetricQueryMetricParam object	Query parameters.

Table 4-237 MetricDataPoints

Parameter	Type	Description
statistics	Array of StatisticValue objects	Statistic.
timestamp	Long	Timestamp.
unit	String	Time series unit.

Table 4-238 StatisticValue

Parameter	Type	Description
statistic	String	Statistic.
value	Double	Statistical result.

Table 4-239 MetricQueryMetricParam

Parameter	Type	Description
dimensions	Array of Dimension objects	List of metric dimensions. Neither the array nor the name or value of any dimension in the array can be left blank.

Parameter	Type	Description
metricName	String	Metric name. Length: 1 to 255 characters. Value range: cpuUsage, cpuCoreUsed, and other basic metrics provided by AOM. cpuUsage: CPU usage. cpuCoreUsed: used CPU cores. Custom metrics.
namespace	String	Metric namespace. Values: PAAS.CONTAINER: namespace of component, instance, process, and container metrics. PAAS.NODE: namespace of host, network, disk, and file system metrics. PAAS.SLA: namespace of SLA metrics. PAAS.AGGR: namespace of cluster metrics. CUSTOMMETRICS: default namespace of custom metrics.

Table 4-240 Dimension

Parameter	Type	Description
name	String	Dimension name.
value	String	Dimension value.

Example Requests

Query the monitoring data of **cpuUsage** in the **PAAS.CONTAINER** namespace in the last five minutes.

`https://{Endpoint}/v1/{project_id}/ams/metricdata`

```
{
  "metrics" : [ {
    "dimensions" : [ {
      "name" : "appName",
      "value" : "aomApp"
    } ],
    "metricName" : "cpuUsage",
    "namespace" : "PAAS.CONTAINER"
  } ],
  "period" : 60,
  "statistics" : [ "maximum", "minimum", "sum" ],
```

```
"timerange" : "-1.-1.5"  
}
```

Example Responses

Status code: 200

OK: The request is successful.

```
{  
  "errorCode" : "SVCSTG_AMS_2000000",  
  "errorMessage" : "success",  
  "metrics" : [ {  
    "metric" : {  
      "namespace" : "PAAS.CONTAINER",  
      "metricName" : "cpuUsage",  
      "dimensions" : [ {  
        "name" : "appName",  
        "value" : "aomApp"  
      } ]  
    }  
  } ],  
  "dataPoints" : [ {  
    "timestamp" : "1467892800000",  
    "unit" : "Percent",  
    "statistics" : [ {  
      "statistic" : "maximum",  
      "value" : "23"  
    } ]  
  } ]  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query the monitoring data of **cpuUsage** in the **PAAS.CONTAINER** namespace in the last five minutes.

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v2.region.AomRegion;  
import com.huaweicloud.sdk.aom.v2.*;  
import com.huaweicloud.sdk.aom.v2.model.*;  
  
import java.util.List;  
import java.util.ArrayList;  
  
public class ShowMetricsDataSolution {  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or  
        // environment variables and decrypted during use to ensure security.  
        // In this example, AK and SK are stored in environment variables for authentication. Before running  
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
        String ak = System.getenv("CLOUD_SDK_AK");  
        String sk = System.getenv("CLOUD_SDK_SK");  
        String projectId = "{project_id}";
```

```
ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
ShowMetricsDataRequest request = new ShowMetricsDataRequest();
QueryMetricDataParam body = new QueryMetricDataParam();
List<String> listbodyStatistics = new ArrayList<>();
listbodyStatistics.add("maximum");
listbodyStatistics.add("minimum");
listbodyStatistics.add("sum");
List<Dimension> listMetricsDimensions = new ArrayList<>();
listMetricsDimensions.add(
    new Dimension()
        .withName("appName")
        .withValue("aomApp")
);
List<MetricQueryMetricParam> listbodyMetrics = new ArrayList<>();
listbodyMetrics.add(
    new MetricQueryMetricParam()
        .withDimensions(listMetricsDimensions)
        .withMetricName("cpuUsage")
        .withNamespace("PAAS.CONTAINER")
);
body.withTimerange("-1.-1.5");
body.withStatistics(listbodyStatistics);
body.withPeriod(60);
body.withMetrics(listbodyMetrics);
request.withBody(body);
try {
    ShowMetricsDataResponse response = client.showMetricsData(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

Query the monitoring data of **cpuUsage** in the **PAAS.CONTAINER** namespace in the last five minutes.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
```

```
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
ak = os.environ["CLOUD_SDK_AK"]
sk = os.environ["CLOUD_SDK_SK"]
projectId = "{project_id}"

credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = ShowMetricsDataRequest()
    listStatisticsbody = [
        "maximum",
        "minimum",
        "sum"
    ]
    listDimensionsMetrics = [
        Dimension(
            name="appName",
            value="aomApp"
        )
    ]
    listMetricsbody = [
        MetricQueryMetricParam(
            dimensions=listDimensionsMetrics,
            metric_name="cpuUsage",
            namespace="PAAS.CONTAINER"
        )
    ]
    request.body = QueryMetricDataParam(
        timerange="-1.-1.5",
        statistics=listStatisticsbody,
        period=60,
        metrics=listMetricsbody
    )
    response = client.show_metrics_data(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Query the monitoring data of **cpuUsage** in the **PAAS.CONTAINER** namespace in the last five minutes.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
```

```

projectId := "{project_id}"

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    WithProjectId(projectId).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.ShowMetricsDataRequest{}
var listStatisticsbody = []string{
    "maximum",
    "minimum",
    "sum",
}
var listDimensionsMetrics = []model.Dimension{
    {
        Name: "appName",
        Value: "aomApp",
    },
}
var listMetricsbody = []model.MetricQueryMetricParam{
    {
        Dimensions: listDimensionsMetrics,
        MetricName: "cpuUsage",
        Namespace: "PAAS.CONTAINER",
    },
}
request.Body = &model.QueryMetricDataParam{
    Timerange: "-1.-1.5",
    Statistics: listStatisticsbody,
    Period: int32(60),
    Metrics: listMetricsbody,
}
response, err := client.ShowMetricsData(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.

Status Code	Description
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.2.5 Adding Monitoring Data

Function

This API is used to add one or more monitoring data records to a server.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/ams/report/metricdata

Table 4-241 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-242 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> • application/json

Table 4-243 Request body parameters

Parameter	Mandatory	Type	Description
[items]	Yes	Array of MetricDataItem objects	Metric.

Table 4-244 MetricDataItem

Parameter	Mandatory	Type	Description
collect_time	Yes	Long	Data collection time (UNIX timestamp, in ms), which ranges from the last 24 hours to the next 0.5 hour. The following requirement needs to be met: Current UTC time – Data collection time ≤ 24 hours, or Data collection time – Current UTC time ≤ 30 minutes If the data reporting time is earlier than 08:00 of the current day, only the data generated after 08:00 of the current day is displayed on the metric monitoring page.
metric	Yes	MetricItemInfo object	Metric details.
values	Yes	Array of ValueData objects	Metric value.

Table 4-245 MetricItemInfo

Parameter	Mandatory	Type	Description
dimensions	Yes	Array of Dimension2 objects	List of metric dimensions. A maximum of 50 dimensions are supported. Each dimension is in JSON format. The structure is as follows: dimension.name: 1–32 characters. dimension.value: 1–64 characters.
namespace	Yes	String	Metric namespace. It cannot contain colons (:). It must be in the format of "service.item". The value must contain 3 to 32 characters starting with a letter. Only letters, digits, and underscores (_) are allowed. In addition, "service" cannot be "PAAS".

Table 4-246 Dimension2

Parameter	Mandatory	Type	Description
name	Yes	String	Dimension name.
value	Yes	String	Dimension value.

Table 4-247 ValueData

Parameter	Mandatory	Type	Description
metric_name	Yes	String	Metric name. Length: 1 to 255 characters.
type	No	String	Data type. Values: int and float. Enumeration values: <ul style="list-style-type: none"> • int • float
unit	No	String	Data unit. Length: up to 32 characters.
value	Yes	Double	Metric value, which must be of a valid numeric type.

Response Parameters

Status code: 200

Table 4-248 Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.

Example Requests

Add a piece of monitoring data to the server. (In the following example, set "collect_time" to the latest timestamp.)

```
https://{Endpoint}/v1/{project_id}/ams/report/metricdata
```

```
[ {
  "metric": {
    "namespace": "NOPAAS.ESC",
    "dimensions": [ {
      "name": "instance_id",
      "value": "instance-101"
    } ]
  },
  "values": [ {
    "unit": "percent",
    "metric_name": "cpu_util",
    "type": "int",
    "value": 35
  } ],
  "collect_time": 1467787152000
} ]
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "errorCode": "SVCSTG_AMS_2000000",
  "errorMessage": "success"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add a piece of monitoring data to the server. (In the following example, set "collect_time" to the latest timestamp.)

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;

public class AddMetricDataSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        AddMetricDataRequest request = new AddMetricDataRequest();
        List<ValueData> listBodyValues = new ArrayList<>();
        listBodyValues.add(
            new ValueData()
                .withMetricName("cpu_util")
                .withType(ValueData.TypeEnum.fromValue("int"))
                .withUnit("percent")
                .withValue((double)35)
        );
        List<Dimension2> listMetricDimensions = new ArrayList<>();
        listMetricDimensions.add(
            new Dimension2()
                .withName("instance_id")
                .withValue("instance-101")
        );
        MetricItemInfo metricBody = new MetricItemInfo();
        metricBody.withDimensions(listMetricDimensions)
            .withNamespace("NOPAAS.ESC");
        List<MetricDataItem> listbodyBody = new ArrayList<>();
        listbodyBody.add(
            new MetricDataItem()
                .withCollectTime(1467787152000L)
                .withMetric(metricBody)
                .withValues(listBodyValues)
        );
        request.withBody(listbodyBody);
        try {
            AddMetricDataResponse response = client.addMetricData(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
```

```
e.printStackTrace();
System.out.println(e.getHttpStatusCode());
System.out.println(e.getRequestId());
System.out.println(e.getErrorCode());
System.out.println(e.getErrorMsg());
    }
}
}
```

Python

Add a piece of monitoring data to the server. (In the following example, set "collect_time" to the latest timestamp.)

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = AddMetricDataRequest()
        listValuesBody = [
            ValueData(
                metric_name="cpu_util",
                type="int",
                unit="percent",
                value=35
            )
        ]
        listDimensionsMetric = [
            Dimension2(
                name="instance_id",
                value="instance-101"
            )
        ]
        metricBody = MetricItemInfo(
            dimensions=listDimensionsMetric,
            namespace="NOPAAS.ESC"
        )
        listBodybody = [
            MetricDataItem(
                collect_time=1467787152000,
                metric=metricBody,
                values=listValuesBody
            )
        ]
        request.body = listBodybody
        response = client.add_metric_data(request)
        print(response)
```

```
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Add a piece of monitoring data to the server. (In the following example, set "collect_time" to the latest timestamp.)

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AddMetricDataRequest{}
    typeValues := model.GetValueDataTypeEnum().INT
    unitValues := "percent"
    var listValuesBody = []model.ValueData{
        {
            MetricName: "cpu_util",
            Type: &typeValues,
            Unit: &unitValues,
            Value: float64(35),
        },
    }
    var listDimensionsMetric = []model.Dimension2{
        {
            Name: "instance_id",
            Value: "instance-101",
        },
    }
    metricBody := &model.MetricItemInfo{
        Dimensions: listDimensionsMetric,
        Namespace: "NOPAAS.ESC",
    }
    var listBodybody = []model.MetricDataItem{
        {
            CollectTime: int64(1467787152000),
            Metric: metricBody,
            Values: listValuesBody,
        },
    }
}
```

```
    },  
  }  
  request.Body = &listBodybody  
  response, err := client.AddMetricData(request)  
  if err == nil {  
    fmt.Printf("%+v\n", response)  
  } else {  
    fmt.Println(err)  
  }  
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.2.6 Adding or Modifying One or More Service Discovery Rules

Function

This API is used to add or modify one or more service discovery rules. A maximum of 100 rules can be added to a project.

Calling Method

For details, see [Calling APIs](#).

URI

PUT /v1/{project_id}/inv/servicediscoveryrules

Table 4-249 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-250 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none">• application/json

Table 4-251 Request body parameters

Parameter	Mandatory	Type	Description
appRules	No	Array of AppRules objects	Service parameters.

Table 4-252 AppRules

Parameter	Mandatory	Type	Description
createTime	No	String	Creation time. When creating a service discovery rule, leave this parameter blank. When modifying a service discovery rule, enter the returned createTime.
enable	Yes	Boolean	Whether a rule is enabled. Values: true and false.

Parameter	Mandatory	Type	Description
eventName	Yes	String	aom_inventory_rules_event Rule event name. For service discovery, the fixed value is aom_inventory_rules_event.
hostid	No	Array of strings	Host ID. Currently, this parameter is not used and can be left blank.
id	Yes	String	Rule ID. When creating a service discovery rule, leave this parameter blank. When modifying a service discovery rule, enter a rule ID.
name	Yes	String	Rule name, which contains a maximum of 64 characters. It must start with a lowercase letter but cannot end with a hyphen (-). Only digits, lowercase letters, and hyphens are allowed.
projectid	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
spec	Yes	AppRulesSpec object	Rule details.
desc	No	String	Custom description

Table 4-253 AppRulesSpec

Parameter	Mandatory	Type	Description
appType	Yes	String	Service type, which is used only for rule classification and UI display. You can enter any field. For example, enter Java or Python by technology stack, or enter collector or database by function.
attrList	No	Array of strings	Attribute list. Currently, this parameter is not used and can be left blank. Values: cmdLine and env.

Parameter	Mandatory	Type	Description
detectLog	Yes	String	Whether to enable log collection. Values: true and false.
discoveryRule	Yes	Array of DiscoveryRule objects	Discovery rule. If the array contains multiple conditions, only the processes that meet all the conditions will be matched. If the value of checkType is cmdLine, set the value of checkMode to contain. checkContent is in the format of ["xxx"], indicating that the process must contain the xxx parameter. If the value of checkType is env, set the value of checkMode to contain. checkContent is in the format of ["k1","v1"], indicating that the process must contain the environment variable whose name is k1 and value is v1. If the value of checkType is scope, set the value of checkMode to equals. checkContent is in the format of ["hostId1","hostId2"], indicating that the rule takes effect only on specified nodes. If no nodes are specified, the rule applies to all nodes of the project.
isDefaultRule	Yes	String	Whether the rule is the default one. Values: true and false.
isDetect	Yes	String	Whether the scenario is a pre-check scenario. No rules will be saved in the pre-check scenario. This scenario is designed only to check whether a rule can detect node processes before it is delivered. Values: true and false.
logFileFix	Yes	Array of strings	Log file suffix. Values: log, trace, and out.

Parameter	Mandatory	Type	Description
logPathRule	No	Array of LogPathRule objects	Log path configuration rule. If cmdLineHash is a fixed string, logs in the specified log path or log file are collected. Otherwise, only the files whose names end with .log or .trace are collected. If the value of nameType is cmdLineHash, args is in the format of ["00001"] and value is in the format of ["/xxx/xx.log"], indicating that the log path is /xxx/xx.log when the startup command is 00001.
nameRule	Yes	NameRule object	Naming rules for discovered services and applications.
priority	Yes	Integer	Rule priority. Value range: 1 to 9999. Default value: 9999.
dataSource	No	String	Data source.
editable	No	String	Whether to support editing. Options: true and false.
aom_metric_relabel_configs	No	Object	Metric configuration.

Table 4-254 DiscoveryRule

Parameter	Mandatory	Type	Description
checkContent	Yes	Array of strings	Matched value.
checkMode	Yes	String	Match condition. Values: contain and equals.
checkType	Yes	String	Match type. Values: cmdLine, env, and scope.

Table 4-255 LogPathRule

Parameter	Mandatory	Type	Description
args	Yes	Array of strings	Command.

Parameter	Mandatory	Type	Description
nameType	Yes	String	Value type, which can be cmdLineHash.
value	Yes	Array of strings	Log path.

Table 4-256 NameRule

Parameter	Mandatory	Type	Description
appNameRule	Yes	Array of AppNameRule objects	Service name rule. If there are multiple objects in the array, the character strings extracted from these objects constitute the service name. If the value of nameType is cmdLine, args is in the format of ["start", "end"], indicating that the characters between start and end in the command are extracted. If the value of nameType is cmdLine, args is in the format of ["aa"], indicating that the environment variable named aa is extracted. If the value of nameType is str, args is in the format of ["fix"], indicating that the service name is suffixed with fix. If the value of nameType is cmdLineHash, args is in the format of ["0001"] and value is in the format of ["ser"], indicating that the service name is ser when the startup command is 0001.

Parameter	Mandatory	Type	Description
applicationNameRule	Yes	Array of ApplicationNameRule objects	Application name rule.If the value of nameType is cmdLine, args is in the format of ["start", "end"], indicating that the characters between start and end in the command are extracted.If the value of nameType is cmdLine, args is in the format of ["aa"], indicating that the environment variable named aa is extracted.If the value of nameType is str, args is in the format of ["fix"], indicating that the service name is suffixed with fix.If the value of nameType is cmdLineHash, args is in the format of ["0001"] and value is in the format of ["ser"], indicating that the application name is ser when the startup command is 0001.

Table 4-257 AppNameRule

Parameter	Mandatory	Type	Description
nameType	Yes	String	Value type. Values: cmdLineHash, cmdLine, env, and str.
args	Yes	Array of strings	Input value.
value	No	Array of strings	Service name, which is mandatory only when the value of nameType is cmdLineHash.

Table 4-258 ApplicationNameRule

Parameter	Mandatory	Type	Description
nameType	Yes	String	Value type. Values: cmdLineHash, cmdLine, env, and str.

Parameter	Mandatory	Type	Description
args	Yes	Array of strings	Input value.
value	No	Array of strings	Service name, which is mandatory only when the value of nameType is cmdLineHash.

Response Parameters

Status code: 200

Table 4-259 Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.
responseStatus	Integer	Response status code (no longer used).
id	Array of strings	Service discovery rule ID list. This parameter is used during cross-AZ configuration synchronization.
results	Array of Map<String,String > objects	Details about service discovery rules.

Example Requests

Add an application discovery rule whose name is **aom_inventory_rules_event** and project ID is **684fc87a79d7xxxx22e62a7da95b**.

`https://{endpoint}/v1/{project_id}/inv/servicediscoveryrules`

```
{
  "appRules": [ {
    "createTime": "1694705766730",
    "enable": true,
    "name": "ica**nt",
    "eventName": "aom_inventory_rules_event",
    "hostid": [ ],
    "id": "b53a5152-****-****-302367e04c0b",
    "projectid": "684fc87a79d7xxxx22e62a7da95b",
    "spec": {
      "detectLog": "true",
      "editable": null,
      "logPathRule": [ ],
      "priority": 9999,
      "attrList": [ "cmdLine" ],
      "nameRule": {
```

```
"appNameRule" : [ {
  "args" : [ "/opt/***** -DNFW=ica**nt" ],
  "nameType" : "cmdLineHash",
  "value" : [ "aicagentserver" ]
}],
"applicationNameRule" : [ {
  "args" : [ "/opt/***** -DNFW=ica**nt" ],
  "nameType" : "cmdLineHash",
  "value" : [ "aica**nt" ]
}]
},
"appType" : "",
"aom_metric_relabel_configs" : null,
"logFileFix" : [ "log", "trace", "out" ],
"isDetect" : "false",
"isDefaultRule" : null,
"dataSource" : null,
"discoveryRule" : [ {
  "checkType" : "cmdLine",
  "checkContent" : [ "-DNFW=ica**nt" ],
  "checkMode" : "contain"
}]
},
"desc" : "Custom description"
}]
}
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "errorCode" : "SVCSTG.INV.2000000",
  "errorMessage" : null,
  "id" : [ ],
  "results" : [ {
    "name" : "aom_inventory_rules_event",
    "id" : "b53a5152-****-****-302367e04c0b"
  } ]
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "errorCode" : "SVCSTG.INV.4000115",
  "errorMessage" : "apprule name has existed",
  "id" : [ ],
  "results" : [ ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add an application discovery rule whose name is **aom_inventory_rules_event** and project ID is **684fc87a79d7xxx22e62a7da95b**.

```
package com.huaweicloud.sdk.test;
```

```
import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;

public class AddOrUpdateServiceDiscoveryRulesSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        AddOrUpdateServiceDiscoveryRulesRequest request = new
AddOrUpdateServiceDiscoveryRulesRequest();
        AppRulesBody body = new AppRulesBody();
        List<String> listApplicationNameRuleValue = new ArrayList<>();
        listApplicationNameRuleValue.add("aica**nt");
        List<String> listApplicationNameRuleArgs = new ArrayList<>();
        listApplicationNameRuleArgs.add("/opt/***** -DNFW=ica**nt");
        List<ApplicationNameRule> listNameRuleApplicationNameRule = new ArrayList<>();
        listNameRuleApplicationNameRule.add(
            new ApplicationNameRule()
                .withNameType("cmdLineHash")
                .withArgs(listApplicationNameRuleArgs)
                .withValue(listApplicationNameRuleValue)
        );
        List<String> listAppNameRuleValue = new ArrayList<>();
        listAppNameRuleValue.add("aicagentserver");
        List<String> listAppNameRuleArgs = new ArrayList<>();
        listAppNameRuleArgs.add("/opt/***** -DNFW=ica**nt");
        List<AppNameRule> listNameRuleAppNameRule = new ArrayList<>();
        listNameRuleAppNameRule.add(
            new AppNameRule()
                .withNameType("cmdLineHash")
                .withArgs(listAppNameRuleArgs)
                .withValue(listAppNameRuleValue)
        );
        NameRule nameRuleSpec = new NameRule();
        nameRuleSpec.withAppNameRule(listNameRuleAppNameRule)
            .withApplicationNameRule(listNameRuleApplicationNameRule);
        List<String> listSpecLogFileFix = new ArrayList<>();
        listSpecLogFileFix.add("log");
        listSpecLogFileFix.add("trace");
        listSpecLogFileFix.add("out");
        List<String> listDiscoveryRuleCheckContent = new ArrayList<>();
        listDiscoveryRuleCheckContent.add("-DNFW=ica**nt");
        List<DiscoveryRule> listSpecDiscoveryRule = new ArrayList<>();
        listSpecDiscoveryRule.add(
```

```
        new DiscoveryRule()
            .withCheckContent(listDiscoveryRuleCheckContent)
            .withCheckMode("contain")
            .withCheckType("cmdLine")
    );
    List<String> listSpecAttrList = new ArrayList<>();
    listSpecAttrList.add("cmdLine");
    AppRulesSpec specAppRules = new AppRulesSpec();
    specAppRules.withAppType("")
        .withAttrList(listSpecAttrList)
        .withDetectLog("true")
        .withDiscoveryRule(listSpecDiscoveryRule)
        .withIsDetect("false")
        .withLogFileFix(listSpecLogFileFix)
        .withNameRule(nameRuleSpec)
        .withPriority(9999);
    List<AppRules> listbodyAppRules = new ArrayList<>();
    listbodyAppRules.add(
        new AppRules()
            .withCreateTime("1694705766730")
            .withEnable(true)
            .withEventName("aom_inventory_rules_event")
            .withHostid()
            .withId("b53a5152-****-****-****-302367e04c0b")
            .withName("ica**nt")
            .withProjectid("684fc87a79d7xxxx22e62a7da95b")
            .withSpec(specAppRules)
            .withDesc("Custom description")
    );
    body.withAppRules(listbodyAppRules);
    request.withBody(body);
    try {
        AddOrUpdateServiceDiscoveryRulesResponse response =
client.addOrUpdateServiceDiscoveryRules(request);
        System.out.println(response.toString());
    } catch (ConnectionException e) {
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
    }
}
```

Python

Add an application discovery rule whose name is **aom_inventory_rules_event** and project ID is **684fc87a79d7xxxx22e62a7da95b**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
```



```
sk = os.environ["CLOUD_SDK_SK"]
projectId = "{project_id}"

credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = AddOrUpdateServiceDiscoveryRulesRequest()
    listValueApplicationNameRule = [
        "aica**nt"
    ]
    listArgsApplicationNameRule = [
        "/opt/***** -DNFW=aica**nt"
    ]
    listApplicationNameRuleNameRule = [
        ApplicationNameRule(
            name_type="cmdLineHash",
            args=listArgsApplicationNameRule,
            value=listValueApplicationNameRule
        )
    ]
    listValueAppNameRule = [
        "aicagentserver"
    ]
    listArgsAppNameRule = [
        "/opt/***** -DNFW=aica**nt"
    ]
    listAppNameRuleNameRule = [
        AppNameRule(
            name_type="cmdLineHash",
            args=listArgsAppNameRule,
            value=listValueAppNameRule
        )
    ]
    nameRuleSpec = NameRule(
        app_name_rule=listAppNameRuleNameRule,
        application_name_rule=listApplicationNameRuleNameRule
    )
    listLogFileFixSpec = [
        "log",
        "trace",
        "out"
    ]
    listCheckContentDiscoveryRule = [
        "-DNFW=aica**nt"
    ]
    listDiscoveryRuleSpec = [
        DiscoveryRule(
            check_content=listCheckContentDiscoveryRule,
            check_mode="contain",
            check_type="cmdLine"
        )
    ]
    listAttrListSpec = [
        "cmdLine"
    ]
    specAppRules = AppRulesSpec(
        app_type="",
        attr_list=listAttrListSpec,
        detect_log="true",
        discovery_rule=listDiscoveryRuleSpec,
        is_detect="false",
        log_file_fix=listLogFileFixSpec,
        name_rule=nameRuleSpec,
        priority=9999
    )
```

```
)
listAppRulesbody = [
  AppRules(
    create_time="1694705766730",
    enable=True,
    event_name="aom_inventory_rules_event",
    id="b53a5152_****_****_****_302367e04c0b",
    name="ica**nt",
    projectid="684fc87a79d7xxxx22e62a7da95b",
    spec=specAppRules,
    desc="Custom description"
  )
]
request.body = AppRulesBody(
  app_rules=listAppRulesbody
)
response = client.add_or_update_service_discovery_rules(request)
print(response)
except exceptions.ClientRequestException as e:
  print(e.status_code)
  print(e.request_id)
  print(e.error_code)
  print(e.error_msg)
```

Go

Add an application discovery rule whose name is **aom_inventory_rules_event** and project ID is **684fc87a79d7xxxx22e62a7da95b**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AddOrUpdateServiceDiscoveryRulesRequest{}
    var listValueApplicationNameRule = []string{
        "aica**nt",
    }
    var listArgsApplicationNameRule = []string{
        "/opt/***** -DNFW=ica**nt",
    }
    var listApplicationNameRuleNameRule = []model.ApplicationNameRule{
```

```
{
  NameType: "cmdLineHash",
  Args: listArgsApplicationNameRule,
  Value: &listValueApplicationNameRule,
},
}
var listValueAppNameRule = []string{
  "aicagentserver",
}
var listArgsAppNameRule = []string{
  "/opt/***** -DNFW=ica**nt",
}
var listAppNameRuleNameRule = []model.AppNameRule{
  {
    NameType: "cmdLineHash",
    Args: listArgsAppNameRule,
    Value: &listValueAppNameRule,
  },
}
nameRuleSpec := &model.NameRule{
  AppNameRule: listAppNameRuleNameRule,
  ApplicationNameRule: listApplicationNameRuleNameRule,
}
var listLogFileFixSpec = []string{
  "log",
  "trace",
  "out",
}
var listCheckContentDiscoveryRule = []string{
  "-DNFW=ica**nt",
}
var listDiscoveryRuleSpec = []model.DiscoveryRule{
  {
    CheckContent: listCheckContentDiscoveryRule,
    CheckMode: "contain",
    CheckType: "cmdLine",
  },
}
var listAttrListSpec = []string{
  "cmdLine",
}
specAppRules := &model.AppRulesSpec{
  AppType: "",
  AttrList: &listAttrListSpec,
  DetectLog: "true",
  DiscoveryRule: listDiscoveryRuleSpec,
  IsDetect: "false",
  LogFileFix: listLogFileFixSpec,
  NameRule: nameRuleSpec,
  Priority: int32(9999),
}
createTimeAppRules:= "1694705766730"
descAppRules:= "Custom description"
var listAppRulesbody = []model.AppRules{
  {
    CreateTime: &createTimeAppRules,
    Enable: true,
    EventName: "aom_inventory_rules_event",
    Id: "b53a5152-****-****-302367e04c0b",
    Name: "ica**nt",
    Projectid: "684fc87a79d7xxx22e62a7da95b",
    Spec: specAppRules,
    Desc: &descAppRules,
  },
}
request.Body = &model.AppRulesBody{
  AppRules: &listAppRulesbody,
}
response, err := client.AddOrUpdateServiceDiscoveryRules(request)
```

```
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.2.7 Deleting a Service Discovery Rule

Function

This API is used to delete a service discovery rule.

Calling Method

For details, see [Calling APIs](#).

URI

DELETE /v1/{project_id}/inv/servicediscoveryrules

Table 4-260 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-261 Query Parameters

Parameter	Mandatory	Type	Description
appRulesIds	Yes	Array of strings	Discovery rule ID. Multiple IDs need to be separated by commas (.). The parameter cannot be empty.

Request Parameters

Table 4-262 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none">• application/json

Response Parameters

Status code: 200

Table 4-263 Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.
responseStatus	Integer	Response status code (no longer used).

Parameter	Type	Description
id	Array of strings	Service discovery rule ID list. This parameter is used during cross-AZ configuration synchronization.

Status code: 400

Table 4-264 Response body parameters

Parameter	Type	Description
-	String	

Status code: 401

Table 4-265 Response body parameters

Parameter	Type	Description
-	String	

Status code: 403

Table 4-266 Response body parameters

Parameter	Type	Description
-	String	

Status code: 404

Table 4-267 Response body parameters

Parameter	Type	Description
-	String	

Status code: 500

Table 4-268 Response body parameters

Parameter	Type	Description
-	String	

Status code: 503

Table 4-269 Response body parameters

Parameter	Type	Description
-	String	

Example Requests

Delete a service discovery rule with a specified ID.

```
https://{Endpoint}/v1/{project_id}/inv/servicediscoveryrules?appRulesIds=b788349e-62b2-xxxx-xxxx-02c611d59801
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "errorCode" : "SVCSTG.INV.2000000",
  "errorMessage" : null,
  "id" : [ ]
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "errorCode" : "SVCSTG.INV.40000118",
  "errorMessage" : "Request param is invalid",
  "trace_id" : ""
}
```

Status code: 404

Not Found: The requested resource could not be found. The client should not repeat this request without modification.

```
{
  "errorCode" : "SVCSTG.INV.4040000",
  "errorMessage" : "Inventory does not exists",
  "id" : [ ]
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "APM.00000500",
  "error_msg" : "Internal Server Error",
  "trace_id" : ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class DeleteserviceDiscoveryRulesSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        DeleteserviceDiscoveryRulesRequest request = new DeleteserviceDiscoveryRulesRequest();
        try {
            DeleteserviceDiscoveryRulesResponse response = client.deleteserviceDiscoveryRules(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```


Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdfaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdfaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteserviceDiscoveryRulesRequest()
        response = client.deleteservice_discovery_rules(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
```

```
Build()  
  
request := &model.DeleteserviceDiscoveryRulesRequest{}  
response, err := client.DeleteserviceDiscoveryRules(request)  
if err == nil {  
    fmt.Printf("%v\n", response)  
} else {  
    fmt.Println(err)  
}  
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
404	Not Found: The requested resource could not be found. The client should not repeat this request without modification.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Unauthorized: The authentication information is incorrect or invalid.

Error Codes

See [Error Codes](#).

4.2.8 Querying Existing Service Discovery Rules

Function

This API is used to query existing service discovery rules in the system.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/{project_id}/inv/servicediscoveryrules

Table 4-270 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-271 Query Parameters

Parameter	Mandatory	Type	Description
id	No	String	Service discovery rule ID, which corresponds to a service discovery rule. If this parameter is left blank, all service discovery rules in the project are returned.

Request Parameters

Table 4-272 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none">• application/json

Response Parameters

Status code: 200

Table 4-273 Response body parameters

Parameter	Type	Description
appRules	Array of AppRules objects	Rule information.

Parameter	Type	Description
errorCode	String	Response code. AOM_INVENTORY_2000000: Success response.
errorMessage	String	Response message.
id	Array of strings	Service discovery rule ID list. This parameter is used during cross-AZ configuration synchronization.

Table 4-274 AppRules

Parameter	Type	Description
createTime	String	Creation time. When creating a service discovery rule, leave this parameter blank. When modifying a service discovery rule, enter the returned createTime.
enable	Boolean	Whether a rule is enabled. Values: true and false.
eventName	String	aom_inventory_rules_event Rule event name. For service discovery, the fixed value is aom_inventory_rules_event.
hostid	Array of strings	Host ID. Currently, this parameter is not used and can be left blank.
id	String	Rule ID. When creating a service discovery rule, leave this parameter blank. When modifying a service discovery rule, enter a rule ID.
name	String	Rule name, which contains a maximum of 64 characters. It must start with a lowercase letter but cannot end with a hyphen (-). Only digits, lowercase letters, and hyphens are allowed.
projectid	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
spec	AppRulesSpec object	Rule details.
desc	String	Custom description

Table 4-275 AppRulesSpec

Parameter	Type	Description
appType	String	Service type, which is used only for rule classification and UI display. You can enter any field. For example, enter Java or Python by technology stack, or enter collector or database by function.
attrList	Array of strings	Attribute list. Currently, this parameter is not used and can be left blank. Values: cmdLine and env.
detectLog	String	Whether to enable log collection. Values: true and false.
discoveryRule	Array of DiscoveryRule objects	Discovery rule. If the array contains multiple conditions, only the processes that meet all the conditions will be matched. If the value of checkType is cmdLine, set the value of checkMode to contain. checkContent is in the format of ["xxx"], indicating that the process must contain the xxx parameter. If the value of checkType is env, set the value of checkMode to contain. checkContent is in the format of ["k1","v1"], indicating that the process must contain the environment variable whose name is k1 and value is v1. If the value of checkType is scope, set the value of checkMode to equals. checkContent is in the format of ["hostId1","hostId2"], indicating that the rule takes effect only on specified nodes. If no nodes are specified, the rule applies to all nodes of the project.
isDefaultRule	String	Whether the rule is the default one. Values: true and false.
isDetect	String	Whether the scenario is a pre-check scenario. No rules will be saved in the pre-check scenario. This scenario is designed only to check whether a rule can detect node processes before it is delivered. Values: true and false.
logFileFix	Array of strings	Log file suffix. Values: log, trace, and out.

Parameter	Type	Description
logPathRule	Array of LogPathRule objects	Log path configuration rule. If cmdLineHash is a fixed string, logs in the specified log path or log file are collected. Otherwise, only the files whose names end with .log or .trace are collected. If the value of nameType is cmdLineHash, args is in the format of ["00001"] and value is in the format of ["/xxx/xx.log"], indicating that the log path is /xxx/xx.log when the startup command is 00001.
nameRule	NameRule object	Naming rules for discovered services and applications.
priority	Integer	Rule priority. Value range: 1 to 9999. Default value: 9999.
dataSource	String	Data source.
editable	String	Whether to support editing. Options: true and false.
aom_metric_relabel_configs	Object	Metric configuration.

Table 4-276 DiscoveryRule

Parameter	Type	Description
checkContent	Array of strings	Matched value.
checkMode	String	Match condition. Values: contain and equals.
checkType	String	Match type. Values: cmdLine, env, and scope.

Table 4-277 LogPathRule

Parameter	Type	Description
args	Array of strings	Command.
nameType	String	Value type, which can be cmdLineHash.
value	Array of strings	Log path.

Table 4-278 NameRule

Parameter	Type	Description
appNameRule	Array of AppNameRule objects	Service name rule. If there are multiple objects in the array, the character strings extracted from these objects constitute the service name. If the value of nameType is cmdLine, args is in the format of ["start", "end"], indicating that the characters between start and end in the command are extracted.If the value of nameType is cmdLine, args is in the format of ["aa"], indicating that the environment variable named aa is extracted.If the value of nameType is str, args is in the format of ["fix"], indicating that the service name is suffixed with fix.If the value of nameType is cmdLineHash, args is in the format of ["0001"] and value is in the format of ["ser"], indicating that the service name is ser when the startup command is 0001.
applicationNameRule	Array of ApplicationNameRule objects	Application name rule.If the value of nameType is cmdLine, args is in the format of ["start", "end"], indicating that the characters between start and end in the command are extracted.If the value of nameType is cmdLine, args is in the format of ["aa"], indicating that the environment variable named aa is extracted.If the value of nameType is str, args is in the format of ["fix"], indicating that the service name is suffixed with fix.If the value of nameType is cmdLineHash, args is in the format of ["0001"] and value is in the format of ["ser"], indicating that the application name is ser when the startup command is 0001.

Table 4-279 AppNameRule

Parameter	Type	Description
nameType	String	Value type. Values: cmdLineHash, cmdLine, env, and str.
args	Array of strings	Input value.

Parameter	Type	Description
value	Array of strings	Service name, which is mandatory only when the value of nameType is cmdLineHash.

Table 4-280 ApplicationNameRule

Parameter	Type	Description
nameType	String	Value type. Values: cmdLineHash, cmdLine, env, and str.
args	Array of strings	Input value.
value	Array of strings	Service name, which is mandatory only when the value of nameType is cmdLineHash.

Status code: 400

Table 4-281 Response body parameters

Parameter	Type	Description
-	String	

Status code: 401

Table 4-282 Response body parameters

Parameter	Type	Description
-	String	

Status code: 403

Table 4-283 Response body parameters

Parameter	Type	Description
-	String	

Status code: 404

Table 4-284 Response body parameters

Parameter	Type	Description
-	String	

Status code: 500

Table 4-285 Response body parameters

Parameter	Type	Description
-	String	

Status code: 503

Table 4-286 Response body parameters

Parameter	Type	Description
-	String	

Example Requests

Query the application discovery rule whose ID is **-6066-****-8cc7-**.

`https://{endpoint}/v1/{project_id}/inv/servicediscoveryrules?id=*****-6066-****-8cc7-*****`

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "appRules": [ {
    "createTime": "1694705814424",
    "enable": true,
    "name": "icaaant",
    "eventName": "aom_inventory_rules_event",
    "hostid": [ ],
    "id": "*****-6066-****-8cc7-*****",
    "projectid": "684fc87a79d7xxx22e62a7da95b",
    "spec": {
      "detectLog": "true",
      "editable": null,
      "logPathRule": [ ],
      "priority": 9999,
      "attrList": [ "cmdLine" ],
      "nameRule": {
        "appNameRule": [ {
          "args": [ "/opt/***** -DNFW=ica**nt" ],
          "nameType": "cmdLineHash",
          "value": [ "aicagentserver" ]
        } ]
      }
    }
  } ]
}
```

```
    } ],
    "applicationNameRule" : [ {
      "args" : [ "/opt/***** -DNFW=ica**nt" ],
      "nameType" : "cmdLineHash",
      "value" : [ "aica**nt" ]
    } ]
  },
  "appType" : "",
  "aom_metric_relabel_configs" : null,
  "logFileFix" : [ "log", "trace", "out" ],
  "isDetect" : "false",
  "isDefaultRule" : null,
  "dataSource" : null,
  "discoveryRule" : [ {
    "checkType" : "cmdLine",
    "checkContent" : [ "-DNFW=ica**nt" ],
    "checkMode" : "contain"
  } ]
},
"desc" : "Custom description"
}],
"errorMessage" : null,
"errorCode" : "SVCSTG.INV.2000000",
"id" : [ ]
}
```

Status code: 404

Not Found: The requested resource could not be found. The client should not repeat this request without modification.

```
{
  "appRules" : [ ],
  "errorMessage" : "Inventory does not exists",
  "errorCode" : "SVCSTG.INV.4040000",
  "id" : [ ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListServiceDiscoveryRulesSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";
    }
}
```

```
ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
ListServiceDiscoveryRulesRequest request = new ListServiceDiscoveryRulesRequest();
try {
    ListServiceDiscoveryRulesResponse response = client.listServiceDiscoveryRules(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudskaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListServiceDiscoveryRulesRequest()
        response = client.list_service_discovery_rules(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
```

```

"fmt"
"github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
"github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListServiceDiscoveryRulesRequest{}
    response, err := client.ListServiceDiscoveryRules(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
404	Not Found: The requested resource could not be found. The client should not repeat this request without modification.

Status Code	Description
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.2.9 Adding a Threshold Rule

Function

This API is used to add a threshold rule.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v2/{project_id}/alarm-rules

Table 4-287 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-288 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> application/json

Table 4-289 Request body parameters

Parameter	Mandatory	Type	Description
action_enabled	No	Boolean	Whether to enable notification.
alarm_actions	No	Array of strings	List of alarm notifications.
alarm_advice	No	String	Alarm clearance suggestion.
alarm_description	No	String	Threshold rule description.
alarm_level	Yes	Integer	Alarm severity. Values: 1 (critical), 2 (major), 3 (minor), and 4 (warning). Enumeration values: <ul style="list-style-type: none"> • 1 • 2 • 3 • 4
alarm_rule_name	Yes	String	Threshold rule name. Enter a maximum of 100 characters and do not start or end with a special character. Only letters, digits, underscores (_), and hyphens (-) are allowed.
comparison_operator	Yes	String	Comparison operator. Options: <: less than the threshold; >: greater than the threshold; <=: less than or equal to the threshold; >=: greater than or equal to the threshold. Enumeration values: <ul style="list-style-type: none"> • < • > • <= • >=
dimensions	Yes	Array of Dimension objects	List of time series dimensions.
evaluation_periods	Yes	Integer	Interval.

Parameter	Mandatory	Type	Description
is_turn_on	No	Boolean	Whether to enable the threshold rule.
insufficient_data_actions	No	Array of strings	List of insufficient data notifications.
metric_name	Yes	String	Time series name. Length: 1 to 255 characters.
namespace	Yes	String	Time series objects' namespace.
ok_actions	No	Array of strings	List of normal status notifications.
period	Yes	Integer	Statistical period. Options: 60000: one minute; 300000: five minutes; 900000: 15 minutes; 3600000: one hour. Enumeration values: <ul style="list-style-type: none"> • 60000 • 300000 • 900000 • 3600000
statistic	Yes	String	Statistic. Enumeration values: <ul style="list-style-type: none"> • maximum • minimum • average • sum • sampleCount
threshold	Yes	String	Threshold value.
unit	Yes	String	Time series unit.

Table 4-290 Dimension

Parameter	Mandatory	Type	Description
name	Yes	String	Dimension name.
value	Yes	String	Dimension value.

Response Parameters

Status code: 200

Table 4-291 Response body parameters

Parameter	Type	Description
alarm_rule_id	Long	Threshold rule ID.

Status code: 400

Table 4-292 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Trace ID, which is used to search for logs and locate faults. If 2xx is returned, trace_id is empty. If 4xx , trace_id is not empty.

Status code: 500

Table 4-293 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Trace ID, which is used to search for logs and locate faults. If 2xx is returned, trace_id is empty. If 4xx , trace_id is not empty.

Example Requests

Add a threshold rule whose name is **testaom**, alarm severity is **3**, namespace is **PAAS.CONTAINER**, and statistical mode is **average**.

```
https://{Endpoint}/v2/{project_id}/alarm-rules
```



```
{
  "is_turn_on" : true,
  "action_enabled" : false,
  "alarm_actions" : [ ],
  "alarm_advice" : "",
  "alarm_description" : "",
  "alarm_level" : 3,
  "alarm_rule_name" : "aom_rule",
  "comparison_operator" : ">=",
  "dimensions" : [ {
    "name" : "appName",
    "value" : "rhm-broker"
  } ],
  "evaluation_periods" : 1,
  "insufficient_data_actions" : [ ],
  "metric_name" : "cpuCoreLimit",
  "namespace" : "PAAS.CONTAINER",
  "ok_actions" : [ ],
  "period" : 60000,
  "statistic" : "average",
  "threshold" : 0,
  "unit" : "Core"
}
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "alarm_rule_id" : 1134050083814244400
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.02001102",
  "error_msg" : "this Threshold rule name has been existed",
  "error_type" : "BAD_REQUEST",
  "trace_id" : ""
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "AOM.02001500",
  "error_msg" : "internal server error",
  "error_type" : "INTERNAL_SERVER_ERROR",
  "trace_id" : ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add a threshold rule whose name is **testaom**, alarm severity is **3**, namespace is **PAAS.CONTAINER**, and statistical mode is **average**.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;

public class AddAlarmRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        AddAlarmRuleRequest request = new AddAlarmRuleRequest();
        AlarmRuleParam body = new AlarmRuleParam();
        List<Dimension> listbodyDimensions = new ArrayList<>();
        listbodyDimensions.add(
            new Dimension()
                .withName("appName")
                .withValue("rhm-broker")
        );
        body.withUnit("Core");
        body.withThreshold("0");
        body.withStatistic(AlarmRuleParam.StatisticEnum.fromValue("average"));
        body.withPeriod(AlarmRuleParam.PeriodEnum.NUMBER_60000);
        body.withNamespace("PAAS.CONTAINER");
        body.withMetricName("cpuCoreLimit");
        body.withIsTurnOn(true);
        body.withEvaluationPeriods(1);
        body.withDimensions(listbodyDimensions);
        body.withComparisonOperator(AlarmRuleParam.ComparisonOperatorEnum.fromValue(">="));
        body.withAlarmRuleName("aom_rule");
        body.withAlarmLevel(AlarmRuleParam.AlarmLevelEnum.NUMBER_3);
        body.withAlarmDescription("");
        body.withAlarmAdvice("");
        body.withActionEnabled(false);
        request.withBody(body);
        try {
            AddAlarmRuleResponse response = client.addAlarmRule(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
        }
    }
}
```

```
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

Python

Add a threshold rule whose name is **testaom**, alarm severity is **3**, namespace is **PAAS.CONTAINER**, and statistical mode is **average**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdfaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdfaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = AddAlarmRuleRequest()
        listDimensionsbody = [
            Dimension(
                name="appName",
                value="rhm-broker"
            )
        ]
        request.body = AlarmRuleParam(
            unit="Core",
            threshold="0",
            statistic="average",
            period=60000,
            namespace="PAAS.CONTAINER",
            metric_name="cpuCoreLimit",
            is_turn_on=True,
            evaluation_periods=1,
            dimensions=listDimensionsbody,
            comparison_operator=">=",
            alarm_rule_name="aom_rule",
            alarm_level=3,
            alarm_description="",
            alarm_advice="",
            action_enabled=False
        )
        response = client.add_alarm_rule(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Add a threshold rule whose name is **testaom**, alarm severity is **3**, namespace is **PAAS.CONTAINER**, and statistical mode is **average**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AddAlarmRuleRequest{}
    var listDimensionsbody = []model.Dimension{
        {
            Name: "appName",
            Value: "rhm-broker",
        },
    },
    }
    isTurnOnAlarmRuleParam:= true
    alarmDescriptionAlarmRuleParam:= ""
    alarmAdviceAlarmRuleParam:= ""
    actionEnabledAlarmRuleParam:= false
    request.Body = &model.AlarmRuleParam{
        Unit: "Core",
        Threshold: "0",
        Statistic: model.GetAlarmRuleParamStatisticEnum().AVERAGE,
        Period: model.GetAlarmRuleParamPeriodEnum().E_60000,
        Namespace: "PAAS.CONTAINER",
        MetricName: "cpuCoreLimit",
        IsTurnOn: &isTurnOnAlarmRuleParam,
        EvaluationPeriods: int32(1),
        Dimensions: listDimensionsbody,
        ComparisonOperator:
model.GetAlarmRuleParamComparisonOperatorEnum().GREATER_THAN_OR_EQUAL_TO,
        AlarmRuleName: "aom_rule",
        AlarmLevel: model.GetAlarmRuleParamAlarmLevelEnum().E_3,
        AlarmDescription: &alarmDescriptionAlarmRuleParam,
        AlarmAdvice: &alarmAdviceAlarmRuleParam,
        ActionEnabled: &actionEnabledAlarmRuleParam,
    }
    response, err := client.AddAlarmRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    }
}
```

```
} else {  
    fmt.Println(err)  
}  
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.2.10 Querying the Threshold Rule List

Function

This API is used to query the threshold rule list.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v2/{project_id}/alarm-rules

Table 4-294 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-295 Query Parameters

Parameter	Mandatory	Type	Description
offset	No	String	Pagination information.
limit	No	Integer	Maximum number of returned records. Value range: 1–1000. Default value: 1000.

Request Parameters

Table 4-296 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none">• application/json

Response Parameters

Status code: 200

Table 4-297 Response body parameters

Parameter	Type	Description
meta_data	MetaData object	Metadata, including pagination information.
thresholds	Array of QueryAlarmResult objects	Parameters specified for querying a threshold rule.

Table 4-298 MetaData

Parameter	Type	Description
count	Integer	Number of returned records.
start	String	Start of the next page, which is used for pagination. null: No more data.
total	Integer	Total number of records.

Table 4-299 QueryAlarmResult

Parameter	Type	Description
action_enabled	Boolean	Whether to enable notification.
alarm_actions	Array of strings	List of alarm notifications.
alarm_advice	String	Alarm clearance suggestion.
alarm_description	String	Threshold rule description.
alarm_level	String	Alarm severity.
alarm_rule_id	String	Threshold rule ID.
alarm_rule_name	String	Threshold rule name.
comparison_operator	String	Comparison operator.
dimensions	Array of Dimension objects	List of time series dimensions.
evaluation_periods	Integer	Interval.
id_turn_on	Boolean	Whether to enable the threshold rule.
insufficient_data_actions	Array of strings	List of insufficient data notifications.
metric_name	String	Time series name.
namespace	String	Time series objects' namespace.
ok_actions	Array of strings	List of normal status notifications.
period	Integer	Statistical period.
policy_name	String	Threshold rule name.
resources	Array of strings	Resource information (discarded).
state_reason	String	Cause description.

Parameter	Type	Description
state_updated_timestamp	String	Time when the status was updated.
state_value	String	Service status.
statistic	String	Statistic.
threshold	String	Threshold value.
type	String	Threshold rule type.
unit	String	Threshold unit.

Table 4-300 Dimension

Parameter	Type	Description
name	String	Dimension name.
value	String	Dimension value.

Status code: 400**Table 4-301** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Trace ID, which is used to search for logs and locate faults. If 2xx is returned, trace_id is empty. If 4xx , trace_id is not empty.

Example Requests

Obtain the alarm rule list of a user whose ID is **Project_Id**.

https://{EndPoint_Id}/v2/{Project_Id}/alarm-rules

Example Responses

Status code: 200

OK: The request is successful.


```
{
  "meta_data" : [ {
    "count" : 10,
    "total" : 100
  } ],
  "thresholds" : [ {
    "action_enabled" : false,
    "alarm_actions" : null,
    "alarm_advice" : null,
    "alarm_description" : null,
    "alarm_level" : 3,
    "alarm_rule_id" : 2137,
    "alarm_rule_name" : "aom_rule",
    "comparison_operator" : ">=",
    "dimensions" : [ {
      "name" : "appName"
    } ], {
      "value" : "rhm-broker"
    } ],
    "evaluation_periods" : 1,
    "id_turn_on" : true,
    "insufficient_data_actions" : null,
    "metric_name" : "cpuCoreLimit",
    "namespace" : "PAAS.CONTAINER",
    "ok_actions" : null,
    "period" : 60000,
    "policy_name" : "23,",
    "resources" : [ ],
    "state_reason" : null,
    "state_updated_timestamp" : null,
    "state_value" : "alarm",
    "statistic" : "average",
    "threshold" : 0,
    "type" : "single,",
    "unit" : "Core"
  } ]
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.02003SVCSTG_AMS_4000123",
  "error_msg" : "The rule does not exist",
  "error_type" : "BAD_REQUEST",
  "trace_id" : ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;
```

```
public class ListAlarmRuleSolution {
    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListAlarmRuleRequest request = new ListAlarmRuleRequest();
        try {
            ListAlarmRuleResponse response = client.listAlarmRule(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListAlarmRuleRequest()
        response = client.list_alarm_rule(request)
```

```
print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAlarmRuleRequest{}
    response, err := client.ListAlarmRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.

Status Code	Description
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.2.11 Modifying a Threshold Rule

Function

This API is used to modify a threshold rule.

Calling Method

For details, see [Calling APIs](#).

URI

PUT /v2/{project_id}/alarm-rules

Table 4-302 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-303 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> • application/json

Table 4-304 Request body parameters

Parameter	Mandatory	Type	Description
action_enabled	No	Boolean	Whether to enable notification.
alarm_actions	No	Array of strings	List of alarm notifications.
alarm_advice	No	String	Alarm clearance suggestion, which contains a maximum of 255 characters.
alarm_description	No	String	Threshold rule description, which contains a maximum of 1024 characters.
alarm_level	Yes	Integer	Alarm severity. Values: 1 (critical), 2 (major), 3 (minor), and 4 (warning). Enumeration values: <ul style="list-style-type: none"> • 1 • 2 • 3 • 4
alarm_rule_name	Yes	String	Threshold rule name. Enter a maximum of 100 characters and do not start or end with a special character. Only letters, digits, underscores (_), and hyphens (-) are allowed.

Parameter	Mandatory	Type	Description
comparison_operator	Yes	String	Comparison operator. Options: <: less than the threshold; >: greater than the threshold; <=: less than or equal to the threshold; >=: greater than or equal to the threshold. Enumeration values: <ul style="list-style-type: none"> • < • > • <= • >=
dimensions	Yes	Array of Dimension objects	List of time series dimensions.
evaluation_periods	Yes	Integer	Interval at which data is calculated.
is_turn_on	No	Boolean	Whether to enable the threshold rule.
insufficient_data_actions	No	Array of strings	List of insufficient data notifications.
metric_name	Yes	String	Time series name. Length: 1 to 255 characters.
namespace	Yes	String	Namespace of time series objects.
ok_actions	No	Array of strings	List of normal status notifications.
period	Yes	Integer	Statistical period. Options: 60000: one minute; 300000: five minutes; 900000: 15 minutes; 3600000: one hour. Enumeration values: <ul style="list-style-type: none"> • 60000 • 300000 • 900000 • 3600000

Parameter	Mandatory	Type	Description
statistic	Yes	String	Statistic. Enumeration values: <ul style="list-style-type: none">• maximum• minimum• average• sum• sampleCount
threshold	Yes	String	Threshold.
unit	Yes	String	Time series unit.

Table 4-305 Dimension

Parameter	Mandatory	Type	Description
name	Yes	String	Dimension name.
value	Yes	String	Dimension value.

Response Parameters

Status code: 200

Table 4-306 Response body parameters

Parameter	Type	Description
alarm_rule_id	Long	Threshold rule ID.

Status code: 400

Table 4-307 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.

Parameter	Type	Description
trace_id	String	Trace ID, which is used to search for logs and locate faults. If 2xx is returned, trace_id is empty. If 4xx , trace_id is not empty.

Example Requests

Modify a threshold rule whose name is **testaom**, alarm severity is **3**, metric name is **cpuCoreLimit**, and namespace is **PAAS.CONTAINER**.

```
https://{Endpoint}/v2/{project_id}/alarm-rules
```

```
{
  "action_enabled" : false,
  "alarm_actions" : [ ],
  "alarm_advice" : "",
  "alarm_description" : "",
  "alarm_level" : 3,
  "alarm_rule_name" : "aom_rule",
  "comparison_operator" : ">=",
  "dimensions" : [ {
    "name" : "appName",
    "value" : "rhm-broker"
  } ],
  "evaluation_periods" : 1,
  "insufficient_data_actions" : [ ],
  "metric_name" : "cpuCoreLimit",
  "namespace" : "PAAS.CONTAINER",
  "ok_actions" : [ ],
  "period" : 60000,
  "statistic" : "average",
  "threshold" : 0,
  "unit" : "Core"
}
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "alarm_rule_id" : 91307490000416600
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.02002SVCSTG_AMS_4000101",
  "error_msg" : "Invalid alarm name",
  "error_type" : "BAD_REQUEST",
  "trace_id" : ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Modify a threshold rule whose name is **testaom**, alarm severity is **3**, metric name is **cpuCoreLimit**, and namespace is **PAAS.CONTAINER**.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;

public class UpdateAlarmRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        UpdateAlarmRuleRequest request = new UpdateAlarmRuleRequest();
        UpdateAlarmRuleParam body = new UpdateAlarmRuleParam();
        List<Dimension> listbodyDimensions = new ArrayList<>();
        listbodyDimensions.add(
            new Dimension()
                .withName("appName")
                .withValue("rhm-broker")
        );
        body.withUnit("Core");
        body.withThreshold("0");
        body.withStatistic(UpdateAlarmRuleParam.StatisticEnum.fromValue("average"));
        body.withPeriod(UpdateAlarmRuleParam.PeriodEnum.NUMBER_60000);
        body.withNamespace("PAAS.CONTAINER");
        body.withMetricName("cpuCoreLimit");
        body.withEvaluationPeriods(1);
        body.withDimensions(listbodyDimensions);
        body.withComparisonOperator(UpdateAlarmRuleParam.ComparisonOperatorEnum.fromValue(">="));
        body.withAlarmRuleName("aom_rule");
        body.withAlarmLevel(UpdateAlarmRuleParam.AlarmLevelEnum.NUMBER_3);
        body.withAlarmDescription("");
        body.withAlarmAdvice("");
        body.withActionEnabled(false);
        request.withBody(body);
        try {
            UpdateAlarmRuleResponse response = client.updateAlarmRule(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
```

```
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

Python

Modify a threshold rule whose name is **testaom**, alarm severity is **3**, metric name is **cpuCoreLimit**, and namespace is **PAAS.CONTAINER**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdfaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdfaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateAlarmRuleRequest()
        listDimensionsbody = [
            Dimension(
                name="appName",
                value="rhm-broker"
            )
        ]
        request.body = UpdateAlarmRuleParam(
            unit="Core",
            threshold="0",
            statistic="average",
            period=60000,
            namespace="PAAS.CONTAINER",
            metric_name="cpuCoreLimit",
            evaluation_periods=1,
            dimensions=listDimensionsbody,
            comparison_operator=">=",
            alarm_rule_name="aom_rule",
            alarm_level=3,
            alarm_description="",
            alarm_advice="",
            action_enabled=False
        )
        response = client.update_alarm_rule(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
```

```
print(e.request_id)
print(e.error_code)
print(e.error_msg)
```

Go

Modify a threshold rule whose name is **testaom**, alarm severity is **3**, metric name is **cpuCoreLimit**, and namespace is **PAAS.CONTAINER**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateAlarmRuleRequest{}
    var listDimensionsbody = []model.Dimension{
        {
            Name: "appName",
            Value: "rhm-broker",
        },
    },
    }
    alarmDescriptionUpdateAlarmRuleParam:= ""
    alarmAdviceUpdateAlarmRuleParam:= ""
    actionEnabledUpdateAlarmRuleParam:= false
    request.Body = &model.UpdateAlarmRuleParam{
        Unit: "Core",
        Threshold: "0",
        Statistic: model.GetUpdateAlarmRuleParamStatisticEnum().AVERAGE,
        Period: model.GetUpdateAlarmRuleParamPeriodEnum().E_60000,
        Namespace: "PAAS.CONTAINER",
        MetricName: "cpuCoreLimit",
        EvaluationPeriods: int32(1),
        Dimensions: listDimensionsbody,
        ComparisonOperator:
    model.GetUpdateAlarmRuleParamComparisonOperatorEnum().GREATER_THAN_OR_EQUAL_TO,
        AlarmRuleName: "aom_rule",
        AlarmLevel: model.GetUpdateAlarmRuleParamAlarmLevelEnum().E_3,
        AlarmDescription: &alarmDescriptionUpdateAlarmRuleParam,
        AlarmAdvice: &alarmAdviceUpdateAlarmRuleParam,
        ActionEnabled: &actionEnabledUpdateAlarmRuleParam,
    }
    response, err := client.UpdateAlarmRule(request)
```

```
if err == nil {  
    fmt.Printf("%+v\n", response)  
} else {  
    fmt.Println(err)  
}  
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.2.12 Deleting a Threshold Rule

Function

This API is used to delete a threshold rule.

Calling Method

For details, see [Calling APIs](#).

URI

DELETE /v2/{project_id}/alarm-rules/{alarm_rule_id}

Table 4-308 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
alarm_rule_id	Yes	String	Threshold rule ID.

Request Parameters

Table 4-309 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none">• application/json

Response Parameters

Status code: 400

Table 4-310 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Trace ID, which is used to search for logs and locate faults. If 2xx is returned, trace_id is empty. If 4xx , trace_id is not empty.

Example Requests

Delete a threshold rule.

```
https://{Endpoint}/v2/{project_id}/alarm-rules/{alarm_rule_id}
```

Example Responses

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.02005115",
  "error_msg" : "Invalid request parameter",
  "error_type" : "BAD_REQUEST",
  "trace_id" : ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class DeleteAlarmRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        DeleteAlarmRuleRequest request = new DeleteAlarmRuleRequest();
        request.withAlarmRuleId("{alarm_rule_id}");
        try {
            DeleteAlarmRuleResponse response = client.deleteAlarmRule(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
        }
    }
}
```

```
        System.out.println(e.getErrorMsg());
    }
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteAlarmRuleRequest()
        request.alarm_rule_id = "{alarm_rule_id}"
        response = client.delete_alarm_rule(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
```

```

Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.DeleteAlarmRuleRequest{}
request.AlarmRuleId = "{alarm_rule_id}"
response, err := client.DeleteAlarmRule(request)
if err == nil {
    fmt.Printf("%v\n", response)
} else {
    fmt.Println(err)
}
}
    
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.2.13 Querying a Threshold Rule

Function

This API is used to query a threshold rule.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v2/{project_id}/alarm-rules/{alarm_rule_id}

Table 4-311 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
alarm_rule_id	Yes	String	Threshold rule ID.

Request Parameters

Table 4-312 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none">• application/json

Response Parameters

Status code: 200

Table 4-313 Response body parameters

Parameter	Type	Description
meta_data	MetaData object	Metadata, including pagination information.
thresholds	Array of QueryAlarmResult objects	Threshold rule list.

Table 4-314 MetaData

Parameter	Type	Description
count	Integer	Number of returned records.
start	String	Start of the next page, which is used for pagination. null: No more data.
total	Integer	Total number of records.

Table 4-315 QueryAlarmResult

Parameter	Type	Description
action_enabled	Boolean	Whether to enable notification.
alarm_actions	Array of strings	List of alarm notifications.
alarm_advice	String	Alarm clearance suggestion.
alarm_description	String	Threshold rule description.
alarm_level	String	Alarm severity.
alarm_rule_id	String	Threshold rule ID.
alarm_rule_name	String	Threshold rule name.
comparison_operator	String	Comparison operator.
dimensions	Array of Dimension objects	List of time series dimensions.
evaluation_periods	Integer	Interval.
id_turn_on	Boolean	Whether to enable the threshold rule.
insufficient_data_actions	Array of strings	List of insufficient data notifications.
metric_name	String	Time series name.
namespace	String	Time series objects' namespace.
ok_actions	Array of strings	List of normal status notifications.
period	Integer	Statistical period.
policy_name	String	Threshold rule name.
resources	Array of strings	Resource information (discarded).
state_reason	String	Cause description.

Parameter	Type	Description
state_updated_timestamp	String	Time when the status was updated.
state_value	String	Service status.
statistic	String	Statistic.
threshold	String	Threshold value.
type	String	Threshold rule type.
unit	String	Threshold unit.

Table 4-316 Dimension

Parameter	Type	Description
name	String	Dimension name.
value	String	Dimension value.

Status code: 400**Table 4-317** Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Trace ID, which is used to search for logs and locate faults. If 2xx is returned, trace_id is empty. If 4xx , trace_id is not empty.

Example Requests

Obtain the details about the alarm rule whose ID is **alarm_rule_id**.

```
https://{Endpoint}/v2/{project_id}/alarm-rules/{alarm_rule_id}
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "meta_data": {
    "count": 1,
    "start": null,
    "total": 1
  },
  "thresholds": [ {
    "action_enabled": false,
    "alarm_actions": null,
    "alarm_advice": null,
    "alarm_description": null,
    "alarm_level": "3",
    "alarm_rule_id": 2137,
    "alarm_rule_name": "aom_rule",
    "comparison_operator": ">=",
    "dimensions": [ {
      "name": "appName"
    } ], {
      "value": "rhm-broker"
    } ],
    "evaluation_periods": 1,
    "id_turn_on": true,
    "insufficient_data_actions": null,
    "metric_name": "cpuCoreLimit",
    "namespace": "PAAS.CONTAINER",
    "ok_actions": null,
    "period": 60000,
    "policy_name": "23",
    "resources": [ ],
    "state_reason": null,
    "state_updated_timestamp": null,
    "statistic": "average",
    "threshold": 0,
    "type": "single",
    "unit": "Core"
  } ]
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code": "AOM.02004115",
  "error_msg": "Invalid request parameter",
  "error_type": "BAD_REQUEST",
  "trace_id": ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;
```

```
public class ShowAlarmRuleSolution {  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or  
        // environment variables and decrypted during use to ensure security.  
        // In this example, AK and SK are stored in environment variables for authentication. Before running  
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
        String ak = System.getenv("CLOUD_SDK_AK");  
        String sk = System.getenv("CLOUD_SDK_SK");  
        String projectId = "{project_id}";  
  
        ICredential auth = new BasicCredentials()  
            .withProjectId(projectId)  
            .withAk(ak)  
            .withSk(sk);  
  
        AomClient client = AomClient.newBuilder()  
            .withCredential(auth)  
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))  
            .build();  
        ShowAlarmRuleRequest request = new ShowAlarmRuleRequest();  
        request.withAlarmRuleId("{alarm_rule_id}");  
        try {  
            ShowAlarmRuleResponse response = client.showAlarmRule(request);  
            System.out.println(response.toString());  
        } catch (ConnectionException e) {  
            e.printStackTrace();  
        } catch (RequestTimeoutException e) {  
            e.printStackTrace();  
        } catch (ServiceResponseException e) {  
            e.printStackTrace();  
            System.out.println(e.getHttpStatusCode());  
            System.out.println(e.getRequestId());  
            System.out.println(e.getErrorCode());  
            System.out.println(e.getErrorMsg());  
        }  
    }  
}
```

Python

```
# coding: utf-8  
  
import os  
from huaweicloudsdkcore.auth.credentials import BasicCredentials  
from huaweicloudsdfaom.v2.region.aom_region import AomRegion  
from huaweicloudsdkcore.exceptions import exceptions  
from huaweicloudsdfaom.v2 import *  
  
if __name__ == "__main__":  
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    # variables and decrypted during use to ensure security.  
    # In this example, AK and SK are stored in environment variables for authentication. Before running this  
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak = os.getenv("CLOUD_SDK_AK")  
    sk = os.getenv("CLOUD_SDK_SK")  
    projectId = "{project_id}"  
  
    credentials = BasicCredentials(ak, sk, projectId)  
  
    client = AomClient.new_builder() \  
        .with_credentials(credentials) \  
        .with_region(AomRegion.value_of("<YOUR REGION>")) \  
        .build()  
  
    try:  
        request = ShowAlarmRuleRequest()
```

```

request.alarm_rule_id = "{alarm_rule_id}"
response = client.show_alarm_rule(request)
print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)

```

Go

```

package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowAlarmRuleRequest{}
    request.AlarmRuleId = "{alarm_rule_id}"
    response, err := client.ShowAlarmRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.

Status Code	Description
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.2.14 Deleting Threshold Rules in Batches

Function

This API is used to delete threshold rules in batches.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v2/{project_id}/alarm-rules/delete

Table 4-318 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-319 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> application/json

Table 4-320 Request body parameters

Parameter	Mandatory	Type	Description
alarm_rules	Yes	Array of strings	Name of the rule to be deleted.

Response Parameters

Status code: 400

Table 4-321 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Trace ID, which is used to search for logs and locate faults. If 2xx is returned, trace_id is empty. If 4xx , trace_id is not empty.

Example Requests

Delete threshold rules in batches by rule name.

```
https://{Endpoint}/v2/{project_id}/alarm-rules/delete
{
  "alarm_rules": [ ]
}
```


Example Responses

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.02005115",
  "error_msg" : "Invalid request parameter",
  "error_type" : "BAD_REQUEST",
  "trace_id" : ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Delete threshold rules in batches by rule name.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

import java.util.List;
import java.util.ArrayList;

public class DeleteAlarmRulesSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        DeleteAlarmRulesRequest request = new DeleteAlarmRulesRequest();
        try {
            DeleteAlarmRulesResponse response = client.deleteAlarmRules(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
        }
    }
}
```

```
e.printStackTrace();
System.out.println(e.getStatusCode());
System.out.println(e.getRequestId());
System.out.println(e.getErrorCode());
System.out.println(e.getErrorMsg());
    }
}
}
```

Python

Delete threshold rules in batches by rule name.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteAlarmRulesRequest()
        response = client.delete_alarm_rules(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Delete threshold rules in batches by rule name.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
```

```

ak := os.Getenv("CLOUD_SDK_AK")
sk := os.Getenv("CLOUD_SDK_SK")
projectId := "{project_id}"

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    WithProjectId(projectId).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.DeleteAlarmRulesRequest{}
response, err := client.DeleteAlarmRules(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.3 Prometheus Monitoring

4.3.1 Querying Expression Calculation Results in a Specified Period Using the GET Method

Function

This API is used to query the calculation results of a PromQL expression in a specified period using the GET method.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/{project_id}/aom/api/v1/query_range

Table 4-322 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-323 Query Parameters

Parameter	Mandatory	Type	Description
query	Yes	String	PromQL expression. For details, see https://prometheus.io/docs/prometheus/latest/querying/basics/ .
start	Yes	String	Start timestamp (Unix timestamp, in seconds).
end	Yes	String	End timestamp (Unix timestamp, in seconds).
step	Yes	String	Query step (in seconds). The task is executed on the step basis within the specified period.

Request Parameters

Table 4-324 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Response Parameters

Status code: 200

Table 4-325 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Object	Response data.

Status code: 400

Table 4-326 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403

Table 4-327 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422

Table 4-328 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503

Table 4-329 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Example Requests

Query the calculation result of PromQL expression "up" every 15s in a specified period.

```
https://{EndPoint}/v1/{project_id}/aom/api/v1/query_range?
query=up&start=1630124012&end=1630127612&step=15s
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "status": "success",
  "data": {
    "resultType": "matrix",
    "result": [ {
      "metric": {
        "__name__": "up",
        "job": "prometheus",
        "instance": "localhost:9090"
      },
      "values": [ [ 1.435781430781E9, "1" ], [ 1.435781445781E9, "1" ], [ 1.435781460781E9, "1" ] ]
    }, {
      "metric": {
        "__name__": "up",
        "job": "node",
        "instance": "localhost:9091"
      },
      "values": [ [ 1.435781430781E9, "0" ], [ 1.435781445781E9, "0" ], [ 1.435781460781E9, "1" ] ]
    } ]
  }
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "bad_param",
  "error" : "param is invalid."
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "auth",
  "error" : "auth project_id not pass."
}
```

Status code: 422

Unprocessable: The expression cannot be executed.

```
{
  "status" : "error",
  "errorType" : "excution",
  "error" : "expression can't be executed."
}
```

Status code: 503

Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "timeout",
  "error" : "query timed out in query execution."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListRangeQueryAomPromGetSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
    }
}
```

```
// In this example, AK and SK are stored in environment variables for authentication. Before running
this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
String ak = System.getenv("CLOUD_SDK_AK");
String sk = System.getenv("CLOUD_SDK_SK");
String projectId = "{project_id}";

ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
ListRangeQueryAomPromGetRequest request = new ListRangeQueryAomPromGetRequest();
try {
    ListRangeQueryAomPromGetResponse response = client.listRangeQueryAomPromGet(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListRangeQueryAomPromGetRequest()
        response = client.list_range_query_aom_prom_get(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```


Go

```

package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListRangeQueryAomPromGetRequest{}
    response, err := client.ListRangeQueryAomPromGet(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
422	Unprocessable: The expression cannot be executed.

Status Code	Description
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.3.2 (Recommended) Querying Expression Calculation Results in a Specified Period Using the POST Method

Function

This API is used to query the calculation results of a PromQL expression in a specified period using the POST method.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/aom/api/v1/query_range

Table 4-330 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-331 Query Parameters

Parameter	Mandatory	Type	Description
query	Yes	String	PromQL expression. For details, see https://prometheus.io/docs/prometheus/latest/querying/basics/ .
start	Yes	String	Start timestamp (Unix timestamp, in seconds).
end	Yes	String	End timestamp (Unix timestamp, in seconds).

Parameter	Mandatory	Type	Description
step	Yes	String	Query step (in seconds). The task is executed on the step basis within the specified period.

Request Parameters

Table 4-332 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Response Parameters

Status code: 200

Table 4-333 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Object	Response data.

Status code: 400

Table 4-334 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403

Table 4-335 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422

Table 4-336 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503

Table 4-337 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Example Requests

Query the top N aom_node_status metrics on the step basis in a specified period.

```
https://{EndPoint}/v1/{project_id}/aom/api/v1/query_range?
query=topk(2,aom_node_status)&start=1630386780&end=1630390380&step=15
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "status": "success",
  "data": {
    "resultType": "matrix",
    "result": [ {
      "metric": {
```

```
    "__name__" : "amm_node_status",
    "clusterId" : "000000-0000-0000-0000-00000000",
    "hostID" : "c9xxcb-2x6c-4h54-8fcd-f68xx85",
    "nameSpace" : "default",
    "nodeIP" : "1xx.1xx.0.1xx",
    "nodeName" : "sis-xxn-amm"
  },
  "values" : [ [ 1630386780, "0" ], [ 1630388610, "0" ], [ 1630388625, "0" ] ]
}, {
  "metric" : {
    "__name__" : "amm_node_status",
    "clusterId" : "00000000-0000-0000-0000-00000000",
    "hostID" : "ec5xxb-0xx8-4xxx-bxx-9ecxf",
    "nameSpace" : "default",
    "nodeIP" : "1xx.168.0.1x",
    "nodeName" : "fdx-ibxxt"
  },
  "values" : [ [ 1630388265, "0" ], [ 1630388280, "0" ], [ 1630388295, "0" ] ]
} ]
}
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "bad_param",
  "error" : "param is invalid."
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "auth",
  "error" : "auth project_id not pass."
}
```

Status code: 422

Unprocessable: The expression cannot be executed.

```
{
  "status" : "error",
  "errorType" : "excution",
  "error" : "expression can't be executed."
}
```

Status code: 503

Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "timeout",
  "error" : "query timed out in query execution."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListRangeQueryAomPromPostSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListRangeQueryAomPromPostRequest request = new ListRangeQueryAomPromPostRequest();
        try {
            ListRangeQueryAomPromPostResponse response = client.listRangeQueryAomPromPost(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
```

```
# The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
# In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
ak = os.environ["CLOUD_SDK_AK"]
sk = os.environ["CLOUD_SDK_SK"]
projectId = "{project_id}"

credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = ListRangeQueryAomPromPostRequest()
    response = client.list_range_query_aom_prom_post(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListRangeQueryAomPromPostRequest{}
    response, err := client.ListRangeQueryAomPromPost(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
422	Unprocessable: The expression cannot be executed.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.3.3 Querying the Expression Calculation Result at a Specified Time Point Using the GET Method

Function

This API is used to query the calculation result of a PromQL expression at a specified time point using the GET method.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/{project_id}/aom/api/v1/query

Table 4-338 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-339 Query Parameters

Parameter	Mandatory	Type	Description
query	Yes	String	PromQL expression. For details, see https://prometheus.io/docs/prometheus/latest/querying/basics/ .
time	No	String	Timestamp specified for PromQL calculation (Unix timestamp, in seconds).

Request Parameters

Table 4-340 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Response Parameters

Status code: 200

Table 4-341 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Object	Response data.

Status code: 400

Table 4-342 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403

Table 4-343 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422

Table 4-344 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503

Table 4-345 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Example Requests

Query the calculation result of expression "up" at time point "1630124012".

`https://{EndPoint}/v1/{project_id}/aom/api/v1/query?query=up&time=1630124012`

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "status": "success",
  "data": {
    "resultType": "vector",
    "result": [ ]
  }
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "bad_param",
  "error" : "param is invalid."
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "auth",
  "error" : "auth project_id not pass."
}
```

Status code: 422

Unprocessable: The expression cannot be executed.

```
{
  "status" : "error",
  "errorType" : "excution",
  "error" : "expression can't be executed."
}
```

Status code: 503

Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "timeout",
  "error" : "query timed out in query execution."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListInstantQueryAomPromGetSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
```

security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.

// In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment

```
String ak = System.getenv("CLOUD_SDK_AK");
String sk = System.getenv("CLOUD_SDK_SK");
String projectId = "{project_id}";

ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
ListInstantQueryAomPromGetRequest request = new ListInstantQueryAomPromGetRequest();
try {
    ListInstantQueryAomPromGetResponse response = client.listInstantQueryAomPromGet(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListInstantQueryAomPromGetRequest()
        response = client.list_instant_query_aom_prom_get(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
```

```
print(e.error_code)
print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListInstantQueryAomPromGetRequest{}
    response, err := client.ListInstantQueryAomPromGet(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.

Status Code	Description
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
422	Unprocessable: The expression cannot be executed.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.3.4 (Recommended) Querying Expression Calculation Results at a Specified Time Point Using the POST Method

Function

This API is used to query the calculation result of a PromQL expression at a specified time point using the POST method.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/aom/api/v1/query

Table 4-346 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-347 Query Parameters

Parameter	Mandatory	Type	Description
query	Yes	String	PromQL expression. For details, see https://prometheus.io/docs/prometheus/latest/querying/basics/ .

Parameter	Mandatory	Type	Description
time	No	String	Timestamp specified for PromQL calculation (Unix timestamp, in seconds).

Request Parameters

Table 4-348 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Response Parameters

Status code: 200

Table 4-349 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Object	Response data.

Status code: 400

Table 4-350 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403

Table 4-351 Response body parameters

Parameter	Type	Description
status	String	Response status.

Parameter	Type	Description
errorType	String	Error type.
error	String	Error message.

Status code: 422

Table 4-352 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503

Table 4-353 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Example Requests

Query the top N aom_node_status metrics at time point "1630381536".

`https://{EndPoint}/v1/{project_id}/aom/api/v1/query?query=topk(2,aom_node_status)&time=1630381536`

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "status": "success",
  "data": {
    "resultType": "vector",
    "result": [ {
      "metric": {
        "__name__": "amm_node_status",
        "clusterId": "00000000-0000-0000-0000-00000000",
        "hostID": "g947xcxh-2xcxc-xxx-xxcd-f6xxx85",
        "nameSpace": "default",
        "nodeIP": "1x6.1xx.0.xxx",

```



```
    "nodeName" : "sdx-jxxxgksi-axx"
  },
  "value" : [ 16303810036, "0" ]
}, {
  "metric" : {
    "__name__" : "amm_node_status",
    "clusterId" : "00000000-0000-0000-0000-00000000",
    "hostID" : "dc1xxxf7e-b095-4e77-bxx-914dhlxxxbf7",
    "nameSpace" : "default",
    "nodeIP" : "1xx.1xx.0.xxx",
    "nodeName" : "sds-jixxsi-texxt"
  },
  "value" : [ 1630381536, "0" ]
} ]
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "bad_param",
  "error" : "param is invalid."
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "auth",
  "error" : "auth project_id not pass."
}
```

Status code: 422

Unprocessable: The expression cannot be executed.

```
{
  "status" : "error",
  "errorType" : "excution",
  "error" : "expression can't be executed."
}
```

Status code: 503

Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "timeout",
  "error" : "query timed out in query execution."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListInstantQueryAomPromPostSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListInstantQueryAomPromPostRequest request = new ListInstantQueryAomPromPostRequest();
        try {
            ListInstantQueryAomPromPostResponse response = client.listInstantQueryAomPromPost(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
```

```
ak = os.environ["CLOUD_SDK_AK"]
sk = os.environ["CLOUD_SDK_SK"]
projectId = "{project_id}"

credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = ListInstantQueryAomPromPostRequest()
    response = client.list_instant_query_aom_prom_post(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListInstantQueryAomPromPostRequest{}
    response, err := client.ListInstantQueryAomPromPost(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
422	Unprocessable: The expression cannot be executed.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.3.5 Querying Tag Values

Function

This API is used to query the values of a specified tag.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/{project_id}/aom/api/v1/label/{label_name}/values

Table 4-354 Path Parameters

Parameter	Mandatory	Type	Description
label_name	Yes	String	Tag to be queried.
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-355 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Response Parameters

Status code: 200

Table 4-356 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Array of strings	Tag value.

Status code: 400

Table 4-357 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403

Table 4-358 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422

Table 4-359 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503

Table 4-360 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Example Requests

Query all values of the "job" tag.

`https://{EndPoint}/v1/{project_id}/aom/api/v1/label/job/values`

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "status": "success",
  "data": [ "node", "prometheus" ]
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "status": "error",
  "errorType": "bad_param",
  "error": "param is invalid."
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "status": "error",
```

```
"errorType" : "auth",  
"error" : "auth project_id not pass."  
}
```

Status code: 422

Unprocessable: The expression cannot be executed.

```
{  
  "status" : "error",  
  "errorType" : "excution",  
  "error" : "expression can't be executed."  
}
```

Status code: 503

Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

```
{  
  "status" : "error",  
  "errorType" : "timeout",  
  "error" : "query timed out in query execution."  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v2.region.AomRegion;  
import com.huaweicloud.sdk.aom.v2.*;  
import com.huaweicloud.sdk.aom.v2.model.*;  
  
public class ListLabelValuesAomPromGetSolution {  
  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or  
        // environment variables and decrypted during use to ensure security.  
        // In this example, AK and SK are stored in environment variables for authentication. Before running  
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
        String ak = System.getenv("CLOUD_SDK_AK");  
        String sk = System.getenv("CLOUD_SDK_SK");  
        String projectId = "{project_id}";  
  
        ICredential auth = new BasicCredentials()  
            .withProjectId(projectId)  
            .withAk(ak)  
            .withSk(sk);  
  
        AomClient client = AomClient.newBuilder()  
            .withCredential(auth)  
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))  
            .build();  
        ListLabelValuesAomPromGetRequest request = new ListLabelValuesAomPromGetRequest();  
        request.withLabelName("{label_name}");  
        try {
```

```
        ListLabelValuesAomPromGetResponse response = client.listLabelValuesAomPromGet(request);
        System.out.println(response.toString());
    } catch (ConnectionException e) {
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdfaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdfaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListLabelValuesAomPromGetRequest()
        request.label_name = "{label_name}"
        response = client.list_label_values_aom_prom_get(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
```



```

variables and decrypted during use to ensure security.
// In this example, AK and SK are stored in environment variables for authentication. Before running this
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
ak := os.Getenv("CLOUD_SDK_AK")
sk := os.Getenv("CLOUD_SDK_SK")
projectId := "{project_id}"

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    WithProjectId(projectId).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.ListLabelValuesAomPromGetRequest{}
request.LabelName = "{label_name}"
response, err := client.ListLabelValuesAomPromGet(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
422	Unprocessable: The expression cannot be executed.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.3.6 Obtaining the Tag Name List Using the GET Method

Function

This API is used to obtain the tag name list using the GET method.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/{project_id}/aom/api/v1/labels

Table 4-361 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-362 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Response Parameters

Status code: 200

Table 4-363 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Array of strings	Tag value.

Status code: 400

Table 4-364 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403**Table 4-365** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422**Table 4-366** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503**Table 4-367** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Example Requests

Return the tag name list.

https://{EndPoint}/v1/{project_id}/aom/api/v1/labels

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "status" : "success",
  "data" : [ "__name__", "call", "code", "config", "dialer_name", "endpoint", "event", "goversion", "handler",
"instance", "slice", "version" ]
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "bad_param",
  "error" : "param is invalid."
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "auth",
  "error" : "auth project_id not pass."
}
```

Status code: 422

Unprocessable: The expression cannot be executed.

```
{
  "status" : "error",
  "errorType" : "excution",
  "error" : "expression can't be executed."
}
```

Status code: 503

Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "timeout",
  "error" : "query timed out in query execution."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;
```

```
import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListLabelsAomPromGetSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListLabelsAomPromGetRequest request = new ListLabelsAomPromGetRequest();
        try {
            ListLabelsAomPromGetResponse response = client.listLabelsAomPromGet(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")
    projectId = "{project_id}"
```

```
credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = ListLabelsAomPromGetRequest()
    response = client.list_labels_aom_prom_get(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListLabelsAomPromGetRequest{}
    response, err := client.ListLabelsAomPromGet(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
422	Unprocessable: The expression cannot be executed.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.3.7 (Recommended) Obtaining the Tag Name List Using the POST Method

Function

This API is used to obtain the tag name list using the POST method.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/aom/api/v1/labels

Table 4-368 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-369 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Response Parameters

Status code: 200

Table 4-370 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Array of strings	Tag value.

Status code: 400

Table 4-371 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403

Table 4-372 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422

Table 4-373 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503

Table 4-374 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Example Requests

Return the tag name list.

```
https://{EndPoint}/v1/{project_id}/aom/api/v1/labels
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "status": "success",
  "data": [ "_name_", "alarm_level", "adfname", "alertstate", "ammApplicationID",
"ammApplicationName", "appID", "appName", "clusterId", "clusterName", "cluster_id",
"comparisonOperator", "containerID", "containerName", "nameSpace", "namespace", "netDevice",
"nodeIP", "nodeName", "node_ip", "paild", "pailName", "period_expr", "podID", "podName", "processCmd" ]
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "status": "error",
  "errorType": "bad_param",
  "error": "param is invalid."
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "status": "error",
  "errorType": "auth",
  "error": "auth project_id not pass."
}
```

Status code: 422

Unprocessable: The expression cannot be executed.

```
{
  "status": "error",
  "errorType": "excution",
  "error": "expression can't be executed."
}
```

Status code: 503

Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

```
{
  "status": "error",
  "errorType": "timeout",
  "error": "query timed out in query execution."
}
```

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
422	Unprocessable: The expression cannot be executed.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.3.8 Querying Metadata

Function

This API is used to query the metadata of time series and corresponding tags.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/{project_id}/aom/api/v1/metadata

Table 4-375 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-376 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Response Parameters

Status code: 200

Table 4-377 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Object	Metadata information.

Status code: 400

Table 4-378 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403

Table 4-379 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422

Table 4-380 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503

Table 4-381 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Example Requests

Obtain the metadata.

```
https://{EndPoint}/v1/{project_id}/aom/api/v1/metadata
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "status": "success",
  "data": {
    "aggregator_openapi_v2_regeneration_count": [ {
```

```
"type" : "counter",
  "help" : "[ALPHA] Counter of OpenAPI v2 spec regeneration count broken down by causing APIService
name and reason.",
  "unit" : ""
}]
}
```

Status code: 400

Bad Request: The request is invalid. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "bad_param",
  "error" : "param is invalid."
}
```

Status code: 403

Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "auth",
  "error" : "auth project_id not pass."
}
```

Status code: 422

Unprocessable: The expression cannot be executed.

```
{
  "status" : "error",
  "errorType" : "excution",
  "error" : "expression can't be executed."
}
```

Status code: 503

Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

```
{
  "status" : "error",
  "errorType" : "timeout",
  "error" : "query timed out in query execution."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
```

```
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListMetadataAomPromGetSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListMetadataAomPromGetRequest request = new ListMetadataAomPromGetRequest();
        try {
            ListMetadataAomPromGetResponse response = client.listMetadataAomPromGet(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()
```

```

try:
    request = ListMetadataAomPromGetRequest()
    response = client.list_metadata_aom_prom_get(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)

```

Go

```

package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListMetadataAomPromGetRequest{}
    response, err := client.ListMetadataAomPromGet(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.

Status Code	Description
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
422	Unprocessable: The expression cannot be executed.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.4 Log

4.4.1 Querying Logs

Function

This API is used to query logs by different dimensions, such as by cluster, IP address, or application. Pagination queries are supported.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/als/action

Table 4-382 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-383 Query Parameters

Parameter	Mandatory	Type	Description
type	Yes	String	Log API call mode. When the value is querylogs, this API is used to query logs.

Request Parameters

Table 4-384 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none">• application/json

Table 4-385 Request body parameters

Parameter	Mandatory	Type	Description
category	Yes	String	Log type. Values: app_log: application log. node_log: node log. custom_log: log in a custom path.
endTime	Yes	Long	End time of the query (UTC, in ms).
hideSyslog	No	Integer	Whether to hide system logs during log queries. 0: Hide system logs. 1: Show system logs.

Parameter	Mandatory	Type	Description
keyWord	No	String	<p>Keyword for search.</p> <ol style="list-style-type: none"> Exact search by keyword is supported. A keyword is between two adjacent delimiters. Fuzzy search by keyword is supported. Example: RROR, ERRO?, ROR, ERR*, or ER*OR. Exact search by phrase is supported. Example: Start to refresh alm Statistic. Search using AND (&&) or OR () is supported. Example: query&&logs or query logs. <p>Note: Default delimiters: , "" ; = () [] { } @ & < > / : \ n \ t \ r</p>
lineNum	No	String	Sequence number of the final log in the last query result. This parameter is not required for the first query, but is required for subsequent pagination queries.
pageSize/size	No	String	<p>Number of logs queried each time. Default value: 5000. Recommended value: 100.</p> <p>For the first query, pageSize is used. For subsequent pagination queries, size is used.</p>
searchKey	Yes	SearchKey object	Log filter criteria, which vary according to log sources.
startTime	Yes	Long	Start time of the query (UTC, in ms).
type	No	String	Pagination query. This parameter is not required for the first query, but is required for subsequent pagination queries.

Parameter	Mandatory	Type	Description
isDesc	No	Boolean	Whether to query logs based on lineNumber in ascending or descending order. true: lineNumber in descending order (from the latest time to the earliest time) false: lineNumber in ascending order (from the earliest time to the latest time)

Table 4-386 SearchKey

Parameter	Mandatory	Type	Description
appName	No	String	Application name.
clusterId	Yes	String	CCE cluster ID.
hostIP	No	String	IP address of the VM where logs are located.
nameSpace	No	String	CCE cluster namespace.
pathFile	No	String	Log file name.
podName	No	String	Container instance name.

Response Parameters

Status code: 200

Table 4-387 Response body parameters

Parameter	Type	Description
errorCode	String	Response code. SVCSTG_AMS_2000000: Success response.
errorMessage	String	Response message.
result	String	Metadata, including results and the total number of returned records.

Status code: 400

Table 4-388 Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.

Status code: 401**Table 4-389** Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.

Status code: 403**Table 4-390** Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.

Status code: 500**Table 4-391** Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.

Status code: 503**Table 4-392** Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.

Example Requests

- Example 1: Query application logs under a cluster.

```
POST https://{endpoint}/v1/{project_id}/als/action?type=querylogs"
{
  "category": "app_log",
  "endTime": 15389000003,
  "hideSyslog": 0,
  "keyWord": "",
  "searchKey": {
    "clusterId": "c69xxx-5xxx-1xxx-8xxx5-02xxxxx40"
  },
  "startTime": 15389000003
}
```

- Example 2: Perform pagination queries.

Notes:

- a. For pagination queries, the lineNumber (sequence number of the final log in the last query result), type (value: next), and size parameters need to be added.
- b. The values of category, searchKey, keyWord, startTime, and endTime must be the same as those in the first query.
- c. To implement another pagination query, change the value of lineNumber to the sequence number of the final log in the last query result. The rest may be deduced by analogy.

```
/v1/{project_id}/als/action?type=querylogs
{
  "category": "app_log",
  "searchKey": {
    "clusterId": "874xxx9a2-xxxf-xxx-8xxe-02xxxxx3"
  },
  "keyWord": "",
  "startTime": 156946300095,
  "endTime": 15694600008895,
  "lineNum": "1569463900000047",
  "type": "next",
  "size": 100,
  "hideSyslog": 0
}
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "errorCode": "SVCSTG.ALS.200.200",
  "errorMessage": "Query data success",
  "result": [ {
    "data": [ {
      "appName": "axxs0712",
      "category": "apx",
      "clusterId": "c6xxxx7c-54cd-11e8-8055-025xxx1e40",
      "collectTime": 153900000983,
      "containerName": "contsssner-0",
      "hostIP": "1xx.xxx.0.1xxx",
      "hostId": "c11xxxx11-0000b-4925-bef4-d0xxxx9b0",
      "hostName": "1x2.168.0.xxx",
      "lineNum": "1xxx23xxxxxx2VW5xxxxxx0ZWdIcg==",
      "logContent": "warn:2018/10/09 06:57:01 helloworld.go:108: the main processis running now.",
    }
  ]
}
```

```
"logContentSize" : null,
"loghash" : "4xxxx0d40a83c17f262540xxxxxxxxfeaa30eb",
"nameSpace" : "default",
"pathFile" : "/xxx/xxx/xxx/xxx/xxx/xxx.trxe",
"podName" : "axxx12-7xxf884-qxxwp",
"serviceID" : ""
}],
"total" : 5000
}]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

- Example 1: Query application logs under a cluster.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListLogItemsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListLogItemsRequest request = new ListLogItemsRequest();
        QueryBodyParam body = new QueryBodyParam();
        SearchKey searchKeybody = new SearchKey();
        searchKeybody.withClusterId("c69xxx-5xxx-1xxx-8xxx5-02xxxx40");
        body.withStartTime(15389000003L);
        body.withSearchKey(searchKeybody);
        body.withKeyword("");
        body.withHideSyslog(0);
        body.withEndTime(15389000003L);
        body.withCategory("app_log");
        request.withBody(body);
        try {
            ListLogItemsResponse response = client.listLogItems(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
```

```
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

- Example 2: Perform pagination queries.

Notes:

- a. For pagination queries, the `lineNum` (sequence number of the final log in the last query result), `type` (value: `next`), and `size` parameters need to be added.
- b. The values of `category`, `searchKey`, `keyWord`, `startTime`, and `endTime` must be the same as those in the first query.
- c. To implement another pagination query, change the value of `lineNum` to the sequence number of the final log in the last query result. The rest may be deduced by analogy.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListLogItemsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListLogItemsRequest request = new ListLogItemsRequest();
        QueryBodyParam body = new QueryBodyParam();
        SearchKey searchKeybody = new SearchKey();
        searchKeybody.withClusterId("874xxx9a2-xxx-xxx-8xxe-02xxxx3");
        body.withType("next");
        body.withStartTime(156946300095L);
        body.withSearchKey(searchKeybody);
        body.withLineNum("156946390000047");
    }
}
```

```
body.withKeyWord("");
body.withHideSyslog(0);
body.withEndTime(15694600008895L);
body.withCategory("app_log");
request.withBody(body);
try {
    ListLogItemsResponse response = client.listLogItems(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

- Example 1: Query application logs under a cluster.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudskaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListLogItemsRequest()
        searchKeybody = SearchKey(
            cluster_id="c69xxx-5xxx-1xxx-8xxx5-02xxxx40"
        )
        request.body = QueryBodyParam(
            start_time=15389000003,
            search_key=searchKeybody,
            key_word="",
            hide_syslog=0,
            end_time=15389000003,
            category="app_log"
        )
        response = client.list_log_items(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
```



```
print(e.error_code)
print(e.error_msg)
```

- Example 2: Perform pagination queries.

Notes:

- a. For pagination queries, the `lineNum` (sequence number of the final log in the last query result), `type` (value: `next`), and `size` parameters need to be added.
- b. The values of `category`, `searchKey`, `keyWord`, `startTime`, and `endTime` must be the same as those in the first query.
- c. To implement another pagination query, change the value of `lineNum` to the sequence number of the final log in the last query result. The rest may be deduced by analogy.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListLogItemsRequest()
        searchKeybody = SearchKey(
            cluster_id="874xxx9a2-xxx-xxx-8xxe-02xxxxx3"
        )
        request.body = QueryBodyParam(
            type="next",
            start_time=156946300095,
            search_key=searchKeybody,
            line_num="1569463900000047",
            key_word="",
            hide_syslog=0,
            end_time=15694600008895,
            category="app_log"
        )
        response = client.list_log_items(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

- Example 1: Query application logs under a cluster.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListLogItemsRequest{}
    searchKeybody := &model.SearchKey{
        ClusterId: "c69xxx-5xxx-1xxx-8xxx5-02xxxxx40",
    }
    keywordQueryBodyParam := ""
    hideSyslogQueryBodyParam := int32(0)
    request.Body = &model.QueryBodyParam{
        StartTime: int64(15389000003),
        SearchKey: searchKeybody,
        Keyword: &keywordQueryBodyParam,
        HideSyslog: &hideSyslogQueryBodyParam,
        EndTime: int64(15389000003),
        Category: "app_log",
    }
    response, err := client.ListLogItems(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

- Example 2: Perform pagination queries.

Notes:

- a. For pagination queries, the lineNum (sequence number of the final log in the last query result), type (value: next), and size parameters need to be added.
- b. The values of category, searchKey, keyword, startTime, and endTime must be the same as those in the first query.

- c. To implement another pagination query, change the value of `lineNum` to the sequence number of the final log in the last query result. The rest may be deduced by analogy.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListLogItemsRequest{}
    searchKeybody := &model.SearchKey{
        ClusterId: "874xxx9a2-xxx-xxx-8xxe-02xxxxx3",
    }
    typeQueryBodyParam:= "next"
    lineNumQueryBodyParam:= "156946390000047"
    keyWordQueryBodyParam:= ""
    hideSyslogQueryBodyParam:= int32(0)
    request.Body = &model.QueryBodyParam{
        Type: &typeQueryBodyParam,
        StartTime: int64(156946300095),
        SearchKey: searchKeybody,
        LineNum: &lineNumQueryBodyParam,
        Keyword: &keyWordQueryBodyParam,
        HideSyslog: &hideSyslogQueryBodyParam,
        EndTime: int64(1569460008895),
        Category: "app_log",
    }
    response, err := client.ListLogItems(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Bad Request: The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
403	Forbidden: The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.
503	Service Unavailable: The requested service is invalid. The client should not repeat the request without modifications.

Error Codes

See [Error Codes](#).

4.5 Prometheus Instance

4.5.1 Uninstalling a Hosted Prometheus Instance

Function

This API is used to uninstall a hosted Prometheus instance.

Calling Method

For details, see [Calling APIs](#).

URI

DELETE /v1/{project_id}/aom/prometheus

Table 4-393 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-394 Query Parameters

Parameter	Mandatory	Type	Description
prom_id	Yes	String	Prometheus instance ID.

Request Parameters

Table 4-395 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.
Enterprise-Project-Id	Yes	String	Enterprise project ID. <ul style="list-style-type: none">To delete instances in an enterprise project, enter the enterprise project ID.

Response Parameters

Status code: 400

Table 4-396 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Trace ID.

Example Requests

Delete the Prometheus instance whose **prom_id** is **08****2a-8b-45-b1-d1*****79**.

https://{Endpoint}/v1/{project_id}/aom/prometheus?prom_id=08****2a-8**b-4**5-b**1-d1*****79

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "08****2a-8**b-4**5-b**1-d1*****79" : true
}
```

Status code: 400

No Prometheus instance is found.

```
{
  "error_code" : "AOM.11017014",
  "error_msg" : "prom instance not found",
  "trace_id" : ""
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class DeletePromInstanceSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        DeletePromInstanceRequest request = new DeletePromInstanceRequest();
        try {
            DeletePromInstanceResponse response = client.deletePromInstance(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

```
}  
}
```

Python

```
# coding: utf-8  
  
import os  
from huaweicloudsdkcore.auth.credentials import BasicCredentials  
from huaweicloudsdfaom.v2.region.aom_region import AomRegion  
from huaweicloudsdkcore.exceptions import exceptions  
from huaweicloudsdfaom.v2 import *  
  
if __name__ == "__main__":  
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    variables and decrypted during use to ensure security.  
    # In this example, AK and SK are stored in environment variables for authentication. Before running this  
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak = os.environ["CLOUD_SDK_AK"]  
    sk = os.environ["CLOUD_SDK_SK"]  
    projectId = "{project_id}"  
  
    credentials = BasicCredentials(ak, sk, projectId)  
  
    client = AomClient.new_builder() \  
        .with_credentials(credentials) \  
        .with_region(AomRegion.value_of("<YOUR REGION>")) \  
        .build()  
  
    try:  
        request = DeletePromInstanceRequest()  
        response = client.delete_prom_instance(request)  
        print(response)  
    except exceptions.ClientRequestException as e:  
        print(e.status_code)  
        print(e.request_id)  
        print(e.error_code)  
        print(e.error_msg)
```

Go

```
package main  
  
import (  
    "fmt"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"  
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"  
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"  
)  
  
func main() {  
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    variables and decrypted during use to ensure security.  
    // In this example, AK and SK are stored in environment variables for authentication. Before running this  
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak := os.Getenv("CLOUD_SDK_AK")  
    sk := os.Getenv("CLOUD_SDK_SK")  
    projectId := "{project_id}"  
  
    auth := basic.NewCredentialsBuilder().  
        WithAk(ak).  
        WithSk(sk).  
        WithProjectId(projectId).  
        Build()  
  
    client := aom.NewAomClient(  

```

```

aom.AomClientBuilder().
    WithRegion(region.ValueOf("<YOUR REGION>")).
    WithCredential(auth).
    Build()

request := &model.DeletePromInstanceRequest{}
response, err := client.DeletePromInstance(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	No Prometheus instance is found.

Error Codes

See [Error Codes](#).

4.5.2 Querying a Prometheus Instance

Function

This API is used to query a Prometheus instance.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/{project_id}/aom/prometheus

Table 4-397 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Table 4-398 Query Parameters

Parameter	Mandatory	Type	Description
prom_id	No	String	Prometheus instance ID. If both prom_id and prom_type exist, only prom_id takes effect.
prom_type	No	String	Prometheus instance type (VPC and KUBERNETES are not supported). Enumeration values: <ul style="list-style-type: none">• default• ECS• VPC• CCE• REMOTE_WRITE• KUBERNETES• CLOUD_SERVICE• ACROSS_ACCOUNT
cce_cluster_enable	No	String	Whether to enable a CCE cluster. Enumeration values: <ul style="list-style-type: none">• true• false
prom_status	No	String	Prometheus instance status. Enumeration values: <ul style="list-style-type: none">• DELETED• NORMAL• ALL

Request Parameters

Table 4-399 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Parameter	Mandatory	Type	Description
Enterprise-Project-Id	Yes	String	Enterprise project ID. <ul style="list-style-type: none"> To query instances in an enterprise project, enter the enterprise project ID. To query instances in all enterprise projects, enter all_granted_eps.

Response Parameters

Status code: 200

Table 4-400 Response body parameters

Parameter	Type	Description
prometheus	Array of PromInstanceEpsModel objects	Prometheus instance list.

Table 4-401 PromInstanceEpsModel

Parameter	Type	Description
prom_name	String	Prometheus instance name. Enter 1–100 characters and do not start or end with an underscore (_) or hyphen (-). Only letters, digits, underscores, and hyphens are allowed.
prom_id	String	Prometheus instance ID.
prom_type	String	Prometheus instance type (VPC and KUBERNETES are not supported). Enumeration values: <ul style="list-style-type: none"> default ECS VPC CCE REMOTE_WRITE KUBERNETES CLOUD_SERVICE ACROSS_ACCOUNT

Parameter	Type	Description
prom_version	String	Prometheus instance version.
prom_create_time stamp	Long	Timestamp when the Prometheus instance is created.
prom_update_time stamp	Long	Timestamp when the Prometheus instance is updated.
prom_status	String	Prometheus instance status. Enumeration values: <ul style="list-style-type: none"> • DELETED • NORMAL • ALL
enterprise_project_id	String	Enterprise project that the Prometheus instance belongs to.
project_id	String	ID of the project that the Prometheus instance belongs to.
is_deleted_tag	Long	Whether an instance has been deleted.
deleted_time	Long	Deletion time.
prom_spec_config	PromConfigModel object	Special configuration of the Prometheus instance.
cce_spec_config	String	Special configuration of the Prometheus instance in the CCE scenario.

Table 4-402 PromConfigModel

Parameter	Type	Description
remote_write_url	String	Remote write address of the Prometheus instance.
remote_read_url	String	Remote read address of the Prometheus instance.
prom_http_api_endpoint	String	URL for calling the Prometheus instance.
dashboard_id	String	ID of the dashboard associated with the Prometheus instance (not used currently).
region_id	String	Region that the Prometheus instance belongs to.

Example Requests

- Query a Prometheus instance.
`https://{Endpoint}/v1/{project_id}/aom/prometheus`
- Query the Prometheus instance whose **prom_id** is **08****2a-8b-45-b1-d1*****79**.
`https://{Endpoint}/v1/{project_id}/aom/prometheus?prom_id=08****2a-8**b-4**5-b**1-d1*****79`

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "prometheus": [ {
    "deleted_time": 0,
    "enterprise_project_id": "0",
    "project_id": "2a4***56cc***7f837***891***c1cf",
    "prom_create_timestamp": 1691718171483,
    "prom_id": "08****2a-8**b-4**5-b**1-d1*****79",
    "prom_name": "aom_prometheus",
    "prom_spec_config": {
      "prom_http_api_endpoint": "aom-internal.cn-****-
*.myhuaweicloud.com:***v1/2a4***56cc***7f837***891***c1cf/08****2a-8**b-4**5-b**1-d1*****79",
      "region_id": "cn-****-*",
      "remote_read_url": "aom-internal.cn-****-*.myhuaweicloud.com:***v1/2a4***56cc***7f837***891***c1cf/
08****2a-8**b-4**5-b**1-d1*****79/api/v1/read",
      "remote_write_url": "aom-internal.cn-****-*.myhuaweicloud.com:***v1/2a4***56cc***7f837***891***c1cf/
08****2a-8**b-4**5-b**1-d1*****79/push"
    },
    "prom_type": "CCE",
    "prom_update_timestamp": 1691718171483
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListPromInstanceSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";
```

```
ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
ListPromInstanceRequest request = new ListPromInstanceRequest();
try {
    ListPromInstanceResponse response = client.listPromInstance(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdfaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdfaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListPromInstanceRequest()
        response = client.list_prom_instance(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main
```

```
import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListPromInstanceRequest{}
    response, err := client.ListPromInstance(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.

Error Codes

See [Error Codes](#).

4.5.3 Adding a Prometheus Instance

Function

This API is used to add a Prometheus instance.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/aom/prometheus

Table 4-403 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-404 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.
region	Yes	String	Region to which the Prometheus instance belongs. Generally, it is the domain name or IP address of the server bearing the REST service endpoint. This parameter varies depending on the service and region.

Table 4-405 Request body parameters

Parameter	Mandatory	Type	Description
prom_name	Yes	String	Prometheus instance name. Enter 1–100 characters and do not start or end with an underscore (_) or hyphen (-). Only letters, digits, underscores, and hyphens are allowed.

Parameter	Mandatory	Type	Description
prom_type	Yes	String	Prometheus instance type (VPC and KUBERNETES are not supported). Enumeration values: <ul style="list-style-type: none"> • ECS • VPC • CCE • REMOTE_WRITE • KUBERNETES • CLOUD_SERVICE • ACROSS_ACCOUNT
prom_version	No	String	Prometheus instance version.
enterprise_project_id	No	String	Enterprise project that the Prometheus instance belongs to.
project_id	No	String	ID of the project that the Prometheus instance belongs to.

Response Parameters

Status code: 200

Table 4-406 Response body parameters

Parameter	Type	Description
prometheus	Array of PromInstanceEpsCreateModel objects	Prometheus instance list.

Table 4-407 PromInstanceEpsCreateModel

Parameter	Type	Description
prom_name	String	Prometheus instance name. Enter 1–100 characters and do not start or end with an underscore (_) or hyphen (-). Only letters, digits, underscores, and hyphens are allowed.
prom_id	String	Prometheus instance ID.

Parameter	Type	Description
prom_type	String	Prometheus instance type (VPC and KUBERNETES are not supported). Enumeration values: <ul style="list-style-type: none"> • ECS • VPC • CCE • REMOTE_WRITE • KUBERNETES • CLOUD_SERVICE • ACROSS_ACCOUNT
prom_version	String	Prometheus instance version.
prom_create_time_stamp	Long	Timestamp when the Prometheus instance was created.
prom_update_time_stamp	Long	Timestamp when the Prometheus instance was updated.
prom_status	String	Prometheus instance status. Enumeration values: <ul style="list-style-type: none"> • DELETED • NORMAL • ALL
enterprise_project_id	String	Enterprise project that the Prometheus instance belongs to.
project_id	String	ID of the project that the Prometheus instance belongs to.
deleted_time	Long	Deletion time.
prom_spec_config	PromConfigModel object	Special configuration of the Prometheus instance.
cce_spec_config	String	Special configuration of the Prometheus instance in the CCE scenario.

Table 4-408 PromConfigModel

Parameter	Type	Description
remote_write_url	String	Remote write address of the Prometheus instance.

Parameter	Type	Description
remote_read_url	String	Remote read address of the Prometheus instance.
prom_http_api_endpoint	String	URL for calling the Prometheus instance.
dashboard_id	String	ID of the dashboard associated with the Prometheus instance (not used currently).
region_id	String	Region that the Prometheus instance belongs to.

Example Requests

Add a Prometheus instance for CCE.

```
https://{Endpoint}/v1/{project_id}/aom/prometheus
{
  "prom_type": "CCE",
  "prom_name": "aom_prometheus"
}
```

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "prometheus": [ {
    "deleted_time": 0,
    "enterprise_project_id": "0",
    "project_id": "2a4***56cc***7f837***891***c1cf",
    "prom_create_timestamp": 1691718171483,
    "prom_id": "08***2a-8**b-4**5-b**1-d1*****79",
    "prom_name": "aom_prometheus",
    "prom_spec_config": {
      "prom_http_api_endpoint": "aom-internal.cn-****-
*.myhuaweicloud.com:***/v1/2a4***56cc***7f837***891***c1cf/08***2a-8**b-4**5-b**1-d1*****79",
      "remote_read_url": "aom-internal.cn-****-*.myhuaweicloud.com:***/v1/2a4***56cc***7f837***891***c1cf/
08***2a-8**b-4**5-b**1-d1*****79/api/v1/read",
      "remote_write_url": "aom-internal.cn-****-*.myhuaweicloud.com:***/v1/2a4***56cc***7f837***891***c1cf/
08***2a-8**b-4**5-b**1-d1*****79/push",
      "region_id": "cn-****-*"
    },
    "prom_type": "CCE",
    "prom_update_timestamp": 1691718171483
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add a Prometheus instance for CCE.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class CreatePromInstanceSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();

        CreatePromInstanceRequest request = new CreatePromInstanceRequest();
        PromInstanceRequestModel body = new PromInstanceRequestModel();
        body.withPromType(PromInstanceRequestModel.PromTypeEnum.fromValue("CCE"));
        body.withPromName("aom_prometheus");
        request.withBody(body);
        try {
            CreatePromInstanceResponse response = client.createPromInstance(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Add a Prometheus instance for CCE.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
```

```
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreatePromInstanceRequest()
        request.body = PromInstanceRequestModel(
            prom_type="CCE",
            prom_name="aom_prometheus"
        )
        response = client.create_prom_instance(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Add a Prometheus instance for CCE.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())
```

```

request := &model.CreatePromInstanceRequest{}
request.Body = &model.PromInstanceRequestModel{
    PromType: model.GetPromInstanceRequestModelPromTypeEnum().CCE,
    PromName: "aom_prometheus",
}
response, err := client.CreatePromInstance(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.

Error Codes

See [Error Codes](#).

4.5.4 Creating a Recording Rule for a Prometheus Instance

Function

This API is used to create a recording rule for a Prometheus instance.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/{prometheus_instance}/aom/api/v1/rules

Table 4-409 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
prometheus_instance	Yes	String	Prometheus instance ID.

Request Parameters

Table 4-410 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Table 4-411 Request body parameters

Parameter	Mandatory	Type	Description
recording_rule	Yes	String	Recording rule.

Response Parameters

Status code: 500

Table 4-412 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error message.
error_type	String	Error type.
trace_id	String	Trace ID.

Example Requests

Create a recording rule for a Prometheus instance.

```
https://{Endpoint}/v1/{project_id}/{prometheus_instance}/aom/api/v1/rules
```

```
{
  "recording_rule" : "groups:\n  - name: apiserver_request_total\n    interval: 60s\n    rules:\n      -\n        record: job_instance_mode:apiserver_request_total:avg_rate5m\n          expr: avg by (job, instance, mode)\n            (rate(apiserver_request_total[5m]))\n          labels:\n            team: operations\n          - record:\n            job:apiserver_request_total:sum_rate10m\n              expr: sum by (job)(rate(apiserver_request_total[10m]))\n            \n            labels:\n              team: operations"
}
```

Example Responses

Status code: 204

OK: The request is successful.

```
No Content
```

Status code: 500

The recording rule already exists.

```
{
  "error_code" : "AOM.5001019",
  "error_msg" : "recording rule exist for the prometheus instance"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Create a recording rule for a Prometheus instance.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class CreateRecordingRuleSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();

        CreateRecordingRuleRequest request = new CreateRecordingRuleRequest();
        request.withPrometheusInstance("{prometheus_instance}");
        RecordingRuleRequest body = new RecordingRuleRequest();
        body.withRecordingRule("groups:
- name: apiserver_request_total
  interval: 60s
  rules:
- record: job_instance_mode:apiserver_request_total:avg_rate5m
  expr: avg by (job, instance, mode) (rate(apiserver_request_total[5m]))");
    }
```

```
        labels:
          team: operations
        - record: job:apiserver_request_total:sum_rate10m
          expr: sum by (job)(rate(apiserver_request_total[10m]))
          labels:
            team: operations");
    request.withBody(body);
    try {
      CreateRecordingRuleResponse response = client.createRecordingRule(request);
      System.out.println(response.toString());
    } catch (ConnectionException e) {
      e.printStackTrace();
    } catch (RequestTimeoutException e) {
      e.printStackTrace();
    } catch (ServiceResponseException e) {
      e.printStackTrace();
      System.out.println(e.getStatusCode());
      System.out.println(e.getRequestId());
      System.out.println(e.getErrorCode());
      System.out.println(e.getErrorMsg());
    }
  }
}
```

Python

Create a recording rule for a Prometheus instance.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateRecordingRuleRequest()
        request.prometheus_instance = "{prometheus_instance}"
        request.body = RecordingRuleRequest(
            recording_rule="groups:
- name: apiserver_request_total
  interval: 60s
  rules:
  - record: job_instance_mode:apiserver_request_total:avg_rate5m
    expr: avg by (job, instance, mode) (rate(apiserver_request_total[5m]))
    labels:
      team: operations
  - record: job:apiserver_request_total:sum_rate10m
    expr: sum by (job)(rate(apiserver_request_total[10m]))
    labels:
      team: operations"
        )
    
```



```
)
    response = client.create_recording_rule(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Create a recording rule for a Prometheus instance.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateRecordingRuleRequest{
        request.PrometheusInstance = "{prometheus_instance}"
        request.Body = &model.RecordingRuleRequest{
            RecordingRule: "groups:
- name: apiserver_request_total
  interval: 60s
  rules:
  - record: job_instance_mode:apiserver_request_total:avg_rate5m
    expr: avg by (job, instance, mode) (rate(apiserver_request_total[5m]))
    labels:
      team: operations
  - record: job:apiserver_request_total:sum_rate10m
    expr: sum by (job)(rate(apiserver_request_total[10m]))
    labels:
      team: operations",
        }
    response, err := client.CreateRecordingRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	OK: The request is successful.
500	The recording rule already exists.

Error Codes

See [Error Codes](#).

4.5.5 Obtaining the Credential for Calling a Prometheus Instance

Function

This API is used to obtain the credential for calling a Prometheus instance.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/{project_id}/access-code

Table 4-413 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-414 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Response Parameters

Status code: 200

Table 4-415 Response body parameters

Parameter	Type	Description
access_codes	Array of AccessCodeModel objects	Access codes.

Table 4-416 AccessCodeModel

Parameter	Type	Description
access_code	String	Access code.
access_code_id	String	Access code ID.
create_at	Long	Creation time.
status	String	Status.

Example Requests

Obtain the credential for calling a Prometheus instance.

```
https://{Endpoint}/v1/{project_id}/access-code
```

Example Responses

Status code: 200

OK: The request is successful.

```
{  
  "access_codes": [{  
    "access_code": "b***OOJpV***B4ciU*****NfR2f9xZ*****tgpba*****yQS66lh***a",
```

```
"access_code_id" : "c6*04****ee6e*****092*****45*3",
"create_at" : 1700796457506243016,
"status" : "enable"
} ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListAccessCodeSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListAccessCodeRequest request = new ListAccessCodeRequest();
        try {
            ListAccessCodeResponse response = client.listAccessCode(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8
```

```
import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudskaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListAccessCodeRequest()
        response = client.list_access_code(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAccessCodeRequest{}
    response, err := client.ListAccessCode(request)
```

```

if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.

Error Codes

See [Error Codes](#).

4.6 Configuration Management

4.6.1 Querying the Cloud Services for Which AOM 2.0 Has Been Granted Permissions

Function

This API is used to query the cloud services for which AOM 2.0 has been granted permissions.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/{project_id}/aom/auth/grant

Table 4-417 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-418 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Response Parameters

None

Example Requests

Query the cloud services for which AOM 2.0 has been granted permissions.

`https://{Endpoint}/v1/{project_id}/aom/auth/grant`

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "CES" : {
    "role_name" : [ "CES ReadOnlyAccess" ],
    "status" : true
  },
  "ECS" : {
    "role_name" : [ "ECS CommonOperations", "ECS ReadOnlyAccess" ],
    "status" : true
  },
  "CCE" : {
    "role_name" : [ "CCE FullAccess" ],
    "status" : true
  },
  "CCI" : {
    "role_name" : [ "CCI FullAccess" ],
    "status" : true
  },
  "RMS" : {
    "role_name" : [ "RMS ReadOnlyAccess" ],
    "status" : true
  },
  "LTS" : {
    "role_name" : [ "LTS FullAccess" ],
    "status" : true
  },
  "DMS" : {
    "role_name" : [ "DMS UserAccess" ],
    "status" : true
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListPermissionsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListPermissionsRequest request = new ListPermissionsRequest();
        try {
            ListPermissionsResponse response = client.listPermissions(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
```



```
# The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
variables and decrypted during use to ensure security.
# In this example, AK and SK are stored in environment variables for authentication. Before running this
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
ak = os.environ["CLOUD_SDK_AK"]
sk = os.environ["CLOUD_SDK_SK"]
projectId = "{project_id}"

credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = ListPermissionsRequest()
    response = client.list_permissions(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListPermissionsRequest{}
    response, err := client.ListPermissions(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.

Error Codes

See [Error Codes](#).

4.6.2 Querying the ICAgent Installed on a Host

Function

This API is used to query the ICAgent installed on a cluster host or a custom host.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/{project_id}/{cluster_id}/{namespace}/agents

Table 4-419 Path Parameters

Parameter	Mandatory	Type	Description
cluster_id	Yes	String	<ul style="list-style-type: none">Enter a cluster ID when a cluster host is queried.Enter APM when a custom host is queried.
namespace	Yes	String	<ul style="list-style-type: none">Enter a namespace when a cluster host is queried.Enter APM when a custom host is queried.
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-420 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Response Parameters

None

Example Requests

Query the ICAgent installed on a host.

```
https://{Endpoint}/v1/{project_id}/{cluster_id}/{namespace}/agents
```

Example Responses

Status code: 200

OK: The request is successful.

```
[ {
  "ip" : "10.**.13",
  "agentId" : "7b***93-7**1-4**e-8**b-3d***35**84",
  "devCloudId" : "",
  "nodeName" : "aom-docker-75079-iul66",
  "status" : "running",
  "lastModified" : "170057765170",
  "updateTime" : "1701141177267",
  "version" : "5.13.110.52",
  "osType" : "linux",
  "pinpointVersion" : "1.0.29",
  "pinpointStatus" : "",
  "phpProbeVersion" : "",
  "dotnetProbeVersion" : "",
  "extendInfo" : null,
  "customHostTag" : null,
  "enterprise_project_id" : "d64fbcc8-c296-4a6f-8988-6850dfb08b47",
  "reserved" : "{\\"cpu_used\\" : \"1.5\", \"goroutine_used\" : 9507, \"mem_used\" : \"181556\", \"net_used\" : 0.1923828125}"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
```

```
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v2.region.AomRegion;
import com.huaweicloud.sdk.aom.v2.*;
import com.huaweicloud.sdk.aom.v2.model.*;

public class ListAgentsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListAgentsRequest request = new ListAgentsRequest();
        request.withClusterId("{cluster_id}");
        request.withNamespace("{namespace}");
        try {
            ListAgentsResponse response = client.listAgents(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v2.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v2 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")
    projectId = "{project_id}"
```

```
credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = ListAgentsRequest()
    request.cluster_id = "{cluster_id}"
    request.namespace = "{namespace}"
    response = client.list_agents(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v2/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAgentsRequest{}
    request.ClusterId = "{cluster_id}"
    request.Namespace = "{namespace}"
    response, err := client.ListAgents(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.

Error Codes

See [Error Codes](#).

4.7 CMDB (AOM 2.0)

4.7.1 Creating an Application

Function

This API is used to add an application.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/applications

Request Parameters

Table 4-421 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Table 4-422 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	Application description.

Parameter	Mandatory	Type	Description
display_name	No	String	Application name, which can contain 2 to 64 characters. Only letters, digits, underscores (_), hyphens (-), and periods (.) are allowed.
eps_id	No	String	ID of the enterprise project associated with the application. This parameter is mandatory for enterprise users.
name	Yes	String	Unique identifier, which can contain 2 to 64 characters. Only letters, digits, underscores (_), hyphens (-), and periods (.) are allowed.
register_type	No	String	During frontend invocation, the default value is CONSOLE and no parameter needs to be transferred. During REST API invocation, the default value is API . You can change the value to SERVICE_DISCOVERY when necessary. Enumeration values: <ul style="list-style-type: none">• API• CONSOLESERVICE_DISCOVERY

Response Parameters

Status code: 400

Table 4-423 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-424 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Create an application.

```
https://{Endpoint}/v1/applications
```

```
{
  "description": "Application information",
  "display_name": "example1",
  "eps_id": "0",
  "name": "example1",
  "register_type": "CONSOLE"
}
```

Example Responses

Status code: 200

OK

```
{
  "id": "ebac72344bf24500b4f05651cf99e519"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Create an application.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class CreateAppSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
```



```
String sk = System.getenv("CLOUD_SDK_SK");

ICredential auth = new BasicCredentials()
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
CreateAppRequest request = new CreateAppRequest();
BizAppParam body = new BizAppParam();
body.withRegisterType(BizAppParam.RegisterTypeEnum.fromValue("CONSOLE"));
body.withName("example1");
body.withEpsId("0");
body.withDisplayName("example1");
body.withDescription("Application information");
request.withBody(body);
try {
    CreateAppResponse response = client.createApp(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

Create an application.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateAppRequest()
        request.body = BizAppParam(
            register_type="CONSOLE",
            name="example1",
            eps_id="0",
```

```
        display_name="example1",
        description="Application information"
    )
    response = client.create_app(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Create an application.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateAppRequest{}
    registerTypeBizAppParam:= model.GetBizAppParamRegisterTypeEnum().CONSOLE
    epsIdBizAppParam:= "0"
    displayNameBizAppParam:= "example1"
    descriptionBizAppParam:= "Application information"
    request.Body = &model.BizAppParam{
        RegisterType: &registerTypeBizAppParam,
        Name: "example1",
        EpsId: &epsIdBizAppParam,
        DisplayName: &displayNameBizAppParam,
        Description: &descriptionBizAppParam,
    }
    response, err := client.CreateApp(request)
    if err == nil {
        fmt.Printf("%v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.2 Deleting an Application

Function

This API is used to delete an application.

Calling Method

For details, see [Calling APIs](#).

URI

DELETE /v1/applications/{application_id}

Table 4-425 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Request Parameters

Table 4-426 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Response Parameters

Status code: 400

Table 4-427 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-428 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Delete an application.

```
https://{Endpoint}/v1/applications/{application_id}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
```

```
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class DeleteAppSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        DeleteAppRequest request = new DeleteAppRequest();
        request.withApplicationId("{application_id}");
        try {
            DeleteAppResponse response = client.deleteApp(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
```

```
.build()

try:
    request = DeleteAppRequest()
    request.application_id = "{application_id}"
    response = client.delete_app(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteAppRequest{}
    request.ApplicationId = "{application_id}"
    response, err := client.DeleteApp(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The request is successful.
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.3 Querying the Details of an Application

Function

This API is used to query the details of an application.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/applications/{application_id}

Table 4-429 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Request Parameters

Table 4-430 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Response Parameters

Status code: 200

Table 4-431 Response body parameters

Parameter	Type	Description
aom_id	String	AOM ID. If you leave this parameter empty, it will not be displayed.
app_id	String	Application ID.
create_time	String	Creation time.
creator	String	Creator.
description	String	Description.
display_name	String	Application name.
eps_id	String	Enterprise project ID.
modified_time	String	Modification time.
modifier	String	User who makes the modification.
name	String	Unique identifier.
register_type	String	Registration method. Enumeration values: <ul style="list-style-type: none">• API• CONSOLE• SERVICE_DISCOVERY

Status code: 400

Table 4-432 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-433 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Obtain the details of an application.

```
https://{Endpoint}/v1/applications/{application_id}
```

Example Responses

Status code: 200

Application details.

```
{
  "creator" : "xxx",
  "modifier" : "xxx",
  "name" : "exampleSW",
  "create_time" : "2023-02-03 10:35:00",
  "modified_time" : "2023-02-03 10:35:00",
  "register_type" : "API",
  "display_name" : "exampleSW",
  "app_id" : "9616a75c75af4bcdac38d77ff72a88e",
  "eps_id" : "0"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class ShowAppSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
```

```
.withAk(ak)
.withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
ShowAppRequest request = new ShowAppRequest();
request.withApplicationId("{application_id}");
try {
    ShowAppResponse response = client.showApp(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdfaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdfaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowAppRequest()
        request.application_id = "{application_id}"
        response = client.show_app(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
```

```

"github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
"github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowAppRequest{}
    request.ApplicationId = "{application_id}"
    response, err := client.ShowApp(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Application details.
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.4 Modifying an Application

Function

This API is used to modify an application.

Calling Method

For details, see [Calling APIs](#).

URI

PUT /v1/applications/{application_id}

Table 4-434 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Request Parameters

Table 4-435 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Table 4-436 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	Application description.
display_name	No	String	Application name, which can contain 2 to 64 characters. Only letters, digits, underscores (_), hyphens (-), and periods (.) are allowed.

Parameter	Mandatory	Type	Description
eps_id	No	String	ID of the enterprise project associated with the application. This parameter is mandatory for enterprise users.
name	Yes	String	Unique identifier, which can contain 2 to 64 characters. Only letters, digits, underscores (_), hyphens (-), and periods (.) are allowed.
register_type	No	String	During frontend invocation, the default value is CONSOLE and no parameter needs to be transferred. During REST API invocation, the default value is API . You can change the value to SERVICE_DISCOVERY when necessary. Enumeration values: <ul style="list-style-type: none"> • API • CONSOLESERVICE_DISCOVERY

Response Parameters

Status code: 400

Table 4-437 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-438 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Modify an application.

```
https://{Endpoint}/v1/applications/{application_id}

{
  "description" : "Application information.",
  "eps_id" : 0,
  "name" : "exampleSW12",
  "register_type" : "API"
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Modify an application.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class UpdateAppSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        UpdateAppRequest request = new UpdateAppRequest();
        request.withApplicationId("{application_id}");
        BizAppParam body = new BizAppParam();
        body.withRegisterType(BizAppParam.RegisterTypeEnum.fromValue("API"));
        body.withName("exampleSW12");
        body.withEpsId("0");
        body.withDescription("Application information.");
        request.withBody(body);
        try {
            UpdateAppResponse response = client.updateApp(request);
        }
    }
}
```

```
        System.out.println(response.toString());
    } catch (ConnectionException e) {
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

Python

Modify an application.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateAppRequest()
        request.application_id = "{application_id}"
        request.body = BizAppParam(
            register_type="API",
            name="exampleSW12",
            eps_id="0",
            description="Application information."
        )
        response = client.update_app(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Modify an application.

```
package main

import (
    "fmt"
```

```

"github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
"github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateAppRequest{}
    request.ApplicationId = "{application_id}"
    registerTypeBizAppParam:= model.GetBizAppParamRegisterTypeEnum().API
    epsIdBizAppParam:= "0"
    descriptionBizAppParam:= "Application information."
    request.Body = &model.BizAppParam{
        RegisterType: &registerTypeBizAppParam,
        Name: "exampleSW12",
        EpsId: &epsIdBizAppParam,
        Description: &descriptionBizAppParam,
    }
    response, err := client.UpdateApp(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.5 Adding a Component

Function

This API is used to add a component.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/components

Request Parameters

Table 4-439 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Table 4-440 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	Component description.
model_id	Yes	String	Application or sub-application ID, which can contain up to 36 characters. Only letters and digits are allowed.
model_type	Yes	String	Application or sub-application. Options: APPLICATION and SUB_APPLICATION. The value is case-insensitive.
name	Yes	String	Component name.

Response Parameters

Status code: 200

Table 4-441 Response body parameters

Parameter	Type	Description
id	String	Object ID.

Status code: 400

Table 4-442 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-443 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Add a component.

```
https://{Endpoint}/v1/components
{
  "model_id": "9616a75c75af4bcdacf38d77ff72a88e",
  "model_type": "APPLICATION",
  "name": "component1"
}
```

Example Responses

Status code: 200

OK

```
{
  "id": "28c600be47374b9697404b0f58263d1c"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add a component.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class CreateComponentSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        CreateComponentRequest request = new CreateComponentRequest();
        ComponentParam body = new ComponentParam();
        body.setName("component1");
        body.setModelType("APPLICATION");
        body.setModelId("9616a75c75af4bcdacf38d77ff72a88e");
        request.withBody(body);
        try {
            CreateComponentResponse response = client.createComponent(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Add a component.

```
# coding: utf-8
```

```
import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudskaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateComponentRequest()
        request.body = ComponentParam(
            name="component1",
            model_type="APPLICATION",
            model_id="9616a75c75af4bcdacf38d77ff72a88e"
        )
        response = client.create_component(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Add a component.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
```

```

Build()
request := &model.CreateComponentRequest{}
request.Body = &model.ComponentParam{
    Name: "component1",
    ModelType: "APPLICATION",
    ModelId: "9616a75c75af4bcdacf38d77ff72a88e",
}
response, err := client.CreateComponent(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}
    
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.6 Deleting a Component

Function

This API is used to delete a component.

Calling Method

For details, see [Calling APIs](#).

URI

DELETE /v1/components/{component_id}

Table 4-444 Path Parameters

Parameter	Mandatory	Type	Description
component_id	Yes	String	Component ID.

Request Parameters

Table 4-445 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Response Parameters

Status code: 400

Table 4-446 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-447 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Delete a component.

```
https://{Endpoint}/v1/components/{component_id}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class DeleteComponentSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        DeleteComponentRequest request = new DeleteComponentRequest();
        request.withComponentId("{component_id}");
        try {
            DeleteComponentResponse response = client.deleteComponent(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
```

risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.

In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment

```
ak = os.environ["CLOUD_SDK_AK"]
sk = os.environ["CLOUD_SDK_SK"]

credentials = BasicCredentials(ak, sk)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = DeleteComponentRequest()
    request.component_id = "{component_id}"
    response = client.delete_component(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteComponentRequest{}
    request.ComponentId = "{component_id}"
    response, err := client.DeleteComponent(request)
    if err == nil {
        fmt.Printf("%v\n", response)
    } else {
        fmt.Println(err)
    }
}
```


More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: Deleted.
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.7 Querying the Details of a Component

Function

This API is used to query the details of a component.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/components/{component_id}

Table 4-448 Path Parameters

Parameter	Mandatory	Type	Description
component_id	Yes	String	Component ID.

Request Parameters

Table 4-449 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Response Parameters

Status code: 200

Table 4-450 Response body parameters

Parameter	Type	Description
aom_id	String	aomId
app_id	String	Application ID.
create_time	String	Creation time.
creator	String	Creator.
description	String	Description.
id	String	Component ID.
modified_time	String	Modification time.
modifier	String	User who makes the modification.
name	String	Component name.
register_type	String	Registration method. Enumeration values: <ul style="list-style-type: none">• API• CONSOLE• SERVICE_DISCOVERY
sub_app_id	String	Sub-application ID.

Status code: 400

Table 4-451 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403**Table 4-452** Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Obtain the details of a component.

```
https://{Endpoint}/v1/components/{component_id}
```

Example Responses**Status code: 200**

Component details.

```
{
  "creator" : "xxx",
  "modifier" : "xxx",
  "name" : "component1",
  "description" : null,
  "create_time" : "2023-02-03 10:47:38",
  "modified_time" : "2023-02-03 10:47:38",
  "register_type" : "API",
  "id" : "28c600be47374b9697404b0f58263d1c",
  "app_id" : "9616a75c75af4bcdacf38d77ff72a88e",
  "aom_id" : null,
  "sub_app_id" : null
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class ShowComponentSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
```

```
this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
String ak = System.getenv("CLOUD_SDK_AK");
String sk = System.getenv("CLOUD_SDK_SK");

ICredential auth = new BasicCredentials()
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
ShowComponentRequest request = new ShowComponentRequest();
request.withComponentId("{component_id}");
try {
    ShowComponentResponse response = client.showComponent(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdfaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdfaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowComponentRequest()
        request.component_id = "{component_id}"
        response = client.show_component(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```

package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowComponentRequest{}
    request.ComponentId = "{component_id}"
    response, err := client.ShowComponent(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Component details.
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.8 Modifying a Component

Function

This API is used to modify a component.

Calling Method

For details, see [Calling APIs](#).

URI

PUT /v1/components/{component_id}

Table 4-453 Path Parameters

Parameter	Mandatory	Type	Description
component_id	Yes	String	Component ID.

Request Parameters

Table 4-454 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Table 4-455 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	Component description.
name	Yes	String	Component name.

Response Parameters

Status code: 400

Table 4-456 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403**Table 4-457** Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Modify a component.

```
https://{Endpoint}/v1/components/{component_id}
{
  "description" : "Component description.",
  "name" : "component1"
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Modify a component.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class UpdateComponentSolution {
    public static void main(String[] args) {
```

```
// The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
// In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
String ak = System.getenv("CLOUD_SDK_AK");
String sk = System.getenv("CLOUD_SDK_SK");

ICredential auth = new BasicCredentials()
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();

UpdateComponentRequest request = new UpdateComponentRequest();
request.withComponentId("{component_id}");
ComponentUpdateParam body = new ComponentUpdateParam();
body.withName("component1");
body.withDescription("Component description.");
request.withBody(body);
try {
    UpdateComponentResponse response = client.updateComponent(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

Modify a component.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateComponentRequest()
```



```
request.component_id = "{component_id}"
request.body = ComponentUpdateParam(
    name="component1",
    description="Component description."
)
response = client.update_component(request)
print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Modify a component.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateComponentRequest{}
    request.ComponentId = "{component_id}"
    descriptionComponentUpdateParam := "Component description."
    request.Body = &model.ComponentUpdateParam{
        Name: "component1",
        Description: &descriptionComponentUpdateParam,
    }
    response, err := client.UpdateComponent(request)
    if err == nil {
        fmt.Printf("%v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.9 Creating an Environment

Function

This API is used to create an environment.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/environments

Request Parameters

Table 4-458 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Table 4-459 Request body parameters

Parameter	Mandatory	Type	Description
component_id	Yes	String	ID of the component associated with the environment, which can contain up to 36 characters. Only letters and digits are allowed. This parameter is mandatory for creating an environment and optional for modifying an environment.
description	No	String	Description.
env_name	Yes	String	Environment name.
env_type	Yes	String	Environment type. Options: DEV, TEST, PRE, and ONLINE. The value is case-insensitive.
os_type	Yes	String	OS type. Options: LINUX and WINDOWS. This parameter is mandatory for creating an environment and cannot be modified.
region	No	String	Region associated with the environment. This parameter is mandatory for creating an environment and cannot be modified.
register_type	No	String	Registration type. Options: API (default), SERVICE_DISCOVERY, and CONSOLE.

Response Parameters

Status code: 200

Table 4-460 Response body parameters

Parameter	Type	Description
id	String	Object ID.

Status code: 400

Table 4-461 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403**Table 4-462** Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Create an environment.

```
https://{Endpoint}/v1/environments  
  
{  
  "component_id" : "28c600be47374b9697404b0f58263d1c",  
  "description" : "Environment description.",  
  "env_name" : "environment1",  
  "env_type" : "DEV",  
  "os_type" : "LINUX",  
  "region" : "xxx",  
  "register_type" : "API"  
}
```

Example Responses

Status code: 200

Environment ID.

```
{  
  "id" : "530312e8bd7c4674b0af6d4beb2e23c6"  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Create an environment.

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;
```

```
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class CreateEnvSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        CreateEnvRequest request = new CreateEnvRequest();
        EnvParam body = new EnvParam();
        body.withRegisterType("API");
        body.withRegion("xxx");
        body.withOsType("LINUX");
        body.withEnvType("DEV");
        body.withEnvName("environment1");
        body.withDescription("Environment description.");
        body.withComponentId("28c600be47374b9697404b0f58263d1c");
        request.withBody(body);
        try {
            CreateEnvResponse response = client.createEnv(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Create an environment.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
```

```
variables and decrypted during use to ensure security.
# In this example, AK and SK are stored in environment variables for authentication. Before running this
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
ak = os.environ["CLOUD_SDK_AK"]
sk = os.environ["CLOUD_SDK_SK"]

credentials = BasicCredentials(ak, sk)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = CreateEnvRequest()
    request.body = EnvParam(
        register_type="API",
        region="xxx",
        os_type="LINUX",
        env_type="DEV",
        env_name="environment1",
        description="Environment description.",
        component_id="28c600be47374b9697404b0f58263d1c"
    )
    response = client.create_env(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Create an environment.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateEnvRequest{
        registerTypeEnvParam:= "API"
        regionEnvParam:= "xxx"
    }
```

```
descriptionEnvParam:= "Environment description."
request.Body = &model.EnvParam{
    RegisterType: &registerTypeEnvParam,
    Region: &regionEnvParam,
    OsType: "LINUX",
    EnvType: "DEV",
    EnvName: "environment1",
    Description: &descriptionEnvParam,
    ComponentId: "28c600be47374b9697404b0f58263d1c",
}
response, err := client.CreateEnv(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Environment ID.
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.10 Deleting an Environment

Function

This API is used to delete an environment.

Calling Method

For details, see [Calling APIs](#).

URI

DELETE /v1/environments/{environment_id}

Table 4-463 Path Parameters

Parameter	Mandatory	Type	Description
environment_id	Yes	String	Environment ID.

Request Parameters

Table 4-464 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Response Parameters

Status code: 400

Table 4-465 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-466 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Delete an environment.

```
https://{Endpoint}/v1/environments/{environment_id}
```


Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class DeleteEnvSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        DeleteEnvRequest request = new DeleteEnvRequest();
        request.withEnvironmentId("{environment_id}");
        try {
            DeleteEnvResponse response = client.deleteEnv(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v3.region.aom_region import AomRegion
```

```
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteEnvRequest()
        request.environment_id = "{environment_id}"
        response = client.delete_env(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteEnvRequest{}
    request.EnvironmentId = "{environment_id}"
    response, err := client.DeleteEnv(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

```
}  
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	ok
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.11 Querying the Details of an Environment

Function

This API is used to query the details of an environment.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/environments/{environment_id}

Table 4-467 Path Parameters

Parameter	Mandatory	Type	Description
environment_id	Yes	String	Environment ID.

Request Parameters

Table 4-468 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Response Parameters

Status code: 200**Table 4-469** Response body parameters

Parameter	Type	Description
aom_id	String	aomId
component_id	String	Component ID.
create_time	String	Creation time.
creator	String	Creator.
description	String	Description.
env_id	String	Environment ID.
env_name	String	Environment name.
env_tags	Array of TagNameAndIdVo objects	Environment tag.
env_type	String	Environment type.
eps_id	String	Enterprise project ID.
modified_time	String	Modification time.
modifier	String	User who makes the modification.
os_type	String	OS type.
region	String	Region.

Parameter	Type	Description
register_type	String	Registration method. Enumeration values: <ul style="list-style-type: none"> • API • CONSOLE • SERVICE_DISCOVERY

Table 4-470 TagNameAndIdVo

Parameter	Type	Description
tag_id	String	Tag ID.
tag_name	String	Tag name.

Status code: 400

Table 4-471 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-472 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Obtain the details of an environment.

```
https://{Endpoint}/v1/environments/{environment_id}
```

Example Responses

Status code: 200

Environment details.

```
{
  "creator": "xxx",
  "modifier": "xxx",
  "region": "xxx",
  "create_time": "2023-02-03 11:17:19",
  "modified_time": "2023-02-03 11:17:19",
  "register_type": "API",
  "env_name": "environment1",
  "env_id": "530312e8bd7c4674b0af6d4beb2e23c6",
  "description": "Environment description.",
  "component_id": "28c600be47374b9697404b0f58263d1c",
  "os_type": "LINUX",
  "env_type": "DEV",
  "eps_id": "0",
  "aom_id": null,
  "env_tags": null
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class ShowEnvSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ShowEnvRequest request = new ShowEnvRequest();
        request.withEnvironmentId("{environment_id}");
        try {
            ShowEnvResponse response = client.showEnv(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
        }
    }
}
```

```
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdfaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdfaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowEnvRequest()
        request.environment_id = "{environment_id}"
        response = client.show_env(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()
}
```

```
client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.ShowEnvRequest{}
request.EnvironmentId = "{environment_id}"
response, err := client.ShowEnv(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Environment details.
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.12 Modifying an Environment

Function

This API is used to modify an environment.

Calling Method

For details, see [Calling APIs](#).

URI

PUT /v1/environments/{environment_id}

Table 4-473 Path Parameters

Parameter	Mandatory	Type	Description
environment_id	Yes	String	Environment ID.

Request Parameters

Table 4-474 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Table 4-475 Request body parameters

Parameter	Mandatory	Type	Description
component_id	Yes	String	ID of the component associated with the environment, which can contain up to 36 characters. Only letters and digits are allowed. This parameter is mandatory for creating an environment and optional for modifying an environment.
description	No	String	Description.
env_name	Yes	String	Environment name.
env_type	Yes	String	Environment type. Options: DEV, TEST, PRE, and ONLINE. The value is case-insensitive.
os_type	Yes	String	OS type. Options: LINUX and WINDOWS. This parameter is mandatory for creating an environment and cannot be modified.

Parameter	Mandatory	Type	Description
region	No	String	Region associated with the environment. This parameter is mandatory for creating an environment and cannot be modified.
register_type	No	String	Registration type. Options: API (default), SERVICE_DISCOVERY, and CONSOLE.

Response Parameters

Status code: 400

Table 4-476 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-477 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Modify an environment.

```
https://{Endpoint}/v1/environments/{environment_id}

{
  "component_id" : "4df35ac3a1c34652844d18c3d069f8b2",
  "description" : "Environment description.",
  "env_name" : "environment1",
  "env_type" : "DEV",
  "os_type" : "LINUX",
  "region" : "xxx",
  "register_type" : "API"
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Modify an environment.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class UpdateEnvSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        UpdateEnvRequest request = new UpdateEnvRequest();
        request.withEnvironmentId("{environment_id}");
        EnvParam body = new EnvParam();
        body.withRegisterType("API");
        body.withRegion("xxx");
        body.withOsType("LINUX");
        body.withEnvType("DEV");
        body.withEnvName("environment1");
        body.withDescription("Environment description.");
        body.withComponentId("4df35ac3a1c34652844d18c3d069f8b2");
        request.withBody(body);
        try {
            UpdateEnvResponse response = client.updateEnv(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

```
}  
}  
}
```

Python

Modify an environment.

```
# coding: utf-8  
  
import os  
from huaweicloudsdkcore.auth.credentials import BasicCredentials  
from huaweicloudsdkaom.v3.region.aom_region import AomRegion  
from huaweicloudsdkcore.exceptions import exceptions  
from huaweicloudsdkaom.v3 import *  
  
if __name__ == "__main__":  
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    # variables and decrypted during use to ensure security.  
    # In this example, AK and SK are stored in environment variables for authentication. Before running this  
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak = os.environ["CLOUD_SDK_AK"]  
    sk = os.environ["CLOUD_SDK_SK"]  
  
    credentials = BasicCredentials(ak, sk)  
  
    client = AomClient.new_builder() \  
        .with_credentials(credentials) \  
        .with_region(AomRegion.value_of("<YOUR REGION>")) \  
        .build()  
  
    try:  
        request = UpdateEnvRequest()  
        request.environment_id = "{environment_id}"  
        request.body = EnvParam(  
            register_type="API",  
            region="xxx",  
            os_type="LINUX",  
            env_type="DEV",  
            env_name="environment1",  
            description="Environment description.",  
            component_id="4df35ac3a1c34652844d18c3d069f8b2"  
        )  
        response = client.update_env(request)  
        print(response)  
    except exceptions.ClientRequestException as e:  
        print(e.status_code)  
        print(e.request_id)  
        print(e.error_code)  
        print(e.error_msg)
```

Go

Modify an environment.

```
package main  
  
import (  
    "fmt"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"  
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"  
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"  
)  
  
func main() {  
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
```

```

risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
variables and decrypted during use to ensure security.
// In this example, AK and SK are stored in environment variables for authentication. Before running this
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
ak := os.Getenv("CLOUD_SDK_AK")
sk := os.Getenv("CLOUD_SDK_SK")

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.UpdateEnvRequest{}
request.EnvironmentId = "{environment_id}"
registerTypeEnvParam:= "API"
regionEnvParam:= "xxx"
descriptionEnvParam:= "Environment description."
request.Body = &model.EnvParam{
    RegisterType: &registerTypeEnvParam,
    Region: &regionEnvParam,
    OsType: "LINUX",
    EnvType: "DEV",
    EnvName: "environment1",
    Description: &descriptionEnvParam,
    ComponentId: "4df35ac3a1c34652844d18c3d069f8b2",
}
response, err := client.UpdateEnv(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.13 Querying the Resource List of a Node

Function

This API is used to query the resource list of a node.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/resource/{rf_resource_type}/type/{type}/ci-relationships

Table 4-478 Path Parameters

Parameter	Mandatory	Type	Description
rf_resource_type	Yes	String	Cloud service resource, which is the same as provider of Resource Management Service (RMS).
type	Yes	String	Cloud service resource type, which is the same as type of RMS.

Request Parameters

Table 4-479 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Table 4-480 Request body parameters

Parameter	Mandatory	Type	Description
marker	No	String	Pagination marker, which is the ID of the last record on the previous page.

Parameter	Mandatory	Type	Description
limit	No	Integer	Maximum number of records that can be returned. This parameter can be empty. If its value is less than 1 or greater than 100, the default value 100 will be used.
keywords	No	Map<String,String>	Keywords for fuzzy search. Options: NAME and RESOURCE_ID.
ci_relationships	No	Boolean	Whether to return the topology tree. Default: false. true: The topology will be returned, but the performance will be affected. false: No topology will be returned, and the performance will not be affected.
ci_type	Yes	String	Node type. Options: application, sub_application, component, and environment.
ci_region	No	String	Region associated with the environment. If this parameter is left blank, it represents all regions.
ci_ids	No	Array of strings	Node ID list. If both ci_ids and ci_id are specified, ci_ids will be used. They cannot be empty at the same time.
ci_id	No	String	Node ID list. If both ci_ids and ci_id are specified, ci_ids will be used. They cannot be empty at the same time. However, batch application query is not supported.

Response Parameters

Status code: 200

Table 4-481 Response body parameters

Parameter	Type	Description
data	Array of objects	Data displayed during page query.

Parameter	Type	Description
page_info	Object	Pagination information.

Status code: 400

Table 4-482 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-483 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Obtain the resource list of a node.

`https://{Endpoint}/v1/resource/{rf_resource_type}/type/{type}/ci-relationships`

```
{
  "ci_ids" : [ "63c2195e9da846258b113205184b2b53" ],
  "ci_relationships" : true,
  "ci_type" : "environment"
}
```

Example Responses

Status code: 200

Information about the related resources is returned.

```
{
  "data" : [ {
    "id" : "7015d303a8454f49a289dd47ada4b60c",
    "resource_id" : "aom_7015d303a8454f49a289dd47ada4b60c",
    "resource_name" : "luban121000000333",
    "resource_region" : "xxx",
    "env_ids" : [ "63c2195e9da846258b113205184b2b53" ],
    "topology" : [ {
      "app_id" : "07f6836530e24efdab068aacef933d4b",
      "app_name" : "test91",
      "sub_app_id" : "b554711fb4774bf98cfbdfa955a2d640",
      "sub_app_name" : "sub-888",
    }
  ]
}
```



```
"component_id" : "b218263a62554ad6aa976908e4990cf3",
"component_name" : "Component 99",
"env_id" : "63c2195e9da846258b113205184b2b53",
"env_name" : "Environment 22",
"env_region" : "xxx",
"os_type" : "LINUX"
}],
"status" : "ACTIVE",
"cloud_vendors" : "His",
"agent_state" : "UNINSTALLED",
"vpc_id" : " 6681507e-779e-4d0d-9421-5df07b95cca6 ",
"addresses" : [ {
  "host_ip" : "117.1.0.1",
  "ip_type" : "fixed",
  "ip_version" : 4,
  "mac" : null
}, {
  "host_ip" : "179.1.0.1",
  "ip_type" : "floating",
  "ip_version" : 4,
  "mac" : null
} ]
}, {
  "id" : "2c6fd895c88742559f2fd6c57817cf93",
  "resource_id" : "aom_2c6fd895c88742559f2fd6c57817cf93",
  "env_ids" : [ "63c2195e9da846258b113205184b2b53" ],
  "topology" : [ {
    "app_id" : "07f6836530e24efdab068aacef933d4b",
    "app_name" : "test91",
    "sub_app_id" : "b554711fb4774bf98cfbdfa955a2d640",
    "sub_app_name" : "sub-888",
    "component_id" : "b218263a62554ad6aa976908e4990cf3",
    "component_name" : "Component 99",
    "env_id" : "63c2195e9da846258b113205184b2b53",
    "env_name" : "Environment 22",
    "env_region" : "xxx",
    "os_type" : "LINUX"
  } ],
  "cloud_vendors" : "His",
  "agent_state" : "UNINSTALLED",
  "addresses" : [ {
    "host_ip" : "1.3.4.5",
    "ip_type" : "fixed",
    "ip_version" : 4,
    "mac" : null
  } ]
} ],
"page_info" : {
  "next_marker" : null,
  "current_count" : 2
}
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Obtain the resource list of a node.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
```

```
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class ListResourceUnderNodeSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListResourceUnderNodeRequest request = new ListResourceUnderNodeRequest();
        request.withRfResourceType("{rf_resource_type}");
        request.withType("{type}");
        PageResourceListParam body = new PageResourceListParam();
        List<String> listbodyCilds = new ArrayList<>();
        listbodyCilds.add("63c2195e9da846258b113205184b2b53");
        body.withCiRelationships(true);
        body.withCilds(listbodyCilds);
        body.withCiType("environment");
        request.withBody(body);
        try {
            ListResourceUnderNodeResponse response = client.listResourceUnderNode(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Obtain the resource list of a node.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
```

```
variables and decrypted during use to ensure security.
# In this example, AK and SK are stored in environment variables for authentication. Before running this
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
ak = os.environ["CLOUD_SDK_AK"]
sk = os.environ["CLOUD_SDK_SK"]

credentials = BasicCredentials(ak, sk)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = ListResourceUnderNodeRequest()
    request.rf_resource_type = "{rf_resource_type}"
    request.type = "{type}"
    listCildsbody = [
        "63c2195e9da846258b113205184b2b53"
    ]
    request.body = PageResourceListParam(
        ci_relationships=True,
        ci_ids=listCildsbody,
        ci_type="environment"
    )
    response = client.list_resource_under_node(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Obtain the resource list of a node.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListResourceUnderNodeRequest{}
    request.RfResourceType = "{rf_resource_type}"
```

```
request.Type = "{type}"
var listCildsbody = []string{
    "63c2195e9da846258b113205184b2b53",
}
ciRelationshipsPageResourceListParam:= true
request.Body = &model.PageResourceListParam{
    CiRelationships: &ciRelationshipsPageResourceListParam,
    Cilds: &listCildsbody,
    CiType: "environment",
}
response, err := client.ListResourceUnderNode(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Information about the related resources is returned.
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.14 Querying the Details of an Application Based on the Application Name

Function

This API is used to query the details of an application.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/applications

Table 4-484 Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Unique application ID, which contains 2 to 64 characters. Only letters, digits, underscores (_), hyphens (-), and periods (.) are allowed. You need to enter a unique application ID or display name.
display_name	No	String	Display name, which contains 2 to 64 characters. Only letters, digits, underscores (_), hyphens (-), and periods (.) are allowed. You need to enter a unique application ID or display name.

Request Parameters

Table 4-485 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Response Parameters

Status code: 200

Table 4-486 Response body parameters

Parameter	Type	Description
aom_id	String	AOM ID. If you leave this parameter empty, it will not be displayed.
app_id	String	Application ID.
create_time	String	Creation time.
creator	String	Creator.

Parameter	Type	Description
description	String	Description.
display_name	String	Application name.
eps_id	String	Enterprise project ID.
modified_time	String	Modification time.
modifier	String	User who makes the modification.
name	String	Unique identifier.
register_type	String	Registration method. Enumeration values: <ul style="list-style-type: none">• API• CONSOLE• SERVICE_DISCOVERY

Status code: 400**Table 4-487** Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403**Table 4-488** Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Query the details of an application based on the application name.

```
https://{Endpoint}/v1/applications
```

```
{  
  "name" : "exampleSW12"  
}
```

Example Responses

Status code: 200

Application details.

```
{
  "creator" : "xxx",
  "modifier" : "xxx",
  "name" : "exampleSW12",
  "description" : "Application information.",
  "create_time" : "2023-02-03 10:35:00",
  "modified_time" : "2023-02-03 10:41:49",
  "register_type" : "API",
  "display_name" : "exampleSW12",
  "app_id" : "9616a75c75af4bcdacf38d77ff72a88e",
  "eps_id" : "0"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query the details of an application based on the application name.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class ShowAppByNameSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ShowAppByNameRequest request = new ShowAppByNameRequest();
        try {
            ShowAppByNameResponse response = client.showAppByName(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
        }
    }
}
```

```
e.printStackTrace();
System.out.println(e.getStatusCode());
System.out.println(e.getRequestId());
System.out.println(e.getErrorCode());
System.out.println(e.getErrorMsg());
    }
}
}
```

Python

Query the details of an application based on the application name.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowAppByNameRequest()
        response = client.show_app_by_name(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Query the details of an application based on the application name.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
```



```
sk := os.Getenv("CLOUD_SDK_SK")

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.ShowAppByNameRequest{}
response, err := client.ShowAppByName(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Application details.
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.15 Querying the Details of an Environment Based on the Environment Name

Function

This API is used to query the details of an environment.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/environments/name/{environment_name}

Table 4-489 Path Parameters

Parameter	Mandatory	Type	Description
environment_name	Yes	String	Environment name.

Table 4-490 Query Parameters

Parameter	Mandatory	Type	Description
region	Yes	String	Region associated with the environment.
component_id	Yes	String	Component ID.

Request Parameters

Table 4-491 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Response Parameters

Status code: 200

Table 4-492 Response body parameters

Parameter	Type	Description
aom_id	String	aomId
component_id	String	Component ID.
create_time	String	Creation time.
creator	String	Creator.
description	String	Description.
env_id	String	Environment ID.

Parameter	Type	Description
env_name	String	Environment name.
env_tags	Array of TagNameAndIdVo objects	Environment tag.
env_type	String	Environment type.
eps_id	String	Enterprise project ID.
modified_time	String	Modification time.
modifier	String	User who makes the modification.
os_type	String	OS type.
region	String	Region.
register_type	String	Registration method. Enumeration values: <ul style="list-style-type: none">• API• CONSOLE• SERVICE_DISCOVERY

Table 4-493 TagNameAndIdVo

Parameter	Type	Description
tag_id	String	Tag ID.
tag_name	String	Tag name.

Status code: 400**Table 4-494** Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-495 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Query the details of an environment based on the environment name.

```
https://{Endpoint}/v1/environments/name/111?  
component_id=b879dd3d5f8942699814fdf84eb6464f&region=xxx
```

Example Responses

Status code: 200

Environment details.

```
{  
  "creator": "xxx",  
  "modifier": "xxx",  
  "region": "xxx",  
  "create_time": "2023-02-03 11:17:19",  
  "modified_time": "2023-02-03 11:17:19",  
  "register_type": "API",  
  "env_name": "environment1",  
  "env_id": "530312e8bd7c4674b0af6d4beb2e23c6",  
  "description": "Environment description.",  
  "component_id": "28c600be47374b9697404b0f58263d1c",  
  "os_type": "LINUX",  
  "env_type": "DEV",  
  "eps_id": null,  
  "aom_id": null,  
  "env_tags": null  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v3.region.AomRegion;  
import com.huaweicloud.sdk.aom.v3.*;  
import com.huaweicloud.sdk.aom.v3.model.*;  
  
public class ShowEnvByNameSolution {  
  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
        security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
```

```
environment variables and decrypted during use to ensure security.
// In this example, AK and SK are stored in environment variables for authentication. Before running
this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
String ak = System.getenv("CLOUD_SDK_AK");
String sk = System.getenv("CLOUD_SDK_SK");

ICredential auth = new BasicCredentials()
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
ShowEnvByNameRequest request = new ShowEnvByNameRequest();
request.withEnvironmentName("{environment_name}");
try {
    ShowEnvByNameResponse response = client.showEnvByName(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdfaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdfaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowEnvByNameRequest()
        request.environment_name = "{environment_name}"
        response = client.show_env_by_name(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowEnvByNameRequest{}
    request.EnvironmentName = "{environment_name}"
    response, err := client.ShowEnvByName(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Environment details.
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.16 Querying the Details of a Component Based on the Component Name

Function

This API is used to query the details of a component.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/components/application/{application_id}/name/{component_name}

Table 4-496 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.
component_name	Yes	String	Component name.

Request Parameters

Table 4-497 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Response Parameters

Status code: 200

Table 4-498 Response body parameters

Parameter	Type	Description
name	String	Component name.
id	String	Component ID.

Parameter	Type	Description
aom_id	String	aomId
app_id	String	Application ID.

Status code: 400

Table 4-499 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-500 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Query the details of a component based on the component name.

```
https://{Endpoint}/v1/components/application/{application_id}/name/{component_name}
```

Example Responses

Status code: 200

Component details.

```
{
  "name" : "component1",
  "id" : "28c600be47374b9697404b0f58263d1c",
  "aom_id" : null,
  "app_id" : "9616a75c75af4bcdacf38d77ff72a88e"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;
```



```
import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class ShowComponentByNameSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ShowComponentByNameRequest request = new ShowComponentByNameRequest();
        request.withApplicationId("{application_id}");
        request.withComponentName("{component_name}");
        try {
            ShowComponentByNameResponse response = client.showComponentByName(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk)
```

```
client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = ShowComponentByNameRequest()
    request.application_id = "{application_id}"
    request.component_name = "{component_name}"
    response = client.show_component_by_name(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowComponentByNameRequest{}
    request.ApplicationId = "{application_id}"
    request.ComponentName = "{component_name}"
    response, err := client.ShowComponentByName(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Component details.
400	Invalid parameters.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.17 Adding a Sub-application

Function

This API is used to add a sub-application.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/sub-applications

Request Parameters

Table 4-501 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Table 4-502 Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Unique identifier of a sub-application.

Parameter	Mandatory	Type	Description
display_name	No	String	Display name of a sub-application.
model_id	Yes	String	Application or sub-application ID.
model_type	Yes	String	Application or sub-application. Options: APPLICATION and SUB_APPLICATION. Enumeration values: <ul style="list-style-type: none"> • APPLICATION • SUB_APPLICATION
description	No	String	Sub-application description.

Response Parameters

Status code: 400

Table 4-503 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-504 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Create a sub-application.

```
https://{Endpoint}/v1/sub-applications
{
  "name" : "example1",
  "display_name" : "example1",
  "model_id" : "8fd93d051a1447dd8f8fa28b5d68841f",
  "model_type" : "APPLICATION",
```

```
"description" : "Sub-application information"  
}
```

Example Responses

Status code: 200

OK

```
{  
  "id" : "ebac72344bf24500b4f05651cf99e519"  
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Create a sub-application.

```
package com.huaweicloud.sdk.test;  
  
import com.huaweicloud.sdk.core.auth.ICredential;  
import com.huaweicloud.sdk.core.auth.BasicCredentials;  
import com.huaweicloud.sdk.core.exception.ConnectionException;  
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;  
import com.huaweicloud.sdk.core.exception.ServiceResponseException;  
import com.huaweicloud.sdk.aom.v3.region.AomRegion;  
import com.huaweicloud.sdk.aom.v3.*;  
import com.huaweicloud.sdk.aom.v3.model.*;  
  
public class CreateSubAppSolution {  
  
    public static void main(String[] args) {  
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great  
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or  
        // environment variables and decrypted during use to ensure security.  
        // In this example, AK and SK are stored in environment variables for authentication. Before running  
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
        String ak = System.getenv("CLOUD_SDK_AK");  
        String sk = System.getenv("CLOUD_SDK_SK");  
  
        ICredential auth = new BasicCredentials()  
            .withAk(ak)  
            .withSk(sk);  
  
        AomClient client = AomClient.newBuilder()  
            .withCredential(auth)  
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))  
            .build();  
        CreateSubAppRequest request = new CreateSubAppRequest();  
        SubAppCreateParam body = new SubAppCreateParam();  
        body.withDescription("Sub-application information");  
        body.withModelType(SubAppCreateParam.ModelTypeEnum.fromValue("APPLICATION"));  
        body.withModelId("8fd93d051a1447dd8f8fa28b5d68841f");  
        body.withDisplayName("example1");  
        body.withName("example1");  
        request.withBody(body);  
        try {  
            CreateSubAppResponse response = client.createSubApp(request);  
            System.out.println(response.toString());  
        } catch (ConnectionException e) {  
            e.printStackTrace();  
        } catch (RequestTimeoutException e) {
```

```
e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

Create a sub-application.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateSubAppRequest()
        request.body = SubAppCreateParam(
            description="Sub-application information",
            model_type="APPLICATION",
            model_id="8fd93d051a1447dd8f8fa28b5d68841f",
            display_name="example1",
            name="example1"
        )
        response = client.create_sub_app(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Create a sub-application.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
```

```

)
func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateSubAppRequest{}
    descriptionSubAppCreateParam:= "Sub-application information"
    displayNameSubAppCreateParam:= "example1"
    request.Body = &model.SubAppCreateParam{
        Description: &descriptionSubAppCreateParam,
        ModelType: model.GetSubAppCreateParamModelTypeEnum().APPLICATION,
        ModelId: "8fd93d051a1447dd8f8fa28b5d68841f",
        DisplayName: &displayNameSubAppCreateParam,
        Name: "example1",
    }
    response, err := client.CreateSubApp(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Invalid parameter.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.18 Deleting a Sub-application

Function

This API is used to delete a sub-application.

Calling Method

For details, see [Calling APIs](#).

URI

DELETE /v1/sub-applications/{sub_app_id}

Table 4-505 Path Parameters

Parameter	Mandatory	Type	Description
sub_app_id	Yes	String	Sub-application ID.

Request Parameters

Table 4-506 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Response Parameters

Status code: 400

Table 4-507 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-508 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Delete a sub-application.

```
https://{Endpoint}/v1/sub-applications/{sub_app_id}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class DeleteSubAppSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        DeleteSubAppRequest request = new DeleteSubAppRequest();
        request.withSubAppId("{sub_app_id}");
        try {
            DeleteSubAppResponse response = client.deleteSubApp(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        }
    }
}
```

```
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteSubAppRequest()
        request.sub_app_id = "{sub_app_id}"
        response = client.delete_sub_app(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
```

```
auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.DeleteSubAppRequest{}
request.SubAppId = "{sub_app_id}"
response, err := client.DeleteSubApp(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Invalid parameter.
403	No permissions.

Error Codes

See [Error Codes](#).

4.7.19 Modifying a Sub-application

Function

This API is used to modify a sub-application.

Calling Method

For details, see [Calling APIs](#).

URI

PUT /v1/sub-applications/{sub_app_id}

Table 4-509 Path Parameters

Parameter	Mandatory	Type	Description
sub_app_id	Yes	String	Sub-application ID.

Request Parameters

Table 4-510 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json. This parameter is mandatory only when the body exists.

Table 4-511 Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Unique identifier of a sub-application.
display_name	No	String	Display name of a sub-application.
description	No	String	Sub-application description.

Response Parameters

Status code: 400

Table 4-512 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-513 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005
error_msg	String	No permissions.

Example Requests

Modify the information about a sub-application.

```
https://{Endpoint}/v1/sub-applications/{sub_app_id}

{
  "name" : "example1",
  "display_name" : "example1",
  "description" : "Sub-application information"
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Modify the information about a sub-application.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v3.region.AomRegion;
import com.huaweicloud.sdk.aom.v3.*;
import com.huaweicloud.sdk.aom.v3.model.*;

public class UpdateSubAppSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
```

```
        .withRegion(AomRegion.valueOf("<YOUR REGION>"))
        .build();
UpdateSubAppRequest request = new UpdateSubAppRequest();
request.withSubAppId("{sub_app_id}");
SubAppUpdateParam body = new SubAppUpdateParam();
body.withDescription("Sub-application information");
body.withDisplayName("example1");
body.withName("example1");
request.withBody(body);
try {
    UpdateSubAppResponse response = client.updateSubApp(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

Modify the information about a sub-application.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v3.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]

    credentials = BasicCredentials(ak, sk)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateSubAppRequest()
        request.sub_app_id = "{sub_app_id}"
        request.body = SubAppUpdateParam(
            description="Sub-application information",
            display_name="example1",
            name="example1"
        )
        response = client.update_sub_app(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Modify the information about a sub-application.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateSubAppRequest{
        request.SubAppId = "{sub_app_id}"
        descriptionSubAppUpdateParam:= "Sub-application information"
        displayNameSubAppUpdateParam:= "example1"
        request.Body = &model.SubAppUpdateParam{
            Description: &descriptionSubAppUpdateParam,
            DisplayName: &displayNameSubAppUpdateParam,
            Name: "example1",
        }
    }
    response, err := client.UpdateSubApp(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: Modified.
400	Invalid parameter.

Status Code	Description
403	No permissions.

Error Codes

See [Error Codes](#).

4.8 Automation (AOM 2.0)

4.8.1 Creating a Task

Function

This API is used to create a workflow (task). The workflow details will be returned. The task type depends on the template name and input parameter.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/cms/workflow

Table 4-514 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-515 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Table 4-516 Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Workflow name, which can contain 1 to 64 characters. Only letters, digits, hyphens (-), and underscores (_) are allowed.
type	Yes	String	Workflow type. Options: cron and manual.
description	No	String	Workflow description.
tags	No	Object	List of tag keys and values. Maximum key-value pairs: 20.
template_name	No	String	Template name, for example, CMS::ECS::BulkyRunScript, CMS::ECS::BulkyStartECSInstances, or CMS::ECS::BulkyCleanDisks.
template_id	Yes	String	Template ID.
input	Yes	Map<String,Object>	List of parameters required for executing a task.
quote	No	Array of strings	Parameters that are referenced.
job_name	No	String	Job name.
job_id	No	String	Job ID.
service_scenario	No	String	Service scenario.
service_name	No	String	Service name.
task_type	Yes	String	Task type. Options: package, script, job, cloud, standard, and customize.

Response Parameters

Status code: 200

Table 4-517 Response body parameters

Parameter	Type	Description
id	String	Workflow ID, which is unique and generated based on project_id and workflow_name.
name	String	Workflow name.
type	String	Workflow type. Options: cron and manual.
description	String	Workflow description.
tags	Map<String,String >	List of tag keys and values. Maximum key-value pairs: 20.
create_time	Long	Time (UTC, in milliseconds) when a workflow was created.
create_by	String	User who created the workflow. This parameter is obtained from the token transferred during API calling.
update_time	Long	Time (UTC, in milliseconds) when a workflow was updated.
update_by	String	User who updated the workflow. This parameter is obtained from the token transferred during API calling.
template_name	String	Template name.
template_id	String	Template ID.
input	Map<String,Object>	List of parameters required for executing a task.
last_execution_id	String	Latest execution ID, which is also the workflow ID.
status	String	Task status. Options: success, fail, and executing.
citation_urns	Array of strings	Reference of a workflow.
last_execution_end_time	Long	End time (UTC, in milliseconds) of the last execution.
last_execution_start_time	Long	Start time (UTC, in milliseconds) of the last execution.
quote	Array of strings	Parameters that are referenced.
job_name	String	Job name.
job_id	String	Job ID.

Parameter	Type	Description
service_scenario	String	Service scenario.
service_name	String	Service name.
task_type	String	Task type.
project_id	String	Project ID returned by FunctionGraph.
workflow_id	String	Workflow ID returned by FunctionGraph.
task_status	String	Task status.
nodes	Array of Node objects	Task node.
edit_time	Long	Edit time.
execution_action_rules	Array of strings	Fine-grained permissions for executing actions.
execution_permission	Array of strings	Cloud service permissions.
global_parameters	Array of Parameter objects	Global parameters.
is_delete	Boolean	Whether the object has been logically deleted.
steps	Array of Step objects	Step.
output	String	Task output.
trigger_id	String	Trigger ID.
trigger_status	String	Trigger status.
approve_id	String	Approval ID.
template_i18n	WorkflowModel object	Task internationalization field, including English description.
enterprise_project_id	String	Enterprise project to which the task belongs.
last_execute_by	String	Last task executor.

Table 4-518 Node

Parameter	Type	Description
parent_node	String	Name of the parent node.

Parameter	Type	Description
category	String	Node type.
description	String	Node description.
id	String	Node ID.
ignore_error	Boolean	Whether to ignore the error.
metadata	Metadata object	Metadata.
name	String	Node name, for example, Node.
task_name	String	Task name.

Table 4-519 Metadata

Parameter	Type	Description
type	String	Node type.
configuration	Map<String, Object>	Configuration information.

Table 4-520 Parameter

Parameter	Type	Description
param_name	String	Parameter name.
param_type	String	Parameter type.
param_group	String	Parameter group.
default_value	String	Initial value of a parameter.
id	String	Parameter ID.
encryption	Boolean	Whether to encrypt the data.
hint	String	Parameter prompt.
quote_param	Boolean	Whether to select a parameter from the parameter library.
required	Boolean	Whether a parameter is mandatory.
description	String	Parameter description.

Table 4-521 Step

Parameter	Type	Description
id	String	Step ID.
name	String	Step name.
type	String	Step type.
input	Map<String,String >	Step parameter.
ignore_error	Boolean	Whether to automatically ignore errors.
description	String	Step description.

Table 4-522 WorkFlowModel

Parameter	Type	Description
en-us	Map<String,String >	Description
zh-cn	Map<String,String >	Description

Status code: 400

Table 4-523 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 401

Table 4-524 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 500

Table 4-525 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Example Requests

- Create an ECS startup task by using the name xxx, template "CMS::ECS::BulkyStartECSInstances", and input parameter "input".

```
https://{Endpoint}/v1/{project_id}/cms/workflow
{
  "name": "xxx",
  "template_name": "CMS::ECS::BulkyStartECSInstances",
  "template_id": "CMS::ECS::BulkyStartECSInstances",
  "tags": { },
  "input": {
    "get_instances": {
      "type": "manual",
      "group": "ecs_instance",
      "ecs_id_list": "[\"xxx\"]",
      "ecs_instance_status": null,
      "ecs_instance_tags": null,
      "ecs_instance_enterprise_project_id": null,
      "vpc_id": null,
      "subnet_id": null,
      "frontend_info": null,
      "selectedData": null
    },
    "rate_control": {
      "max": "1",
      "timeDelay": "10",
      "group": "rate_control"
    },
    "approve": {
      "need_approve": "false",
      "topic_selected": null,
      "group": "approve"
    },
    "project_id": "xxx",
    "region_id": "cn-north-7"
  },
  "type": "manual",
  "description": "",
  "task_type": "cloud"
}
```

- Create a scheduled script execution task by using the name xxx, template "CMS::ECS::BulkyRunScript", and input parameter "input".

```
https://{Endpoint}/v1/{project_id}/cms/workflow
{
  "name": "xxxxxshced",
```

```

"template_name": "CMS::ECS::BulkyRunScript",
"tags": { },
"input": {
  "project_id": "2xxx487fxxxxbffc1cf",
  "region_id": "cn-north-7",
  "trigger": {
    "scheduled_time": "00:04:05",
    "time_zone": "Asia/Riyadh",
    "policy": "periodic",
    "cron": null,
    "period": "[\"0\", \"3\", \"4\", \"5\", \"6\"]",
    "group": "trigger"
  },
  "notice": {
    "interval": null,
    "before_notice": null,
    "succeed_notice": null,
    "fail_notice": null,
    "group": "notice",
    "before_topic_selected": null,
    "success_topic_selected": null,
    "fail_topic_selected": null
  },
  "get_instances": {
    "type": "manual",
    "group": "ecs_instance",
    "ecs_id_list": "[\"4bxxxx-xxxx-4c92-xxxx-19469d40a51c\"]",
    "ecs_instance_status": null,
    "ecs_instance_tags": null,
    "ecs_instance_enterprise_project_id": null,
    "vpc_id": null,
    "subnet_id": null,
    "frontend_info": null,
    "selectedData": null
  },
  "approve": {
    "need_approve": "false",
    "topic_selected": null,
    "group": "approve"
  },
  "rate_control": {
    "max": "0",
    "timeDelay": "0",
    "group": "rate_control"
  },
  "script_param": {
    "name": "zzy",
    "script_content": "cd /xxx/xxx",
    "script_type": "SHELL",
    "version_number": "1.0",
    "cmd_user": "xxxx",
    "script_id": "xxx-7e9e-4eed-8xxf-5f1fxx6ebb7d",
    "scriptSelected": "null",
    "script_args": null,
    "sensitive_param": false,
    "time_out": "7200",
    "script_version_id": "e005xxx4-1fcf-40xx-b1x6-8dxxxxcae7b021",
    "sourceId": "script",
    "group": "script"
  }
},
"type": "cron",
"description": "",
"task_type": "script",
"template_id": "CMS::ECS::BulkyRunScript"
}

```

- Create a script execution task by using the name xxx, template "CMS::ECS::BulkyRunScript", and input parameter "input".

```

https://{Endpoint}/v1/{project_id}/cms/workflow
{
  "name": "execute_task_demo",
  "template_name": "CMS::ECS::BulkyRunScript",
  "template_id": "CMS::ECS::BulkyRunScript",
  "tags": {},
  "input": {
    "script_param": {
      "script_content": "date",
      "script_type": "SHELL",
      "version_number": "1.0",
      "cmd_user": "root",
      "script_id": "6xxx097-a4x4-4dxx-axa2-fef5xxxxdd55",
      "scriptSelected": "null",
      "script_args": "arg1 agr2",
      "sensitive_param": "false",
      "time_out": "7200",
      "script_version_id": "47xxx67-bxx5-45x9-860x-cb3d6xxxx745",
      "sourceld": "script",
      "group": "script"
    },
    "get_instances": {
      "ecs_id_list": "[\"4380xxx9-33xf-4xxe-axxx-7xxxxx3fcd\"]",
      "type": "manual",
      "group": "ecs_instance",
      "vpc_id": null,
      "subnet_id": null
    },
    "approve": {
      "need_approve": "false",
      "topic_selected": null,
      "group": "approve"
    },
    "rate_control": {
      "max": "0",
      "timeDelay": "0",
      "group": "rate_control"
    },
    "project_id": "2xxxxxca5xx8373xxx1bffxxcf",
    "region_id": "cn-north-7"
  },
  "type": "manual",
  "description": "",
  "task_type": "script"
}

```

- Create an RDS instance restart task by using the name xxx, template "CMS::RDS::RestartRDSInstance", and input parameter "input".

```

https://{Endpoint}/v1/{project_id}/cms/workflow
{
  "name": "xxx",
  "template_name": "CMS::RDS::RestartRDSInstance",
  "template_id": "CMS::RDS::RestartRDSInstance",
  "tags": {},
  "input": {
    "get_instances": {
      "type": "manual",
      "group": "rds_instance",
      "rds_id_list": "[\"xxx\"]",
      "rds_instance_tags": null,
      "rds_instance_type": null,
      "rds_instance_datastore_type": null,
      "frontend_info": null,
      "selectedData": null
    },
    "rate_control": {
      "max": "0",

```



```
    "timeDelay" : "0",
    "group" : "rate_control"
  },
  "approve" : {
    "need_approve" : "false",
    "topic_selected" : null,
    "group" : "approve"
  },
  "project_id" : "xxx",
  "region_id" : "cn-north-7"
},
"type" : "manual",
"description" : "",
"task_type" : "cloud"
}
```

- Create a quick file distribution task by using the name xxx, template "CMS::ECS::Package", and input parameter "input".

https://{Endpoint}/v1/{project_id}/cms/workflow

```
{
  "name" : "xxx",
  "template_name" : "CMS::ECS::Package",
  "template_id" : "CMS::ECS::Package",
  "tags" : { },
  "input" : {
    "project_id" : "xxx",
    "region_id" : "cn-north-7",
    "package" : {
      "package_version_id" : "xxx",
      "package_basic_id" : "xxx",
      "cmd_user" : "xxxxx",
      "install_file_dir" : "/",
      "package_name" : "77779956",
      "version_number" : "110",
      "operate_type" : "install",
      "group" : "package",
      "software_list" : "[{x}]",
      "time_out" : "7200",
      "pre_install_script" : "",
      "install_script" : "ls",
      "un_install_script" : "",
      "plat_form" : "Linux"
    },
    "get_instances" : {
      "type" : "manual",
      "group" : "ecs_instance",
      "ecs_id_list" : "[\"xxx\"]",
      "ecs_instance_status" : null,
      "ecs_instance_tags" : null,
      "ecs_instance_enterprise_project_id" : null,
      "vpc_id" : null,
      "subnet_id" : null,
      "frontend_info" : null,
      "selectedData" : null
    },
    "rate_control" : {
      "max" : "0",
      "timeDelay" : "0",
      "group" : "rate_control"
    },
    "approve" : {
      "need_approve" : "false",
      "topic_selected" : null,
      "group" : "approve"
    }
  },
  "type" : "manual",
  "description" : "",
}
```

```
"task_type" : "package"
}
```

- Create an ECS stop task by using the name xxx, template "CMS::ECS::BulkyStopECSInstances", and input parameter "input".

https://{Endpoint}/v1/{project_id}/cms/workflow

```
{
  "name" : "xxx",
  "template_name" : "CMS::ECS::BulkyStopECSInstances",
  "template_id" : "CMS::ECS::BulkyStopECSInstances",
  "tags" : { },
  "input" : {
    "get_instances" : {
      "type" : "manual",
      "group" : "ecs_instance",
      "ecs_id_list" : "[\"xxx\"]",
      "ecs_instance_status" : null,
      "ecs_instance_tags" : null,
      "ecs_instance_enterprise_project_id" : null,
      "vpc_id" : null,
      "subnet_id" : null,
      "frontend_info" : null,
      "selectedData" : null
    },
    "stop_ecs_type" : {
      "group" : "stop_ecs_type",
      "stop_ecs_type" : "SOFT"
    },
    "rate_control" : {
      "max" : "0",
      "timeDelay" : "0",
      "group" : "rate_control"
    },
    "approve" : {
      "need_approve" : "false",
      "topic_selected" : null,
      "group" : "approve"
    }
  },
  "project_id" : "xxx",
  "region_id" : "cn-north-7"
},
"type" : "manual",
"description" : "",
"task_type" : "cloud"
}
```

- Create a disk clearance task by using the name xxx, template "CMS::ECS::BulkyCleanDisks", and input parameter "input".

https://{Endpoint}/v1/{project_id}/cms/workflow

```
{
  "name" : "xxx",
  "template_name" : "CMS::ECS::BulkyCleanDisks",
  "template_id" : "CMS::ECS::BulkyCleanDisks",
  "tags" : { },
  "input" : {
    "get_instances" : {
      "type" : "manual",
      "group" : "ecs_instance",
      "ecs_id_list" : "[\"xxx\"]",
      "ecs_instance_status" : null,
      "ecs_instance_tags" : null,
      "ecs_instance_enterprise_project_id" : null,
      "vpc_id" : null,
      "subnet_id" : null,
      "frontend_info" : null,
      "selectedData" : null
    }
  },

```

```

"clean_disk" : {
  "path" : "[{"path":"/xxx/","fileName":"xxxx.xx","date":"1"}]",
  "group" : "clean_disk",
  "platform" : "linux"
},
"rate_control" : {
  "max" : "0",
  "timeDelay" : "0",
  "group" : "rate_control"
},
"approve" : {
  "need_approve" : "false",
  "topic_selected" : null,
  "group" : "approve"
},
"project_id" : "xxxx",
"region_id" : "cn-north-7"
},
"type" : "manual",
"description" : "",
"task_type" : "cloud"
}

```

- Create an ECS password change task by using the name xxx, template "CMS::ECS::BulkyChangeECSPassword", and input parameter "input".

https://{Endpoint}/v1/{project_id}/cms/workflow

```

{
  "name" : "xxxx",
  "template_name" : "CMS::ECS::BulkyChangeECSPassword",
  "template_id" : "CMS::ECS::BulkyChangeECSPassword",
  "tags" : { },
  "input" : {
    "get_instances" : {
      "type" : "manual",
      "group" : "ecs_instance",
      "ecs_id_list" : "[\"xxxx\"]",
      "ecs_instance_status" : null,
      "ecs_instance_tags" : null,
      "ecs_instance_enterprise_project_id" : null,
      "vpc_id" : null,
      "subnet_id" : null,
      "frontend_info" : null,
      "selectedData" : null
    },
    "user_password" : {
      "username" : "xxx",
      "password" : "xxxx",
      "group" : "user_password"
    },
    "rate_control" : {
      "max" : "0",
      "timeDelay" : "0",
      "group" : "rate_control"
    },
    "approve" : {
      "need_approve" : "false",
      "topic_selected" : null,
      "group" : "approve"
    },
    "project_id" : "xxxx",
    "region_id" : "cn-north-7"
  },
  "type" : "manual",
  "description" : "",
  "task_type" : "cloud"
}

```

- Create a job task by using the name xxx, template "job_1", and input parameter "input".

https://{Endpoint}/v1/{project_id}/cms/workflow

```
{
  "name": "xxx",
  "template_name": "job_1",
  "template_id": "xxx",
  "tags": {},
  "input": {
    "project_id": "xxx",
    "region_id": "cn-north-7",
    "isExist": "false",
    "rate_control": {
      "max": "0",
      "timeDelay": "0",
      "group": "rate_control"
    },
    "approve": {
      "need_approve": "false",
      "topic_selected": null,
      "reviewer_selected": null,
      "group": "approve"
    }
  },
  "type": "manual",
  "description": "",
  "task_type": "job"
}
```

- Create a workload restart task using the name xxx, template "CMS::CCE::RestartWorkloadInstance", and input parameter "input".

https://{Endpoint}/v1/{project_id}/cms/workflow

```
{
  "name": "xxx",
  "template_name": "CMS::CCE::RestartWorkloadInstance",
  "template_id": "CMS::CCE::RestartWorkloadInstance",
  "tags": {},
  "input": {
    "get_instances": {
      "type": "manual",
      "group": "cce_workload_instance",
      "cce_workload_id_list": "[\"xxx\"]",
      "cce_workload_type": "deployments",
      "cce_workload_cluster": "xxx",
      "cce_workload_namespace": null,
      "frontend_info": null,
      "selectedData": null
    },
    "cce_workload_restart_info": {
      "group": "cce_workload_restart_info",
      "time_interval": "300"
    },
    "rate_control": {
      "max": "2",
      "timeDelay": "2",
      "group": "rate_control"
    },
    "approve": {
      "need_approve": "false",
      "topic_selected": null,
      "group": "approve"
    },
    "project_id": "xxx",
    "region_id": "cn-north-7"
  },
  "type": "manual",
}
```

```
"description" : "",
"task_type" : "cloud"
}
```

Example Responses

Status code: 200

Success response: The workflow details are returned.

```
{
  "citation_urns" : [ ],
  "create_by" : "xxxx",
  "create_time" : 1670328762884,
  "description" : "",
  "edit_time" : 0,
  "enterprise_project_id" : "0",
  "execution_action_rules" : [ "ecs:cloudServers:start", "ecs:cloudServers:list" ],
  "execution_permission" : [ "CMS FullAccess", "ECS FullAccess", "AOM FullAccess" ],
  "id" : "c15a19ce-110b-4822-862a-a29677dbed6c",
  "input" : {
    "project_id" : "2axxxa54xxx73bxxbfxxcf",
    "approve" : {
      "need_approve" : "false",
      "group" : "approve"
    },
  },
  "region_id" : "cn-north-7",
  "get_instances" : {
    "selectedData" : "",
    "frontend_info" : "{\"cmdbApplicationId\":\"xxxxx627611xxd\"}",
    "type" : "cmdb_dynamic_node",
    "group" : "ecs_instance"
  },
  "rate_control" : {
    "max" : "1",
    "timeDelay" : "10",
    "group" : "rate_control"
  }
},
"last_execute_by" : "xxx",
"last_execution_end_time" : 1670328823670,
"last_execution_id" : "adxxxb-4894-4xxc-80xx-7xxx3de24b",
"last_execution_start_time" : 1670328772402,
"name" : "Task xxx0123xx9",
"nodes" : [ {
  "category" : "service",
  "description" : "Start the ECS instances",
  "id" : "start-ecs-instances",
  "ignore_error" : true,
  "metadata" : {
    "configuration" : {
      "func_urn" : "urn:fss:cn-
north-7:xxxxec14exxx79b44xxx57:function:CMS:CMS_DEFAULT_JAVA_FUN_NAME",
      "dataOutputPath" : "",
      "func_app" : "CMS",
      "dataInputPath" : "",
      "validator" : true,
      "func_version" : "latest",
      "dataResultsPath" : "",
      "parameters" : [ {
        "default" : "",
        "showFormat" : false,
        "format" : "",
        "value" : "2a47xxx487f837xxxxxfc1cf",
        "isEditor" : false,
        "key" : "properties.project_id"
      } ],
    },
  },
  "default" : "",

```

```
"showFormat" : false,
"format" : "",
"value" : "cn-north-7",
"isEditor" : false,
"key" : "properties.region_id"
}, {
"default" : "",
"showFormat" : false,
"format" : "",
"value" : "",
"isEditor" : false,
"key" : "properties.selectedData"
}, {
"default" : "",
"showFormat" : false,
"format" : "",
"value" : "{\"cmdbApplicationId\": \"xxxxxxx96627xxxxa3cd\"}",
"isEditor" : false,
"key" : "properties.frontend_info"
}, {
"default" : "",
"showFormat" : false,
"format" : "",
"value" : "cmdb_dynamic_node",
"isEditor" : false,
"key" : "properties.type"
}, {
"default" : "",
"showFormat" : false,
"format" : "",
"value" : "ecs_instance",
"isEditor" : false,
"key" : "properties.group"
}, {
"default" : "",
"showFormat" : false,
"format" : "",
"value" : "1",
"isEditor" : false,
"key" : "properties.max"
}, {
"default" : "",
"showFormat" : false,
"format" : "",
"value" : "10",
"isEditor" : false,
"key" : "properties.timeDelay"
}, {
"default" : "",
"showFormat" : false,
"format" : "",
"value" : "rate_control",
"isEditor" : false,
"key" : "properties.group"
}, {
"default" : "",
"showFormat" : false,
"format" : "",
"value" : "$.executionId",
"isEditor" : false,
"key" : "properties.executionId"
}, {
"default" : "",
"showFormat" : false,
"format" : "",
"value" : "xxx9ce-xxx-4822-xxx-a296xxxxc",
"isEditor" : false,
"key" : "properties.workflowId"
}, {
```

```
    "default" : "",
    "showFormat" : false,
    "format" : "",
    "value" : "CMS::ECS::StartECS",
    "isEditor" : false,
    "key" : "properties.cmsTaskName2Distribute"
  }, {
    "default" : "",
    "showFormat" : false,
    "format" : "",
    "value" : "0.0.0.0",
    "isEditor" : false,
    "key" : "properties.cmsAccessPodLb"
  }, {
    "default" : "",
    "showFormat" : false,
    "format" : "",
    "value" : "manual",
    "isEditor" : false,
    "key" : "properties.workflowType"
  }, {
    "default" : "",
    "showFormat" : false,
    "format" : "",
    "value" : "start-ecs-instances",
    "isEditor" : false,
    "key" : "properties.nodeId"
  }
]
}
"type" : "operation"
},
"name" : "startECSInstance",
"task_name" : "CMS::ECS::StartECS"
}],
"project_id" : "2axxxx5487f83xxx891xxx1cf",
"quote" : [ ],
"status" : "success",
"steps" : [ ],
"tags" : { },
"task_type" : "cloud",
"template_i18n" : {
  "en-us" : {
    "name" : "Starting an ECS Instance",
    "description" : "Starting a HUAWEI CLOUD ECS Instance"
  },
  "zh-cn" : {
    "name" : "Starting ECS",
    "description" : "Starts a Huawei Cloud ECS."
  }
},
"template_id" : "CMS::ECS::BulkyStartECSInstances",
"template_name" : "CMS::ECS::BulkyStartECSInstances",
"type" : "manual",
"update_time" : 1670328823794
}
```

Status code: 400

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.31001302",
  "error_msg" : "Invalid input parameter.",
  "http_code" : 400
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.31009003",
  "error_msg" : "auth failed.",
  "http_code" : 401
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "AOM.31001305",
  "error_msg" : "workflow internal server error.",
  "http_code" : 500
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

- Create an ECS startup task by using the name xxx, template "CMS::ECS::BulkyStartECSInstances", and input parameter "input".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

import java.util.Map;
import java.util.HashMap;

public class CreateWorkflowSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        CreateWorkflowRequest request = new CreateWorkflowRequest();
        WorkflowRequestBody body = new WorkflowRequestBody();
        Map<String, Object> listbodyInput = new HashMap<>();
        listbodyInput.put("get_instances", "{\"ecs_id_list\": \"[\\\"xxx\\\"]\", \"type\": \"manual\", \"group\": \"ecs_instance\"}");
        listbodyInput.put("rate_control", "{\"max\": \"1\", \"timeDelay\": \"10\", \"group\": \"rate_control\"}");
    }
}
```



```
\}");
    listbodyInput.put("approve", "{\"need_approve\": \"false\", \"group\": \"approve\"}");
    listbodyInput.put("project_id", "xxx");
    listbodyInput.put("region_id", "cn-north-7");
    body.withTaskType("cloud");
    body.withInput(listbodyInput);
    body.withTemplateId("CMS::ECS::BulkyStartECSInstances");
    body.withTemplateName("CMS::ECS::BulkyStartECSInstances");
    body.withTags(new Object());
    body.withDescription("");
    body.withType("manual");
    body.withName("xxx");
    request.withBody(body);
    try {
        CreateWorkflowResponse response = client.createWorkflow(request);
        System.out.println(response.toString());
    } catch (ConnectionException e) {
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

- Create a scheduled script execution task by using the name xxx, template "CMS::ECS::BulkyRunScript", and input parameter "input".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

import java.util.Map;
import java.util.HashMap;

public class CreateWorkflowSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        CreateWorkflowRequest request = new CreateWorkflowRequest();
```

```
WorkflowRequestBody body = new WorkflowRequestBody();
Map<String, Object> listbodyInput = new HashMap<>();
listbodyInput.put("project_id", "2xxx487fxxxxbffc1cf");
listbodyInput.put("region_id", "cn-north-7");
listbodyInput.put("trigger", "{\"period\":{\"[\\\"0\\\",\\\"3\\\",\\\"4\\\",\\\"5\\\",\\\"6\\\"]\", \"scheduled_time\":{\"00:04:05\"}, \"time_zone\":{\"Asia/Riyadh\"}, \"policy\":{\"periodic\"}, \"group\": \"trigger\"}");
listbodyInput.put("notice", "{\"group\":{\"notice\"}");
listbodyInput.put("get_instances", "{\"ecs_id_list\":{\"[\\\"4bxxxx-xxxx-4c92-xxxx-19469d40a51c\\\"]\", \"type\":{\"manual\"}, \"group\":{\"ecs_instance\"}");
listbodyInput.put("approve", "{\"need_approve\":{\"false\"}, \"group\":{\"approve\"}");
listbodyInput.put("rate_control", "{\"max\":{\"0\"}, \"timeDelay\":{\"0\"}, \"group\":{\"rate_control\"}");
listbodyInput.put("script_param", "{\"sourceId\":{\"script\"}, \"cmd_user\":{\"xxxxx\", \"sensitive_param\":{\"false\", \"script_content\":{\"cd /xxx/xxx\"}, \"name\":{\"zzy\"}, \"version_number\": \"1.0\", \"script_id\":{\"xxx-7e9e-4eed-8xf-5f1fxx6ebb7d\"}, \"script_type\":{\"SHELL\", \"script_version_id\":{\"e005xxx4-1fcf-40xx-b1x6-8dxxxcae7b021\"}, \"scriptSelected\":{\"null\", \"time_out\":{\"7200\"}, \"group\":{\"script\"}");
body.withTaskType("script");
body.withInput(listbodyInput);
body.withTemplateId("CMS::ECS::BulkyRunScript");
body.withTemplateName("CMS::ECS::BulkyRunScript");
body.withTags(new Object());
body.withDescription("");
body.withType("cron");
body.withName("xxxxxshcd");
request.withBody(body);
try {
    CreateWorkflowResponse response = client.createWorkflow(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

- Create a script execution task by using the name xxx, template "CMS::ECS::BulkyRunScript", and input parameter "input".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

import java.util.Map;
import java.util.HashMap;

public class CreateWorkflowSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
```

```
String sk = System.getenv("CLOUD_SDK_SK");
String projectId = "{project_id}";

ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
CreateWorkflowRequest request = new CreateWorkflowRequest();
WorkflowRequestBody body = new WorkflowRequestBody();
Map<String, Object> listbodyInput = new HashMap<>();
listbodyInput.put("script_param", "{\sourceId\":"script\","cmd_user\":"root\","sensitive_param
\":"false\","script_content\":"date\","version_number\":"1.0\","script_id\":"6xxx097-a4x4-4dxx-
axa2-fef5xxxxdd55\","script_type\":"SHELL\","script_version_id\":"47xxxd67-bxx5-45x9-860x-
cb3d6xxx745\","scriptSelected\":"null\","script_args\":"arg1 agr2\","time_out\":"7200\","group
\":"script"}");
listbodyInput.put("get_instances", "{\ecs_id_list\":"[\"4380xxx9-33xf-4xxe-axxx-7xxxxx3fcd\"]
\","type\":"manual\","group\":"ecs_instance"}");
listbodyInput.put("approve", "{\need_approve\":"false\","group\":"approve"}");
listbodyInput.put("rate_control", "{\max\":"0\","timeDelay\":"0\","group\":"rate_control"}");
listbodyInput.put("project_id", "2xxxxxca5xx8373xxx1bffxxcf");
listbodyInput.put("region_id", "cn-north-7");
body.withTaskType("script");
body.withInput(listbodyInput);
body.withTemplateId("CMS::ECS::BulkyRunScript");
body.withTemplateName("CMS::ECS::BulkyRunScript");
body.withTags(new Object());
body.withDescription("");
body.withType("manual");
body.withName("execute_task_demo");
request.withBody(body);
try {
    CreateWorkflowResponse response = client.createWorkflow(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
}
```

- Create an RDS instance restart task by using the name xxx, template "CMS::RDS::RestartRDSInstance", and input parameter "input".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

import java.util.Map;
import java.util.HashMap;

public class CreateWorkflowSolution {
```

```
public static void main(String[] args) {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    String ak = System.getenv("CLOUD_SDK_AK");
    String sk = System.getenv("CLOUD_SDK_SK");
    String projectId = "{project_id}";

    ICredential auth = new BasicCredentials()
        .withProjectId(projectId)
        .withAk(ak)
        .withSk(sk);

    AomClient client = AomClient.newBuilder()
        .withCredential(auth)
        .withRegion(AomRegion.valueOf("<YOUR REGION>"))
        .build();

    CreateWorkflowRequest request = new CreateWorkflowRequest();
    WorkflowRequestBody body = new WorkflowRequestBody();
    Map<String, Object> listbodyInput = new HashMap<>();
    listbodyInput.put("get_instances", "{\"rds_id_list\": \"[\\\"xxx\\\"]\", \"type\": \"manual\", \"group\": \"rds_instance\"}");
    listbodyInput.put("rate_control", "{\"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"}");
    listbodyInput.put("approve", "{\"need_approve\": \"false\", \"group\": \"approve\"}");
    listbodyInput.put("project_id", "xxx");
    listbodyInput.put("region_id", "cn-north-7");
    body.withTaskType("cloud");
    body.withInput(listbodyInput);
    body.withTemplateId("CMS::RDS::RestartRDSInstance");
    body.withTemplateName("CMS::RDS::RestartRDSInstance");
    body.withTags(new Object());
    body.withDescription("");
    body.withType("manual");
    body.withName("xxx");
    request.withBody(body);
    try {
        CreateWorkflowResponse response = client.createWorkflow(request);
        System.out.println(response.toString());
    } catch (ConnectionException e) {
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
```

- Create a quick file distribution task by using the name xxx, template "CMS::ECS::Package", and input parameter "input".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;
```

```
import java.util.Map;
import java.util.HashMap;

public class CreateWorkflowSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        CreateWorkflowRequest request = new CreateWorkflowRequest();
        WorkflowRequestBody body = new WorkflowRequestBody();
        Map<String, Object> listbodyInput = new HashMap<>();
        listbodyInput.put("project_id", "xxx");
        listbodyInput.put("region_id", "cn-north-7");
        listbodyInput.put("package", "{\n"cmd_user":\n"xxxxx",\n"software_list":\n["{x}
\n",\n"pre_install_script":\n"\n",\n"operate_type":\n"install",\n"un_install_script":\n"\n",\n"version_number
\n":\n"110",\n"time_out":\n"7200",\n"install_script":\n"ls",\n"package_version_id":\n"xxx
\n",\n"package_basic_id":\n"xxx",\n"package_name":\n"77779956",\n"install_file_dir":\n"/",\n"plat_form
\n":\n"Linux",\n"group":\n"package"}");
        listbodyInput.put("get_instances", "{\n"ecs_id_list":\n["\n"xxx",\n"]\n"type":\n"manual",\n"group
\n":\n"ecs_instance"}");
        listbodyInput.put("rate_control", "{\n"max":\n"0",\n"timeDelay":\n"0",\n"group":\n"rate_control"}");
        listbodyInput.put("approve", "{\n"need_approve":\n"false",\n"group":\n"approve"}");
        body.withTaskType("package");
        body.withInput(listbodyInput);
        body.withTemplateId("CMS::ECS::Package");
        body.withTemplateName("CMS::ECS::Package");
        body.withTags(new Object());
        body.withDescription("");
        body.withType("manual");
        body.withName("xxx");
        request.withBody(body);
        try {
            CreateWorkflowResponse response = client.createWorkflow(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

- Create an ECS stop task by using the name xxx, template "CMS::ECS::BulkyStopECSInstances", and input parameter "input".

```
package com.huaweicloud.sdk.test;
```

```
import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

import java.util.Map;
import java.util.HashMap;

public class CreateWorkflowSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        CreateWorkflowRequest request = new CreateWorkflowRequest();
        WorkflowRequestBody body = new WorkflowRequestBody();
        Map<String, Object> listbodyInput = new HashMap<>();
        listbodyInput.put("get_instances", "{\"ecs_id_list\": \"[\\\"xxx\\\"]\", \"type\": \"manual\", \"group\": \"ecs_instance\"}");
        listbodyInput.put("stop_ecs_type", "{\"stop_ecs_type\": \"SOFT\", \"group\": \"stop_ecs_type\"}");
        listbodyInput.put("rate_control", "{\"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"}");
        listbodyInput.put("approve", "{\"need_approve\": \"false\", \"group\": \"approve\"}");
        listbodyInput.put("project_id", "xxx");
        listbodyInput.put("region_id", "cn-north-7");
        body.withTaskType("cloud");
        body.withInput(listbodyInput);
        body.withTemplateId("CMS::ECS::BulkyStopECSInstances");
        body.withTemplateName("CMS::ECS::BulkyStopECSInstances");
        body.withTags(new Object());
        body.withDescription("");
        body.withType("manual");
        body.withName("xxx");
        request.withBody(body);
        try {
            CreateWorkflowResponse response = client.createWorkflow(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

- Create a disk clearance task by using the name xxx, template "CMS::ECS::BulkyCleanDisks", and input parameter "input".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

import java.util.Map;
import java.util.HashMap;

public class CreateWorkflowSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        CreateWorkflowRequest request = new CreateWorkflowRequest();
        WorkflowRequestBody body = new WorkflowRequestBody();
        Map<String, Object> listbodyInput = new HashMap<>();
        listbodyInput.put("get_instances", "{\"ecs_id_list\": \"[\\\"xxx\\\"]\", \"type\": \"manual\", \"group\": \"ecs_instance\"}");
        listbodyInput.put("clean_disk", "{\"path\": \"[\\\"path\\\": \\\"/xxx/\\\", \\\"fileName\\\": \\\"xxxx.xx\\\", \\\"date\\\": \\\"1\\\"]\", \"platform\": \"linux\", \"group\": \"clean_disk\"}");
        listbodyInput.put("rate_control", "{\"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"}");
        listbodyInput.put("approve", "{\"need_approve\": \"false\", \"group\": \"approve\"}");
        listbodyInput.put("project_id", "xxxxx");
        listbodyInput.put("region_id", "cn-north-7");
        body.withTaskType("cloud");
        body.withInput(listbodyInput);
        body.withTemplateId("CMS::ECS::BulkyCleanDisks");
        body.withTemplateName("CMS::ECS::BulkyCleanDisks");
        body.withTags(new Object());
        body.withDescription("");
        body.withType("manual");
        body.withName("xxx");
        request.withBody(body);
        try {
            CreateWorkflowResponse response = client.createWorkflow(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
        }
    }
}
```

```
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
```

- Create an ECS password change task by using the name xxx, template "CMS::ECS::BulkyChangeECSPassword", and input parameter "input".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

import java.util.Map;
import java.util.HashMap;

public class CreateWorkflowSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        CreateWorkflowRequest request = new CreateWorkflowRequest();
        WorkflowRequestBody body = new WorkflowRequestBody();
        Map<String, Object> listbodyInput = new HashMap<>();
        listbodyInput.put("get_instances", "{\"ecs_id_list\": \"[\\\"xxxxx\\\"]\", \"type\": \"manual\", \"group\": \"ecs_instance\"}");
        listbodyInput.put("user_password", "{\"password\": \"xxxxx\", \"username\": \"xxx\", \"group\": \"user_password\"}");
        listbodyInput.put("rate_control", "{\"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"}");
        listbodyInput.put("approve", "{\"need_approve\": \"false\", \"group\": \"approve\"}");
        listbodyInput.put("project_id", "xxxxx");
        listbodyInput.put("region_id", "cn-north-7");
        body.withTaskType("cloud");
        body.withInput(listbodyInput);
        body.withTemplateId("CMS::ECS::BulkyChangeECSPassword");
        body.withTemplateName("CMS::ECS::BulkyChangeECSPassword");
        body.withTags(new Object());
        body.withDescription("");
        body.withType("manual");
        body.withName("xxxxx");
        request.withBody(body);
        try {
            CreateWorkflowResponse response = client.createWorkflow(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        }
    }
}
```



```
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

- Create a job task by using the name xxx, template "job_1", and input parameter "input".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

import java.util.Map;
import java.util.HashMap;

public class CreateWorkflowSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        CreateWorkflowRequest request = new CreateWorkflowRequest();
        WorkflowRequestBody body = new WorkflowRequestBody();
        Map<String, Object> listbodyInput = new HashMap<>();
        listbodyInput.put("project_id", "xxx");
        listbodyInput.put("region_id", "cn-north-7");
        listbodyInput.put("isExist", "false");
        listbodyInput.put("rate_control", "{\"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"}");
        listbodyInput.put("approve", "{\"need_approve\": \"false\", \"group\": \"approve\"}");
        body.withTaskType("job");
        body.withInput(listbodyInput);
        body.withTemplateId("xxx");
        body.withTemplateName("job_1");
        body.withTags(new Object());
        body.withDescription("");
        body.withType("manual");
        body.withName("xxx");
        request.withBody(body);
        try {
            CreateWorkflowResponse response = client.createWorkflow(request);
        }
    }
}
```

```
        System.out.println(response.toString());
    } catch (ConnectionException e) {
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

- Create a workload restart task using the name xxx, template "CMS::CCE::RestartWorkloadInstance", and input parameter "input".

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

import java.util.Map;
import java.util.HashMap;

public class CreateWorkflowSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before
        // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
        // environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();

        CreateWorkflowRequest request = new CreateWorkflowRequest();
        WorkflowRequestBody body = new WorkflowRequestBody();
        Map<String, Object> listbodyInput = new HashMap<>();
        listbodyInput.put("get_instances", "{\n\"cce_workload_id_list\": \"[\n\"xxx\"]\n\","
            + "\"cce_workload_cluster\": \"xxx\", \"type\": \"manual\", \"cce_workload_type\": \"deployments\", \"group\":"
            + "\"cce_workload_instance\"}");
        listbodyInput.put("cce_workload_restart_info", "{\n\"time_interval\": \"300\", \"group\":"
            + "\"cce_workload_restart_info\"}");
        listbodyInput.put("rate_control", "{\n\"max\": \"2\", \"timeDelay\": \"2\", \"group\": \"rate_control\"}");
        listbodyInput.put("approve", "{\n\"need_approve\": \"false\", \"group\": \"approve\"}");
        listbodyInput.put("project_id", "xxx");
        listbodyInput.put("region_id", "cn-north-7");
        body.withTaskType("cloud");
        body.withInput(listbodyInput);
        body.withTemplateId("CMS::CCE::RestartWorkloadInstance");
        body.withTemplateName("CMS::CCE::RestartWorkloadInstance");
    }
}
```

```
body.withTags(new Object());
body.withDescription("");
body.withType("manual");
body.withName("xxx");
request.withBody(body);
try {
    CreateWorkflowResponse response = client.createWorkflow(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

- Create an ECS startup task by using the name xxx, template "CMS::ECS::BulkyStartECSInstances", and input parameter "input".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateWorkflowRequest()
        listInputbody = {
            "get_instances": "{\"ecs_id_list\": \"[\\\"xxx\\\"]\", \"type\": \"manual\", \"group\": \"ecs_instance
            \", \"rate_control\": \"{\\\"max\\\": \"1\", \"timeDelay\": \"10\", \"group\": \"rate_control\"}\",
            \"approve\": \"{\\\"need_approve\\\": \"false\", \"group\": \"approve\"}\",
            \"project_id\": \"xxx\",
            \"region_id\": \"cn-north-7\"
            }
        }
        request.body = WorkflowRequestBody(
            task_type="cloud",
            input=listInputbody,
            template_id="CMS::ECS::BulkyStartECSInstances",
            template_name="CMS::ECS::BulkyStartECSInstances",
            tags={},
```

```

        description="",
        type="manual",
        name="xxx"
    )
    response = client.create_workflow(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)

```

- Create a scheduled script execution task by using the name xxx, template "CMS::ECS::BulkyRunScript", and input parameter "input".

```

# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudskaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateWorkflowRequest()
        listInputbody = {
            "project_id": "2xxx487fxxxxbffc1cf",
            "region_id": "cn-north-7",
            "trigger": "{\n  \"period\": \"0\", \"3\", \"4\", \"5\", \"6\", \"7\", \"scheduled_time\n\n: \"00:04:05\", \"time_zone\": \"Asia/Riyadh\", \"policy\": \"periodic\", \"group\": \"trigger\"}",
            "notice": "{\n  \"group\": \"notice\"}",
            "get_instances": "{\n  \"ecs_id_list\": \"[\"4bxxxx-xxxx-4c92-xxxx-19469d40a51c\"]\", \"type\n\n: \"manual\", \"group\": \"ecs_instance\"}",
            "approve": "{\n  \"need_approve\": \"false\", \"group\": \"approve\"}",
            "rate_control": "{\n  \"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"}",
            "script_param": "{\n  \"sourceId\": \"script\", \"cmd_user\": \"xxxx\", \"sensitive_param\n\n: false, \"script_content\": \"cd /xxx/xxx\", \"name\": \"zzy\", \"version_number\": \"1.0\", \"script_id\n\n: \"xxx-7e9e-4eed-8xf-5f1fx6ebb7d\", \"script_type\": \"SHELL\", \"script_version_id\n\n: \"e005xxx4-1fcf-40xx-b1x6-8dxxxxcae7b021\", \"scriptSelected\": \"null\", \"time_out\": \"7200\", \"group\n\n: \"script\""}"
        }
        request.body = WorkflowRequestBody(
            task_type="script",
            input=listInputbody,
            template_id="CMS::ECS::BulkyRunScript",
            template_name="CMS::ECS::BulkyRunScript",
            tags={},
            description="",
            type="cron",
            name="xxxxshcd"
        )
        response = client.create_workflow(request)

```

```
print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

- Create a script execution task by using the name xxx, template "CMS::ECS::BulkyRunScript", and input parameter "input".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateWorkflowRequest()
        listInputbody = {
            "script_param": "{\"sourceId\":\"script\\\", \"cmd_user\":\"root\\\", \"sensitive_param\": \"false
            \\\", \"script_content\": \"date\\\", \"version_number\": \"1.0\\\", \"script_id\": \"6xxxx097-a4x4-4dxx-axa2-
            fef5xxxxdd55\\\", \"script_type\": \"SHELL\\\", \"script_version_id\": \"47xxxd67-bxx5-45x9-860x-
            cb3d6xxxx745\\\", \"scriptSelected\": \"null\\\", \"script_args\": \"arg1 agr2\\\", \"time_out\": \"7200\\\", \"group
            \": \"script\\\"}",
            "get_instances": "{\"ecs_id_list\": \"[\\\"4380xxx9-33xf-4xxe-axxx-7xxxxx3fcd\\\"]\\\", \"type
            \": \"manual\\\", \"group\": \"ecs_instance\\\"}",
            "approve": "{\"need_approve\": \"false\\\", \"group\": \"approve\\\"}",
            "rate_control": "{\"max\": \"0\\\", \"timeDelay\": \"0\\\", \"group\": \"rate_control\\\"}",
            "project_id": "2xxxxxca5xx8373xxx1bfxxcf",
            "region_id": "cn-north-7"
        }
        request.body = WorkflowRequestBody(
            task_type="script",
            input=listInputbody,
            template_id="CMS::ECS::BulkyRunScript",
            template_name="CMS::ECS::BulkyRunScript",
            tags={},
            description="",
            type="manual",
            name="execute_task_demo"
        )
        response = client.create_workflow(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

- Create an RDS instance restart task by using the name xxx, template "CMS::RDS::RestartRDSInstance", and input parameter "input".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudskaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateWorkflowRequest()
        listInputbody = {
            "get_instances": "{\"rds_id_list\": \"[\\\"xxx\\\"]\", \"type\": \"manual\", \"group\": \"rds_instance
            \", \"rate_control\": \"{\"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"}\",
            \"approve\": \"{\"need_approve\": \"false\", \"group\": \"approve\"}\",
            \"project_id\": \"xxx\",
            \"region_id\": \"cn-north-7\"
            }
        request.body = WorkflowRequestBody(
            task_type="cloud",
            input=listInputbody,
            template_id="CMS::RDS::RestartRDSInstance",
            template_name="CMS::RDS::RestartRDSInstance",
            tags={},
            description="",
            type="manual",
            name="xxx"
        )
        response = client.create_workflow(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

- Create a quick file distribution task by using the name xxx, template "CMS::ECS::Package", and input parameter "input".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudskaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
```

security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.

In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment

```
ak = os.environ["CLOUD_SDK_AK"]
sk = os.environ["CLOUD_SDK_SK"]
projectId = "{project_id}"

credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = CreateWorkflowRequest()
    listInputbody = {
        "project_id": "xxx",
        "region_id": "cn-north-7",
        "package": "{cmd_user\\\\"xxx\\",software_list\\\\"{x}\\",pre_install_script
\\\\"\\",operate_type\\\\"install\\",un_install_script\\\\"\\",version_number\\\\"110\\",time_out
\\\\"7200\\",install_script\\\\"ls\\",package_version_id\\\\"xxx\\",package_basic_id\\\\"xxx
\\",package_name\\\\"77779956\\",install_file_dir\\\\"/\\",plat_form\\\\"Linux\\",group\\\\"package
\\",
        "get_instances": "{ecs_id_list\\\\"[\\\\"xxx\\"]\\",type\\\\"manual\\",group\\\\"ecs_instance
\\",
        "rate_control": "{max\\\\"0\\",timeDelay\\\\"0\\",group\\\\"rate_control\\",
        "approve": "{need_approve\\\\"false\\",group\\\\"approve\\",
    }
    request.body = WorkflowRequestBody(
        task_type="package",
        input=listInputbody,
        template_id="CMS::ECS::Package",
        template_name="CMS::ECS::Package",
        tags={},
        description="",
        type="manual",
        name="xxx"
    )
    response = client.create_workflow(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

- Create an ECS stop task by using the name xxx, template "CMS::ECS::BulkyStopECSInstances", and input parameter "input".

coding: utf-8

```
import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsckaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsckaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"
```

```

credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = CreateWorkflowRequest()
    listInputbody = {
        "get_instances": "{\\"ecs_id_list\\":\\"[\\\\"xxx\\"]\\",\\"type\\":\\"manual\\",\\"group\\":\\"ecs_instance
\\"}",
        "stop_ecs_type": "{\\"stop_ecs_type\\":\\"SOFT\\",\\"group\\":\\"stop_ecs_type\\"}",
        "rate_control": "{\\"max\\":\\"0\\",\\"timeDelay\\":\\"0\\",\\"group\\":\\"rate_control\\"}",
        "approve": "{\\"need_approve\\":\\"false\\",\\"group\\":\\"approve\\"}",
        "project_id": "xxx",
        "region_id": "cn-north-7"
    }
    request.body = WorkflowRequestBody(
        task_type="cloud",
        input=listInputbody,
        template_id="CMS::ECS::BulkyStopECSInstances",
        template_name="CMS::ECS::BulkyStopECSInstances",
        tags={},
        description="",
        type="manual",
        name="xxx"
    )
    response = client.create_workflow(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)

```

- Create a disk clearance task by using the name xxx, template "CMS::ECS::BulkyCleanDisks", and input parameter "input".

```

# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{projectId}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateWorkflowRequest()
        listInputbody = {
            "get_instances": "{\\"ecs_id_list\\":\\"[\\\\"xxx\\"]\\",\\"type\\":\\"manual\\",\\"group\\":\\"ecs_instance

```



```

    }",
    "clean_disk": "{\path\":"[{\path\":"\/xxx\/\","fileName\":"xxxx.xx\","date\":"11\"}]
\,"platform\":"linux\","group\":"clean_disk\}";
    "rate_control": "{\max\":"0\","timeDelay\":"0\","group\":"rate_control\}";
    "approve": "{\need_approve\":"false\","group\":"approve\}";
    "project_id": "xxxx",
    "region_id": "cn-north-7"
  }
  request.body = WorkflowRequestBody(
    task_type="cloud",
    input=listInputbody,
    template_id="CMS::ECS::BulkyCleanDisks",
    template_name="CMS::ECS::BulkyCleanDisks",
    tags={},
    description="",
    type="manual",
    name="xxx"
  )
  response = client.create_workflow(request)
  print(response)
except exceptions.ClientRequestException as e:
  print(e.status_code)
  print(e.request_id)
  print(e.error_code)
  print(e.error_msg)

```

- Create an ECS password change task by using the name xxx, template "CMS::ECS::BulkyChangeECSPassword", and input parameter "input".

```

# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudskaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudskaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateWorkflowRequest()
        listInputbody = {
            "get_instances": "{\ecs_id_list\":"[{\xxxx\}]\","type\":"manual\","group\":"ecs_instance
\}";
            "user_password": "{\password\":"xxxx\","username\":"xxx\","group\":"user_password\}";
            "rate_control": "{\max\":"0\","timeDelay\":"0\","group\":"rate_control\}";
            "approve": "{\need_approve\":"false\","group\":"approve\}";
            "project_id": "xxxx",
            "region_id": "cn-north-7"
        }
        request.body = WorkflowRequestBody(
            task_type="cloud",
            input=listInputbody,
            template_id="CMS::ECS::BulkyChangeECSPassword",

```

```
        template_name="CMS::ECS::BulkyChangeECSPassword",
        tags={},
        description="",
        type="manual",
        name="xxxxx"
    )
    response = client.create_workflow(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

- Create a job task by using the name xxx, template "job_1", and input parameter "input".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateWorkflowRequest()
        listInputbody = {
            "project_id": "xxx",
            "region_id": "cn-north-7",
            "isExist": "false",
            "rate_control": "{\n\"max\":\n\"0\", \"timeDelay\":\n\"0\", \"group\":\n\"rate_control\"}",
            "approve": "{\n\"need_approve\":\n\"false\", \"group\":\n\"approve\"}"
        }
        request.body = WorkflowRequestBody(
            task_type="job",
            input=listInputbody,
            template_id="xxx",
            template_name="job_1",
            tags={},
            description="",
            type="manual",
            name="xxx"
        )
        response = client.create_workflow(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

- Create a workload restart task using the name xxx, template "CMS::CCE::RestartWorkloadInstance", and input parameter "input".

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    # security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    # environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before
    # running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    # environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateWorkflowRequest()
        listInputbody = {
            "get_instances": "{\n\"cce_workload_id_list\": \"[\\\"xxx\\\"]\", \"cce_workload_cluster\": \"xxx
            \", \"type\": \"manual\", \"cce_workload_type\": \"deployments\", \"group\": \"cce_workload_instance\"}",
            "cce_workload_restart_info": "{\n\"time_interval\": \"300\", \"group\": \"cce_workload_restart_info
            \",
            \"rate_control\": \"{\\\"max\": \"2\", \"timeDelay\": \"2\", \"group\": \"rate_control\"}\",
            \"approve\": \"{\\\"need_approve\": \"false\", \"group\": \"approve\"}\",
            \"project_id\": \"xxx\",
            \"region_id\": \"cn-north-7\"
            }
        }
        request.body = WorkflowRequestBody(
            task_type="cloud",
            input=listInputbody,
            template_id="CMS::CCE::RestartWorkloadInstance",
            template_name="CMS::CCE::RestartWorkloadInstance",
            tags={},
            description="",
            type="manual",
            name="xxx"
        )
        response = client.create_workflow(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

- Create an ECS startup task by using the name xxx, template "CMS::ECS::BulkyStartECSInstances", and input parameter "input".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
```

```
aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
"github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateWorkflowRequest{}
    var listInputbody = map[string]interface{}{
        "get_instances": "{ \"ecs_id_list\": \"[\\\"xxx\\\"]\", \"type\": \"manual\", \"group\": \"ecs_instance\"}",
        "rate_control": "{ \"max\": \"1\", \"timeDelay\": \"10\", \"group\": \"rate_control\"}",
        "approve": "{ \"need_approve\": \"false\", \"group\": \"approve\"}",
        "project_id": "xxx",
        "region_id": "cn-north-7",
    }
    templateNameWorkflowRequestBody := "CMS::ECS::BulkyStartECSInstances"
    var tagsWorkflowRequestBody interface{} = make(map[string]string)
    descriptionWorkflowRequestBody := ""
    request.Body = &model.WorkflowRequestBody{
        TaskType: "cloud",
        Input: listInputbody,
        TemplateId: "CMS::ECS::BulkyStartECSInstances",
        TemplateName: &templateNameWorkflowRequestBody,
        Tags: &tagsWorkflowRequestBody,
        Description: &descriptionWorkflowRequestBody,
        Type: "manual",
        Name: "xxx",
    }
    response, err := client.CreateWorkflow(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

- Create a scheduled script execution task by using the name xxx, template "CMS::ECS::BulkyRunScript", and input parameter "input".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)
```

```

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateWorkflowRequest{}
    var listInputbody = map[string]interface{}{
        "project_id": "2xxx487fxxxxbffc1cf",
        "region_id": "cn-north-7",
        "trigger": "{\n  \"period\": \"[\\\"0\\\", \\\"3\\\", \\\"4\\\", \\\"5\\\", \\\"6\\\"]\",\n  \"scheduled_time\
        \": \"00:04:05\",\n  \"time_zone\": \"Asia/Riyadh\",\n  \"policy\": \"periodic\",\n  \"group\": \"trigger\"}",
        "notice": "{\n  \"group\": \"notice\"}",
        "get_instances": "{\n  \"ecs_id_list\": \"[\\\"4bxxxx-xxxx-4c92-xxxx-19469d40a51c\\\"]\",\n  \"type\
        \": \"manual\",\n  \"group\": \"ecs_instance\"}",
        "approve": "{\n  \"need_approve\": \"false\",\n  \"group\": \"approve\"}",
        "rate_control": "{\n  \"max\": \"0\",\n  \"timeDelay\": \"0\",\n  \"group\": \"rate_control\"}",
        "script_param": "{\n  \"sourceId\": \"script\",\n  \"cmd_user\": \"xxxxx\",\n  \"sensitive_param\
        \": false,\n  \"script_content\": \"cd /xxx/xxx\",\n  \"name\": \"zzy\",\n  \"version_number\": \"1.0\",\n  \"script_id\
        \": \"xxxx-7e9e-4eed-8xf-5f1fxx6ebb7d\",\n  \"script_type\": \"SHELL\",\n  \"script_version_id\
        \": \"e005xxx4-1fcf-40xx-b1x6-8dxxxcae7b021\",\n  \"scriptSelected\": \"null\",\n  \"time_out\": \"7200\",\n  \"group\
        \": \"script\"}",
    }
    templateNameWorkflowRequestBody := "CMS::ECS::BulkyRunScript"
    var tagsWorkflowRequestBody interface{} = make(map[string]string)
    descriptionWorkflowRequestBody := ""
    request.Body = &model.WorkflowRequestBody{
        TaskType: "script",
        Input: listInputbody,
        TemplateId: "CMS::ECS::BulkyRunScript",
        TemplateName: &templateNameWorkflowRequestBody,
        Tags: &tagsWorkflowRequestBody,
        Description: &descriptionWorkflowRequestBody,
        Type: "cron",
        Name: "xxxxxshcd",
    }
    response, err := client.CreateWorkflow(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

- Create a script execution task by using the name xxx, template "CMS::ECS::BulkyRunScript", and input parameter "input".

```

package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"

```

```

"github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateWorkflowRequest{}
    var listInputbody = map[string]interface{}{
        "script_param": "{\nsourceId\n:\nscript\n,\n cmd_user\n:\nroot\n,\n sensitive_param\n:\nfalse\n,\nscript_content\n:\n date\n,\n version_number\n:\n1.0\n,\nscript_id\n:\n6xxxx097-a4x4-4dxx-axa2-fef5xxxxdd55\n,\nscript_type\n:\nSHELL\n,\nscript_version_id\n:\n47xxxxd67-bxx5-45x9-860x-cb3d6xxxx745\n,\nscriptSelected\n:\nnull\n,\nscript_args\n:\narg1 agr2\n,\ntime_out\n:\n7200\n,\ngroup\n:\nscript\n}",
        "get_instances": "{\necs_id_list\n:\n[\n4380xxx9-33xf-4xe-axxx-7xxxxxx3fcd\n]\n,\ntype\n:\nmanual\n,\ngroup\n:\necs_instance\n}",
        "approve": "{\nneed_approve\n:\nfalse\n,\ngroup\n:\napprove\n}",
        "rate_control": "{\nmax\n:\n0\n,\ntimeDelay\n:\n0\n,\ngroup\n:\nrate_control\n}",
        "project_id": "2xxxxxcca5xx8373xxx1bffxxcf",
        "region_id": "cn-north-7",
    }
    templateNameWorkflowRequestBody := "CMS::ECS::BulkyRunScript"
    var tagsWorkflowRequestBody interface{} = make(map[string]string)
    descriptionWorkflowRequestBody := ""
    request.Body = &model.WorkflowRequestBody{
        TaskType: "script",
        Input: listInputbody,
        TemplateId: "CMS::ECS::BulkyRunScript",
        TemplateName: &templateNameWorkflowRequestBody,
        Tags: &tagsWorkflowRequestBody,
        Description: &descriptionWorkflowRequestBody,
        Type: "manual",
        Name: "execute_task_demo",
    }
    response, err := client.CreateWorkflow(request)
    if err == nil {
        fmt.Printf("%v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

- Create an RDS instance restart task by using the name xxx, template "CMS::RDS::RestartRDSInstance", and input parameter "input".

```

package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"

```

```
aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
"github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateWorkflowRequest{}
    var listInputbody = map[string]interface{}{
        "get_instances": "{ \"rds_id_list\": \"[\\\"xxx\\\"]\", \"type\": \"manual\", \"group\": \"rds_instance\"",
        "rate_control": "{ \"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"",
        "approve": "{ \"need_approve\": \"false\", \"group\": \"approve\"",
        "project_id": "xxx",
        "region_id": "cn-north-7",
    }
    templateNameWorkflowRequestBody := "CMS::RDS::RestartRDSInstance"
    var tagsWorkflowRequestBody interface{} = make(map[string]string)
    descriptionWorkflowRequestBody := ""
    request.Body = &model.WorkflowRequestBody{
        TaskType: "cloud",
        Input: listInputbody,
        TemplateId: "CMS::RDS::RestartRDSInstance",
        TemplateName: &templateNameWorkflowRequestBody,
        Tags: &tagsWorkflowRequestBody,
        Description: &descriptionWorkflowRequestBody,
        Type: "manual",
        Name: "xxx",
    }
    response, err := client.CreateWorkflow(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

- Create a quick file distribution task by using the name xxx, template "CMS::ECS::Package", and input parameter "input".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)
```

```

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateWorkflowRequest{}
    var listInputbody = map[string]interface{}{
        "project_id": "xxx",
        "region_id": "cn-north-7",
        "package": "{\"cmd_user\": \"xxxx\", \"software_list\": \"{{x}}\", \"pre_install_script
        \": \"\", \"operate_type\": \"install\", \"un_install_script\": \"\", \"version_number\": \"110\", \"time_out
        \": \"7200\", \"install_script\": \"ls\", \"package_version_id\": \"xxx\", \"package_basic_id\": \"xxx
        \", \"package_name\": \"77779956\", \"install_file_dir\": \"/\", \"plat_form\": \"Linux\", \"group\": \"package
        \"}",
        "get_instances": "{\"ecs_id_list\": \"[\\\"xxx\\\"]\", \"type\": \"manual\", \"group\": \"ecs_instance\"}",
        "rate_control": "{\"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"}",
        "approve": "{\"need_approve\": \"false\", \"group\": \"approve\"}",
    }
    templateNameWorkflowRequestBody := "CMS::ECS::Package"
    var tagsWorkflowRequestBody interface{} = make(map[string]string)
    descriptionWorkflowRequestBody := ""
    request.Body = &model.WorkflowRequestBody{
        TaskType: "package",
        Input: listInputbody,
        TemplateId: "CMS::ECS::Package",
        TemplateName: &templateNameWorkflowRequestBody,
        Tags: &tagsWorkflowRequestBody,
        Description: &descriptionWorkflowRequestBody,
        Type: "manual",
        Name: "xxx",
    }
    response, err := client.CreateWorkflow(request)
    if err == nil {
        fmt.Printf("%v\\n", response)
    } else {
        fmt.Println(err)
    }
}

```

- Create an ECS stop task by using the name xxx, template "CMS::ECS::BulkyStopECSInstances", and input parameter "input".

```

package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

```



```
func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateWorkflowRequest{}
    var listInputbody = map[string]interface{}{
        "get_instances": "{\n  \"ecs_id_list\": \"[\\\"xxx\\\"]\", \"type\": \"manual\", \"group\": \"ecs_instance\"",
        "stop_ecs_type": "{\n  \"stop_ecs_type\": \"SOFT\", \"group\": \"stop_ecs_type\"",
        "rate_control": "{\n  \"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"",
        "approve": "{\n  \"need_approve\": \"false\", \"group\": \"approve\"",
        "project_id": "xxx",
        "region_id": "cn-north-7",
    }
    templateNameWorkflowRequestBody := "CMS::ECS::BulkyStopECSInstances"
    var tagsWorkflowRequestBody interface{} = make(map[string]string)
    descriptionWorkflowRequestBody := ""
    request.Body = &model.WorkflowRequestBody{
        TaskType: "cloud",
        Input: listInputbody,
        TemplateId: "CMS::ECS::BulkyStopECSInstances",
        TemplateName: &templateNameWorkflowRequestBody,
        Tags: &tagsWorkflowRequestBody,
        Description: &descriptionWorkflowRequestBody,
        Type: "manual",
        Name: "xxx",
    }
    response, err := client.CreateWorkflow(request)
    if err == nil {
        fmt.Printf("%v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

- Create a disk clearance task by using the name xxx, template "CMS::ECS::BulkyCleanDisks", and input parameter "input".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
```

```
// In this example, AK and SK are stored in environment variables for authentication. Before
running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
environment
ak := os.Getenv("CLOUD_SDK_AK")
sk := os.Getenv("CLOUD_SDK_SK")
projectId := "{project_id}"

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    WithProjectId(projectId).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.CreateWorkflowRequest{}
var listInputbody = map[string]interface{}{
    "get_instances": "{\"ecs_id_list\": \"[\\\"xxx\\\"]\", \"type\": \"manual\", \"group\": \"ecs_instance\"}",
    "clean_disk": "{\"path\": \"[\\\"path\\\": \\\"/xxx/\\\", \\\"fileName\\\": \\\"xxx.xx\\\", \\\"date\\\": \\\"1\\\"]\",
    \"platform\": \"linux\", \"group\": \"clean_disk\"}",
    "rate_control": "{\"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"}",
    "approve": "{\"need_approve\": \"false\", \"group\": \"approve\"}",
    "project_id": "xxxx",
    "region_id": "cn-north-7",
}
templateNameWorkflowRequestBody := "CMS::ECS::BulkyCleanDisks"
var tagsWorkflowRequestBody interface{} = make(map[string]string)
descriptionWorkflowRequestBody := ""
request.Body = &model.WorkflowRequestBody{
    TaskType: "cloud",
    Input: listInputbody,
    TemplateId: "CMS::ECS::BulkyCleanDisks",
    TemplateName: &templateNameWorkflowRequestBody,
    Tags: &tagsWorkflowRequestBody,
    Description: &descriptionWorkflowRequestBody,
    Type: "manual",
    Name: "xxx",
}
response, err := client.CreateWorkflow(request)
if err == nil {
    fmt.Printf("%v\n", response)
} else {
    fmt.Println(err)
}
}
```

- Create an ECS password change task by using the name xxx, template "CMS::ECS::BulkyChangeECSPassword", and input parameter "input".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    environment
```

```
ak := os.Getenv("CLOUD_SDK_AK")
sk := os.Getenv("CLOUD_SDK_SK")
projectId := "{project_id}"

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    WithProjectId(projectId).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.CreateWorkflowRequest{}
var listInputbody = map[string]interface{}{
    "get_instances": "{ \"ecs_id_list\": \"[\\\"xxxxx\\\"]\", \"type\": \"manual\", \"group\": \"ecs_instance\"",
    "user_password": "{ \"password\": \"xxxxx\", \"username\": \"xxx\", \"group\": \"user_password\"",
    "rate_control": "{ \"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"",
    "approve": "{ \"need_approve\": \"false\", \"group\": \"approve\"",
    "project_id": "xxxxx",
    "region_id": "cn-north-7",
}
templateNameWorkflowRequestBody := "CMS::ECS::BulkyChangeECSPassword"
var tagsWorkflowRequestBody interface{} = make(map[string]string)
descriptionWorkflowRequestBody := ""
request.Body = &model.WorkflowRequestBody{
    TaskType: "cloud",
    Input: listInputbody,
    TemplateId: "CMS::ECS::BulkyChangeECSPassword",
    TemplateName: &templateNameWorkflowRequestBody,
    Tags: &tagsWorkflowRequestBody,
    Description: &descriptionWorkflowRequestBody,
    Type: "manual",
    Name: "xxxxx",
}
response, err := client.CreateWorkflow(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}
```

- Create a job task by using the name xxx, template "job_1", and input parameter "input".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"
```

```
auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    WithProjectId(projectId).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.CreateWorkflowRequest{}
var listInputbody = map[string]interface{}{
    "project_id": "xxx",
    "region_id": "cn-north-7",
    "isExist": "false",
    "rate_control": "{\\"max\\":\\"0\\",\\"timeDelay\\":\\"0\\",\\"group\\":\\"rate_control\\"}",
    "approve": "{\\"need_approve\\":\\"false\\",\\"group\\":\\"approve\\"}",
}
templateNameWorkflowRequestBody := "job_1"
var tagsWorkflowRequestBody interface{} = make(map[string]string)
descriptionWorkflowRequestBody := ""
request.Body = &model.WorkflowRequestBody{
    TaskType: "job",
    Input: listInputbody,
    TemplateId: "xxx",
    TemplateName: &templateNameWorkflowRequestBody,
    Tags: &tagsWorkflowRequestBody,
    Description: &descriptionWorkflowRequestBody,
    Type: "manual",
    Name: "xxx",
}
response, err := client.CreateWorkflow(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}
```

- Create a workload restart task using the name xxx, template "CMS::CCE::RestartWorkloadInstance", and input parameter "input".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
    // running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
    // environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{projectId}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()
}
```


4.8.2 Updating a Task

Function

This API is used to enable or disable a scheduled task. The corresponding result will be returned.

Calling Method

For details, see [Calling APIs](#).

URI

PUT /v1/{project_id}/cms/workflow/{workflow_id}/trigger/action

Table 4-526 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
workflow_id	Yes	String	ID of the task to be enabled or disabled.

Table 4-527 Query Parameters

Parameter	Mandatory	Type	Description
action	Yes	String	Enable or disable the scheduled task. enable: Enable the scheduled task. disable: Disable the scheduled task. Enumeration values: <ul style="list-style-type: none"> • enable • disable

Request Parameters

Table 4-528 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Content type, which is application/json.

Response Parameters

Status code: 400

Table 4-529 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 401

Table 4-530 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 500

Table 4-531 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Example Requests

enable: Enable the scheduled task. disable: Disable the scheduled task.

https://{Endpoint}/v1/{project_id}/cms/workflow/{workflow_id}/trigger/action?action=enable

Example Responses

Status code: 200

The task is enabled or disabled successfully.

```
{"success"}
```

Status code: 400

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.31001302",
  "error_msg" : "Invalid param",
  "http_code" : 400
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.31009003",
  "error_msg" : "auth failed.",
  "http_code" : 401
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "AOM.31001305",
  "error_msg" : "workflow internal server error.",
  "http_code" : 500
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

public class UpdateWorkflowTriggerStatusSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    }
}
```



```
String ak = System.getenv("CLOUD_SDK_AK");
String sk = System.getenv("CLOUD_SDK_SK");
String projectId = "{project_id}";

ICredential auth = new BasicCredentials()
    .withProjectId(projectId)
    .withAk(ak)
    .withSk(sk);

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
UpdateWorkflowTriggerStatusRequest request = new UpdateWorkflowTriggerStatusRequest();
request.withWorkflowId("{workflow_id}");
try {
    UpdateWorkflowTriggerStatusResponse response = client.updateWorkflowTriggerStatus(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateWorkflowTriggerStatusRequest()
        request.workflow_id = "{workflow_id}"
        response = client.update_workflow_trigger_status(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```

package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateWorkflowTriggerStatusRequest{}
    request.WorkflowId = "{workflow_id}"
    response, err := client.UpdateWorkflowTriggerStatus(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	The task is enabled or disabled successfully.
400	Bad Request: Invalid request. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.8.3 Operating a Paused Task

Function

This API is used to restart, skip, and resume a task upon failure. The corresponding result will be returned.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/cms/workflow/{workflow_id}/executions/{execution_id}/operation

Table 4-532 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
workflow_id	Yes	String	Workflow ID, which is unique and generated based on project_id and workflow_name.
execution_id	Yes	String	Workflow execution ID.

Table 4-533 Query Parameters

Parameter	Mandatory	Type	Description
action	Yes	String	Operation to be performed on the current node. restart: Restart the failed node. skip: Skip the failed node and go to the next node. continue: Go to the next node through the pause node. Enumeration values: <ul style="list-style-type: none"> ● restart ● skip ● continue

Parameter	Mandatory	Type	Description
node_id	Yes	String	ID of the current node.

Request Parameters

Table 4-534 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Response Parameters

Status code: 200

Table 4-535 Response body parameters

Parameter	Type	Description
result	Object	Response body

Status code: 401

Table 4-536 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 500

Table 4-537 Response body parameters

Parameter	Type	Description
error_code	String	Response code.

Parameter	Type	Description
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Example Requests

Specify the skip action for the task. skip: Skip the task. restart: Execute the task again. continue: Continue to execute the task.

```
https://{Endpoint}/v1/{project_id}/cms/workflow/{workflow_id}/executions/{execution_id}/operation?
action=skip&node_id=xxxxxxx
```

Example Responses

Status code: 200

OK: The task status has changed.

```
{
  "result" : "success"
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.31009004",
  "error_msg" : "auth failed.",
  "http_code" : "401"
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "AOM.31001405",
  "error_msg" : "internal server error.",
  "http_code" : "500"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;
```

```
public class StartPausingWorkflowExecutionsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        StartPausingWorkflowExecutionsRequest request = new StartPausingWorkflowExecutionsRequest();
        request.withWorkflowId("{workflow_id}");
        request.withExecutionId("{execution_id}");
        try {
            StartPausingWorkflowExecutionsResponse response =
            client.startPausingWorkflowExecutions(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
```

```
.build()

try:
    request = StartPausingWorkflowExecutionsRequest()
    request.workflow_id = "{workflow_id}"
    request.execution_id = "{execution_id}"
    response = client.start_pausing_workflow_executions(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.StartPausingWorkflowExecutionsRequest{}
    request.WorkflowId = "{workflow_id}"
    request.ExecutionId = "{execution_id}"
    response, err := client.StartPausingWorkflowExecutions(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The task status has changed.
401	Unauthorized: The authentication information is incorrect or invalid.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.8.4 Obtaining the Execution Details of a Workflow

Function

This API is used to obtain the execution details of a task. You can specify the workflow ID and execution ID to query the corresponding task. The task execution details will be returned.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/{project_id}/cms/workflow/{workflow_id}/executions/{execution_id}/status

Table 4-538 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
workflow_id	Yes	String	Workflow ID, which is unique and generated based on project_id and workflow_name.
execution_id	Yes	String	Workflow execution ID.

Request Parameters

Table 4-539 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Response Parameters

Status code: 200

Table 4-540 Response body parameters

Parameter	Type	Description
workflow_id	String	Process definition ID.
execution_id	String	Flow instance ID.
status	String	Flow instance execution status.
begin_time	Long	Time (UTC) when a flow instance was created.
end_time	Long	Time (UTC) when a flow instance was completed.
last_update_time	Long	Time (UTC) when a flow instance was updated. Format: yyyy-MM-ddTHH:mm:ssZ.
execution_result_list	Array of execution_result_list objects	Node execution information.
approve_user_name_list	Array of strings	Approver list.
project_id	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
workflow_edit_time	Long	Time when the workflow was updated.
last_record_id_with_snapshot	String	Execution snapshot.

Table 4-541 execution_result_list

Parameter	Type	Description
node_id	String	Flow node ID.
begin_time	Long	Start time of node execution.
end_time	Long	End time of node execution.
function_execution_id	String	FunctionGraph execution ID.
output	Object	Node output.
status	String	Node status.

Status code: 400

Table 4-542 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 401

Table 4-543 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 500

Table 4-544 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.

Parameter	Type	Description
http_code	Integer	HTTP response code.

Example Requests

Specify workflow_id and execution_id to obtain task details.

```
https://{Endpoint}/v1/{project_id}/cms/workflow/{workflow_id}/executions/{execution_id}/status
```

Example Responses

Status code: 200

OK: The task execution details are returned.

```
{
  "approve_user_name_list" : [],
  "begin_time" : 1670311148207,
  "end_time" : 1670311151857,
  "execution_id" : "xxxxx",
  "execution_result_list" : [ {
    "begin_time" : 1670311148207,
    "end_time" : 1670311151857,
    "function_execution_id" : "xxxxx",
    "node_id" : "run-script",
    "output" : {
      "fail" : [ {
        "availability_zone" : "cn-north-7b",
        "code" : "0",
        "error_msg" : "",
        "floating_ip_list" : [ "192.0.0.0" ],
        "charging_mode" : "0",
        "current_project" : true,
        "log" : "/usr/local/uniagentd/tmp/tmp_1670311150998271_de7b35a0-dc43-45e0-a712-d6b26844be1c:
>-\\n line 1: cd: /xxx/xxx: Not a directory",
        "vpc_id" : "xxxxxx",
        "ip" : "192.0.0.0",
        "fixed_ip_list" : [ "192.0.0.0" ],
        "tags" : [ ],
        "start_time" : "1670311150773",
        "enterprise_project_id" : "0",
        "execute_time" : "130",
        "os_type" : "Linux",
        "agent_state" : "ONLINE",
        "exit_code" : "1",
        "name" : "xxxx",
        "id" : "xxxxxxxx",
        "instance_status" : "ACTIVE"
      } ],
      "in_execution" : [ ],
      "not_performed" : [ ],
      "success" : [ ]
    },
    "status" : "success"
  } ],
  "last_record_id_with_snapshot" : "xxxxxxxx",
  "project_id" : "xxxxxx",
  "status" : "fail",
  "workflow_edit_time" : 1670311089444,
  "workflow_id" : "xxxxxx"
}
```

Status code: 400

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.31001403",
  "error_message" : "param error.",
  "http_code" : "400"
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.31009004",
  "error_message" : "auth failed.",
  "http_code" : "401"
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "AOM.31001405",
  "error_message" : "internal server error.",
  "http_code" : "500"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

public class SearchWorkflowExecutionDetailSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
```

```
        .withRegion(AomRegion.valueOf("<YOUR REGION>"))
        .build();
SearchWorkflowExecutionDetailRequest request = new SearchWorkflowExecutionDetailRequest();
request.withWorkflowId("{workflow_id}");
request.withExecutionId("{execution_id}");
try {
    SearchWorkflowExecutionDetailResponse response = client.searchWorkflowExecutionDetail(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = SearchWorkflowExecutionDetailRequest()
        request.workflow_id = "{workflow_id}"
        request.execution_id = "{execution_id}"
        response = client.search_workflow_execution_detail(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
```

```

"github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.SearchWorkflowExecutionDetailRequest{}
    request.WorkflowId = "{workflow_id}"
    request.ExecutionId = "{execution_id}"
    response, err := client.SearchWorkflowExecutionDetail(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The task execution details are returned.
400	Bad Request: Invalid request. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.8.5 Terminating a Task

Function

This API is used to terminate a task that is being executed. You can specify a workflow ID and execution ID. The termination status will be returned.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/cms/workflow/{workflow_id}/executions/{execution_id}/
terminate

Table 4-545 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
workflow_id	Yes	String	Task ID, which is the workflow ID obtained from the workflow command list.
execution_id	Yes	String	Task execution ID.

Request Parameters

Table 4-546 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Response Parameters

Status code: 400

Table 4-547 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 401**Table 4-548** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 404**Table 4-549** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 500**Table 4-550** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Example Requests

Specify workflow_id and execution_id to terminate a task that is being executed.

https://{Endpoint}/v1/{project_id}/cms/workflow/{workflow_id}/executions/{execution_id}/terminate

Example Responses

Status code: 200

The task is terminated successfully.

```
{
  "result" : "success"
}
```

Status code: 400

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.31001418",
  "error_msg" : "The task does not support the current operation.",
  "http_code" : 400
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.31009004",
  "error_msg" : "auth failed.",
  "http_code" : 401
}
```

Status code: 404

The task to be terminated does not exist.

```
{
  "error_code" : "AOM.31001306",
  "error_msg" : "Execution not exist. recordInfo is not exist.",
  "http_code" : 404
}
```

Status code: 500

Internal server error.

```
{
  "error_code" : "AOM.31001405",
  "error_msg" : "workflow internal server error.",
  "http_code" : 500
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
```

```
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

public class StopExecutionSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();

        StopExecutionRequest request = new StopExecutionRequest();
        request.withWorkflowId("{workflow_id}");
        request.withExecutionId("{execution_id}");
        try {
            StopExecutionResponse response = client.stopExecution(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
```

```
.with_credentials(credentials) \  
.with_region(AomRegion.value_of("<YOUR REGION>")) \  
.build()  
  
try:  
    request = StopExecutionRequest()  
    request.workflow_id = "{workflow_id}"  
    request.execution_id = "{execution_id}"  
    response = client.stop_execution(request)  
    print(response)  
except exceptions.ClientRequestException as e:  
    print(e.status_code)  
    print(e.request_id)  
    print(e.error_code)  
    print(e.error_msg)
```

Go

```
package main  
  
import (  
    "fmt"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"  
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"  
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"  
)  
  
func main() {  
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    // variables and decrypted during use to ensure security.  
    // In this example, AK and SK are stored in environment variables for authentication. Before running this  
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak := os.Getenv("CLOUD_SDK_AK")  
    sk := os.Getenv("CLOUD_SDK_SK")  
    projectId := "{project_id}"  
  
    auth := basic.NewCredentialsBuilder().  
        WithAk(ak).  
        WithSk(sk).  
        WithProjectId(projectId).  
        Build()  
  
    client := aom.NewAomClient(  
        aom.AomClientBuilder().  
            WithRegion(region.ValueOf("<YOUR REGION>")).  
            WithCredential(auth).  
            Build())  
  
    request := &model.StopExecutionRequest{}  
    request.WorkflowId = "{workflow_id}"  
    request.ExecutionId = "{execution_id}"  
    response, err := client.StopExecution(request)  
    if err == nil {  
        fmt.Printf("%+v\n", response)  
    } else {  
        fmt.Println(err)  
    }  
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	The task is terminated successfully.
400	Bad Request: Invalid request. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
404	The task to be terminated does not exist.
500	Internal server error.

Error Codes

See [Error Codes](#).

4.8.6 Querying a Script

Function

This API is used to query a script. You can specify a script name and creator for exact query. Information about the corresponding script will be returned.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/cms/script/list

Table 4-551 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Request Parameters

Table 4-552 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Content type, which is application/json.

Table 4-553 Request body parameters

Parameter	Mandatory	Type	Description
name	No	String	Parameter input for query. On the version management page, name refers to the script name, which cannot be empty. On the script management page, name refers to the parameter input for fuzzy query. If the value of name is null, all scripts will be queried by default.
is_default	No	String	Query rule. default: Script management page displayed and fuzzy query supported. no_default: Version management page displayed.
create_by	No	String	Creator. By default, scripts are searched by creator.
script_id	Yes	String	ID of the script to be queried during version management.
page_num	No	Integer	Page number, which is a positive integer.
page_size	No	Integer	Number of records displayed on each page. Default: 10.
project_id	No	String	Project ID.
order_by_column	Yes	String	Field to be sorted. Options: name, create_time, and update_time (default).
sort_order	Yes	String	Sorting order (default: DESC). Options: ASC (ascending order) and DESC (descending order).
enterprise_project_id	No	String	Enterprise project ID, based on which you can search for required scripts.

Response Parameters

Status code: 200

Table 4-554 Response body parameters

Parameter	Type	Description
elements	Array of Script objects	Query result set.
total_elements	Integer	Number of queried results.

Table 4-555 Script

Parameter	Type	Description
approve_info	ApproveInfo object	Review information.
create_by	String	Creator, for example, Tom.
create_time	Long	Creation time.
description	String	Script description, which can contain a maximum of 1000 characters.
enterprise_project_id	String	Enterprise project ID.
id	String	Script ID, which is generated based on UUID.randomUUID.
name	String	Script name, which can contain digits, underscores (_), and letters.
online_exists	Boolean	Whether a version has been released. Options: true (a version has been released) and false (no version has been released).
online_id	String	ID of the released version.
project_id	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
rate_control	RateControl object	Execution policy.
script_language	String	Script language. Options: SHELL, BAT, PYTHON, and POWER_SHELL.
update_by	String	User who makes the modification.

Parameter	Type	Description
update_time	Long	Time when the entity was last updated. Note: When a creation, modification, or deletion operation is performed, update_time will be updated.

Table 4-556 ApproveInfo

Parameter	Type	Description
topic_selected	String	Selected topic.
need_approve	Boolean	Whether a review is needed. Options: true and false (default).
smn_urn_list	String	Topic URN set.

Table 4-557 RateControl

Parameter	Type	Description
have_rate_control	Boolean	Whether to implement batch release. Default: false.
time_delay	Integer	Interval.
max	Integer	Maximum number of instances supported for batch release.

Status code: 400**Table 4-558** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	Returned HTTP code.

Status code: 401

Table 4-559 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	Returned HTTP code.

Status code: 500

Table 4-560 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	Returned HTTP code.

Example Requests

Obtain the list of scripts whose name is xxx and sort order is DESC.

```
https://{endpoint}/v1/{project_id}/cms/script/list
```

```
{
  "name": "xxx",
  "create_by": "user1",
  "enterprise_project_id": "",
  "page_num": 1,
  "page_size": 10,
  "is_default": "default",
  "order_by_column": "create_time",
  "sort_order": "DESC",
  "script_id": ""
}
```

Example Responses

Status code: 200

OK: The basic script information is returned.

```
{
  "elements": [ {
    "approve_info": {
      "need_approve": false
    },
    "create_by": "chenkaiyuan",
    "create_time": 1600076223389,
    "description": "fassfa",
    "enterprise_project_id": "0",
    "id": "xxxxxxxxxxxxxxxxxxxx",
    "name": "awffawsafws",
    "online_exist_status": false,
  }
```



```
"project_id" : "xxxxxxxxxxxxxxxxxxxx",
"rate_control" : {
  "have_rate_control" : false,
  "max" : 0,
  "time_delay" : 0
},
"script_language" : "SHELL",
"update_by" : "xxx",
"update_time" : 1600076223389
}],
"total_elements" : 1
}
```

Status code: 400

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.31002002",
  "error_message" : "Invalid script parameter.",
  "http_code" : 400
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.31009011",
  "error_msg" : "auth failed.",
  "http_code" : 401
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "AOM.31002005",
  "error_msg" : "script internal server error.",
  "http_code" : 500
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Obtain the list of scripts whose name is xxx and sort order is DESC.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

public class ListAllScriptByNameSolution {
```

```
public static void main(String[] args) {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
    // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
    // environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running
    // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    String ak = System.getenv("CLOUD_SDK_AK");
    String sk = System.getenv("CLOUD_SDK_SK");
    String projectId = "{project_id}";

    ICredential auth = new BasicCredentials()
        .withProjectId(projectId)
        .withAk(ak)
        .withSk(sk);

    AomClient client = AomClient.newBuilder()
        .withCredential(auth)
        .withRegion(AomRegion.valueOf("<YOUR REGION>"))
        .build();
    ListAllScriptByNameRequest request = new ListAllScriptByNameRequest();
    SearchScriptsRequestBody body = new SearchScriptsRequestBody();
    body.withEnterpriseProjectId("");
    body.withSortOrder("DESC");
    body.withOrderByColumn("create_time");
    body.withPageSize(10);
    body.withPageNum(1);
    body.withScriptId("");
    body.withCreateBy("user1");
    body.withIsDefault("default");
    body.withName("xxx");
    request.withBody(body);
    try {
        ListAllScriptByNameResponse response = client.listAllScriptByName(request);
        System.out.println(response.toString());
    } catch (ConnectionException e) {
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
```

Python

Obtain the list of scripts whose name is xxx and sort order is DESC.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")
```

```
projectId = "{project_id}"

credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = ListAllScriptByNameRequest()
    request.body = SearchScriptsRequestBody(
        enterprise_project_id="",
        sort_order="DESC",
        order_by_column="create_time",
        page_size=10,
        page_num=1,
        script_id="",
        create_by="user1",
        is_default="default",
        name="xxx"
    )
    response = client.list_all_script_by_name(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Obtain the list of scripts whose name is xxx and sort order is DESC.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAllScriptByNameRequest{}
    enterpriseProjectIdSearchScriptsRequestBody := ""
    pageSizeSearchScriptsRequestBody := int32(10)
```

```

pageNumSearchScriptsRequestBody:= int32(1)
createBySearchScriptsRequestBody:= "user1"
isDefaultSearchScriptsRequestBody:= "default"
nameSearchScriptsRequestBody:= "xxx"
request.Body = &model.SearchScriptsRequestBody{
    EnterpriseProjectId: &enterpriseProjectIdSearchScriptsRequestBody,
    SortOrder: "DESC",
    OrderByColumn: "create_time",
    PageSize: &pageSizeSearchScriptsRequestBody,
    PageNum: &pageNumSearchScriptsRequestBody,
    ScriptId: "",
    CreateBy: &createBySearchScriptsRequestBody,
    IsDefault: &isDefaultSearchScriptsRequestBody,
    Name: &nameSearchScriptsRequestBody,
}
response, err := client.ListAllScriptByName(request)
if err == nil {
    fmt.Printf("%v\n", response)
} else {
    fmt.Println(err)
}
}

```

More

For SDK sample code of more programming languages, see the [Sample Code](#) tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The basic script information is returned.
400	Bad Request: Invalid request. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.8.7 Querying the Script Version

Function

This API is used to query all versions of a script based on the script ID. The versions of the specified script will be returned.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/cms/script-version-list

Table 4-561 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-562 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Table 4-563 Request body parameters

Parameter	Mandatory	Type	Description
name	No	String	Parameter input for query. On the version management page, name refers to the script name, which cannot be empty. On the script management page, name refers to the parameter input for fuzzy query. If the value of name is null, all scripts will be queried by default.
is_default	No	String	Query rule. default: Script management page displayed and fuzzy query supported. no_default: Version management page displayed.
create_by	No	String	Creator. By default, scripts are searched by creator.
script_id	Yes	String	ID of the script to be queried during version management.

Parameter	Mandatory	Type	Description
page_num	No	Integer	Page number, which is a positive integer.
page_size	No	Integer	Number of records displayed on each page. Default: 10.
project_id	No	String	Project ID.
order_by_column	Yes	String	Field to be sorted. Options: name, create_time, and update_time (default).
sort_order	Yes	String	Sorting order (default: DESC). Options: ASC (ascending order) and DESC (descending order).
enterprise_project_id	No	String	Enterprise project ID, based on which you can search for required scripts.

Response Parameters

Status code: 200

Table 4-564 Response body parameters

Parameter	Type	Description
elements	Array of ScriptVersion objects	Query result set.
total_elements	Integer	Number of queried results.

Table 4-565 ScriptVersion

Parameter	Type	Description
content	String	Script content, which cannot be empty.
create_by	String	Creator, for example, Tom.
create_time	Long	Creation time.
enterprise_project_id	String	Enterprise project ID.
name	String	Script name, which can contain digits, underscores (_), and letters.

Parameter	Type	Description
project_id	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
job_reference_number	Integer	Number of times that a script version is referenced by a job. Default: 0. Do not enter a negative number.
script_id	String	Script ID, which is generated based on UUID.randomUUID.
script_language	String	Script language. Options: SHELL, BAT, PYTHON, and POWER_SHELL.
status_desc	Integer	Status. Options: 0 (unreleased), 1 (released); 2 (offline), and 3 (prohibited).
update_by	String	User who makes the modification.
update_time	Long	Time when the entity was last updated. Note: When a creation, modification, or deletion operation is performed, update_time will be updated.
version_id	String	Version ID, which is generated based on UUID.randomUUID.
version_number	String	Script version number. Only digits, underscores (_), letters, and periods (.) are allowed.
job_reference_name	Array of ReferenceInfo objects	Details of a job referenced by a script.

Table 4-566 ReferenceInfo

Parameter	Type	Description
job_id	String	Job ID.
job_name	String	Job name.

Status code: 400

Table 4-567 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	Returned HTTP code.

Status code: 401**Table 4-568** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	Returned HTTP code.

Status code: 500**Table 4-569** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	Returned HTTP code.

Example Requests

Query the script version based on a specified script ID.

```
POST https://{Endpoint}/v1/{project_id}/cms/script-version-list
```

```
{
  "script_id": "xxxxxxxx",
  "page_num": 1,
  "page_size": 10,
  "order_by_column": "update_time",
  "sort_order": "ASC"
}
```

Example Responses

Status code: 200

OK: The version list of the specified script is returned.


```
{
  "elements": [ {
    "content": "1",
    "create_by": "cxxxx",
    "create_time": 1676892212509,
    "enterprise_project_id": "0",
    "job_reference_name": [ {
      "job_id": "012b43a3xxxxx684a30b52xxxx98cbe",
      "job_name": "onxx_cxxxxxxx"
    } ],
    "job_reference_number": 1,
    "name": "xxxx",
    "project_id": "2axxxxxcca548xxxxe891bxxxxf",
    "script_id": "xxxxaef-dbxx-41x9-8xx2-8exxxx4e159d2",
    "script_language": "SHELL",
    "status_desc": 1,
    "update_by": "cxxxx",
    "update_time": 1672294768193,
    "version_id": "xxxec4xx0-5x5-4bx0-a2xx-efeexx1c559f",
    "version_number": "1"
  } ],
  "total_elements": 1
}
```

Status code: 400

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{
  "error_code": "AOM.31002002",
  "error_msg": "Invalid script parameter.",
  "http_code": 400
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code": "AOM.31009011",
  "error_msg": "auth failed.",
  "http_code": 401
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code": "AOM.31002005",
  "error_msg": "script internal server error.",
  "http_code": 500
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query the script version based on a specified script ID.

```
package com.huaweicloud.sdk.test;
```

```
import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

public class ListAllVersionByVersionIdSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();

        ListAllVersionByVersionIdRequest request = new ListAllVersionByVersionIdRequest();
        SearchScriptsRequestBody body = new SearchScriptsRequestBody();
        body.withSortOrder("ASC");
        body.withOrderByColumn("update_time");
        body.withPageSize(10);
        body.withPageNum(1);
        body.withScriptId("xxxxxxxxx");
        request.withBody(body);
        try {
            ListAllVersionByVersionIdResponse response = client.listAllVersionByVersionId(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Query the script version based on a specified script ID.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v1 import *

if __name__ == "__main__":
```

```
# The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
variables and decrypted during use to ensure security.
# In this example, AK and SK are stored in environment variables for authentication. Before running this
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
ak = os.environ["CLOUD_SDK_AK"]
sk = os.environ["CLOUD_SDK_SK"]
projectId = "{project_id}"

credentials = BasicCredentials(ak, sk, projectId)

client = AomClient.new_builder() \
    .with_credentials(credentials) \
    .with_region(AomRegion.value_of("<YOUR REGION>")) \
    .build()

try:
    request = ListAllVersionByVersionIdRequest()
    request.body = SearchScriptsRequestBody(
        sort_order="ASC",
        order_by_column="update_time",
        page_size=10,
        page_num=1,
        script_id="xxxxxxxxx"
    )
    response = client.list_all_version_by_version_id(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Query the script version based on a specified script ID.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())
```

```
request := &model.ListAllVersionByVersionIdRequest{}
pageSizeSearchScriptsRequestBody:= int32(10)
pageNumSearchScriptsRequestBody:= int32(1)
request.Body = &model.SearchScriptsRequestBody{
    SortOrder: "ASC",
    OrderByColumn: "update_time",
    PageSize: &pageSizeSearchScriptsRequestBody,
    PageNum: &pageNumSearchScriptsRequestBody,
    ScriptId: "xxxxxxxx",
}
response, err := client.ListAllVersionByVersionId(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The version list of the specified script is returned.
400	Bad Request: Invalid request. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.8.8 Performing Fuzzy Search on the Job Management Page

Function

This API is used to query created jobs. You can specify a job name and creator for exact query. The job list will be returned.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/cms/job/list

Table 4-570 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-571 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Table 4-572 Request body parameters

Parameter	Mandatory	Type	Description
name	No	String	Job name.
page_num	No	Integer	Number of the page to be queried, which must be a positive integer. If you enter a negative number, 0, or a positive integer greater than 1000, the value will be automatically changed to 1. Default: 1.
page_size	No	Integer	Number of records displayed on each page, which must be a positive integer. If the value is a negative number, 0, or a positive number greater than 101, the value will be automatically changed to 10. Default: 10.
order_by_column	Yes	String	Field to be sorted. Options: name, create_time, and update_time (default).

Parameter	Mandatory	Type	Description
sort_order	Yes	String	Sorting order (default: DESC). Options: ASC (ascending order) and DESC (descending order).
enterprise_project_id	No	String	Enterprise project ID.

Response Parameters

Status code: 200

Table 4-573 Response body parameters

Parameter	Type	Description
total_elements	Long	Total number.
elements	Array of Job objects	Job information set.

Table 4-574 Job

Parameter	Type	Description
id	String	Job ID.
name	String	Job name.
create_time	Long	Time when an entity was created.
create_by	String	Creator.
update_time	Long	Time when the entity was last updated. Note: When a creation, modification, or deletion operation is performed, update_time will be updated.
update_by	String	User who makes the modification.
description	String	Job description, which can contain up to 1000 characters.
enterprise_project_id	String	Enterprise project ID.
project_id	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Parameter	Type	Description
steps	Array of Step objects	Job step.
parameters	Array of Parameter objects	Global parameter.
rate_control	RateControl object	Execution policy.
approve_info	ApproveInfo object	Approval details.
is_latest_version	Boolean	Whether the job is of the latest version.
version_number	Integer	Version.

Table 4-575 Step

Parameter	Type	Description
id	String	Step ID.
name	String	Step name.
type	String	Step type.
input	Map<String,String>	Step parameter.
ignore_error	Boolean	Whether to automatically ignore errors.
description	String	Step description.

Table 4-576 Parameter

Parameter	Type	Description
param_name	String	Parameter name.
param_type	String	Parameter type.
param_group	String	Parameter group.
default_value	String	Initial value of a parameter.
id	String	Parameter ID.
encryption	Boolean	Whether to encrypt the data.

Parameter	Type	Description
hint	String	Parameter prompt.
quote_param	Boolean	Whether to select a parameter from the parameter library.
required	Boolean	Whether a parameter is mandatory.
description	String	Parameter description.

Table 4-577 RateControl

Parameter	Type	Description
have_rate_control	Boolean	Whether to implement batch release. Default: false.
time_delay	Integer	Interval.
max	Integer	Maximum number of instances supported for batch release.

Table 4-578 ApproveInfo

Parameter	Type	Description
topic_selected	String	Selected topic.
need_approve	Boolean	Whether a review is needed. Options: true and false (default).
smn_urn_list	String	Topic URN set.

Status code: 400**Table 4-579** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	Returned HTTP code.

Status code: 401

Table 4-580 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	Returned HTTP code.

Example Requests

Query the list of jobs whose name is xxx and order_by_column is create_time.

```
POST https://{Endpoint}/v1/{project_id}/cms/job/list
```

```
{
  "name" : "xxx",
  "enterprise_project_id" : "",
  "page_num" : 1,
  "page_size" : 10,
  "order_by_column" : "create_time",
  "sort_order" : "DESC"
}
```

Example Responses

Status code: 200

OK: The job list is returned.

```
{
  "elements" : [ {
    "approve_info" : {
      "need_approve" : false
    },
    "create_by" : "xxxxxx",
    "create_time" : 1600015045074,
    "description" : "",
    "enterprise_project_id" : "0",
    "id" : "xxxxxx",
    "is_latest_version" : true,
    "name" : "xxxxxx",
    "parameters" : [ {
      "default_value" : "xxxxx",
      "description" : "",
      "encryption" : false,
      "hint" : "",
      "id" : "xxxxxxx",
      "param_group" : "",
      "param_name" : "xxxxx",
      "param_type" : "STRING",
      "quote_param" : false,
      "required" : true
    }, {
      "default_value" : "xxxx",
      "description" : "",
      "encryption" : false,
      "hint" : "",
      "id" : "xxxxxxx",
      "param_group" : "",
      "param_name" : "xxxxx",
      "param_type" : "STRING",
      "quote_param" : false,

```

```
"required" : true
}, {
  "default_value" : "{xxxxxxx}",
  "description" : "",
  "encryption" : false,
  "hint" : "",
  "id" : "xxxxxxxxxx",
  "param_group" : "ecs_instance",
  "param_name" : "xxxx",
  "param_type" : "HOST",
  "quote_param" : false,
  "required" : true
}],
"project_id" : "xxxxxxxx",
"rate_control" : {
  "have_rate_control" : false,
  "max" : 0,
  "time_delay" : 0
},
"steps" : [ {
  "description" : "",
  "id" : "xxxxxxxxxxxx",
  "ignore_error" : false,
  "input" : {
    "script_param" : "{xxxxxx}",
    "get_instances" : "{xxxxxx}"
  },
  "name" : "xxx",
  "type" : "script"
}, {
  "description" : "",
  "id" : "xxxxxxxxxxxx",
  "ignore_error" : false,
  "input" : {
    "package" : "{xxxx}",
    "get_instances" : "{xxxx}"
  },
  "name" : "file1",
  "type" : "package"
}],
"update_by" : "xxxx",
"update_time" : 1600015045074,
"version_number" : 1
}],
"total_elements" : 1
}
```

Status code: 400

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.31003202",
  "error_msg" : "job parameter invalid.",
  "http_code" : 400
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.31009019",
  "error_message" : "auth failed.",
  "http_code" : "401"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query the list of jobs whose name is xxx and order_by_column is create_time.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

public class ListAllJobByNameSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListAllJobByNameRequest request = new ListAllJobByNameRequest();
        SearchJobsRequestBody body = new SearchJobsRequestBody();
        body.withEnterpriseProjectId("");
        body.withSortOrder("DESC");
        body.withOrderByColumn("create_time");
        body.withPageSize(10);
        body.withPageNum(1);
        body.withName("xxx");
        request.withBody(body);
        try {
            ListAllJobByNameResponse response = client.listAllJobByName(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Query the list of jobs whose name is xxx and order_by_column is create_time.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListAllJobByNameRequest()
        request.body = SearchJobsRequestBody(
            enterprise_project_id="",
            sort_order="DESC",
            order_by_column="create_time",
            page_size=10,
            page_num=1,
            name="xxx"
        )
        response = client.list_all_job_by_name(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Query the list of jobs whose name is xxx and order_by_column is create_time.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
```

```
sk := os.Getenv("CLOUD_SDK_SK")
projectId := "{project_id}"

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    WithProjectId(projectId).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.ListAllJobByNameRequest{
    enterpriseProjectIdSearchJobsRequestBody:= ""
    pageSizeSearchJobsRequestBody:= int32(10)
    pageNumSearchJobsRequestBody:= int32(1)
    nameSearchJobsRequestBody:= "xxx"
    request.Body = &model.SearchJobsRequestBody{
        EnterpriseProjectId: &enterpriseProjectIdSearchJobsRequestBody,
        SortOrder: "DESC",
        OrderByColumn: "create_time",
        PageSize: &pageSizeSearchJobsRequestBody,
        PageNum: &pageNumSearchJobsRequestBody,
        Name: &nameSearchJobsRequestBody,
    }
}
response, err := client.ListAllJobByName(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The job list is returned.
400	Bad Request: Invalid request. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.

Error Codes

See [Error Codes](#).

4.8.9 Querying Execution Plans (Custom Templates) Based on Job ID

Function

This API is used to query execution plans based on the job ID. The execution plan list will be returned.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/cms/template-list/{job_id}

Table 4-581 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
job_id	Yes	String	Job ID.

Request Parameters

Table 4-582 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Table 4-583 Request body parameters

Parameter	Mandatory	Type	Description
name	No	String	Solution name.
page_num	No	Integer	Page number, which is a positive integer.
page_size	No	Integer	Number of records displayed per page.

Parameter	Mandatory	Type	Description
order_by_column	Yes	String	Field to be sorted. Options: name, create_time, and update_time (default).
sort_order	No	String	Sorting order (default: DESC). Options: ASC (ascending order) and DESC (descending order).

Response Parameters

Status code: 200

Table 4-584 Response body parameters

Parameter	Type	Description
total_elements	Long	Total number.
elements	Array of Template objects	Job information set.

Table 4-585 Template

Parameter	Type	Description
approve_info	ApproveInfo object	Review information.
create_by	String	User who created the template. This parameter is obtained from the token transferred during API calling.
create_time	Long	Time (UTC, in millisecond) when the template was created.
enterprise_project_id	String	Enterprise project ID.
id	String	Template ID, which is unique and generated based on project_id and template_name.
is_collect	Boolean	Whether a template is added to favorites. This parameter cannot be modified when you update the template. To change the template favorites status, call the corresponding API.

Parameter	Type	Description
is_publish	Boolean	Whether to release as a service.
job_id	String	Job ID.
job_version	Integer	Job version.
name	String	Template name.
need_synchronize	Boolean	Whether synchronization is required.
nodes	Array of Node objects	List of parameters required for executing a task.
parameters	Array of Parameter objects	List of parameters required for executing a task.
project_id	String	Project ID.
quote	Array of strings	Referenced parameter.
rate_control	RateControl object	Execution policy.
share_type	String	Template type. Options: public (default templates) and private (custom templates).
steps	Array of Step objects	Job step.
update_by	String	User who updated the template. This parameter is obtained from the token transferred during API calling.
update_time	Long	Template update time (UTC, in milliseconds).
version	String	Template version.

Table 4-586 ApproveInfo

Parameter	Type	Description
topic_selected	String	Selected topic.
need_approve	Boolean	Whether a review is needed. Options: true and false (default).
smn_urn_list	String	Topic URN set.

Table 4-587 Node

Parameter	Type	Description
parent_node	String	Name of the parent node.
category	String	Node type.
description	String	Node description.
id	String	Node ID.
ignore_error	Boolean	Whether to ignore the error.
metadata	Metadata object	Metadata.
name	String	Node name, for example, Node.
task_name	String	Task name.

Table 4-588 Metadata

Parameter	Type	Description
type	String	Node type.
configuration	Map<String, Object>	Configuration information.

Table 4-589 Parameter

Parameter	Type	Description
param_name	String	Parameter name.
param_type	String	Parameter type.
param_group	String	Parameter group.
default_value	String	Initial value of a parameter.
id	String	Parameter ID.
encryption	Boolean	Whether to encrypt the data.
hint	String	Parameter prompt.
quote_param	Boolean	Whether to select a parameter from the parameter library.
required	Boolean	Whether a parameter is mandatory.
description	String	Parameter description.

Table 4-590 RateControl

Parameter	Type	Description
have_rate_control	Boolean	Whether to implement batch release. Default: false.
time_delay	Integer	Interval.
max	Integer	Maximum number of instances supported for batch release.

Table 4-591 Step

Parameter	Type	Description
id	String	Step ID.
name	String	Step name.
type	String	Step type.
input	Map<String,String>	Step parameter.
ignore_error	Boolean	Whether to automatically ignore errors.
description	String	Step description.

Status code: 400

Table 4-592 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 401

Table 4-593 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.

Parameter	Type	Description
http_code	Integer	HTTP response code.

Example Requests

Query the execution plan list based on the job ID and name.

```
POST https://{Endpoint}/v1/{project_id}/cms/template-list/{job_id}
```

```
{
  "name" : "xxxxxx",
  "page_num" : 0,
  "page_size" : 10,
  "order_by_column" : "create_time",
  "sort_order" : "DESC"
}
```

Example Responses

Status code: 200

OK: The execution plan list is returned.

```
{
  "elements" : [ {
    "approve_info" : {
      "need_approve" : false
    },
    "create_by" : "xxxxx",
    "create_time" : 1600073877378,
    "enterprise_project_id" : "0",
    "id" : "xxxxxx",
    "is_collect" : false,
    "is_publish" : false,
    "job_id" : "xxxxx",
    "job_version" : 1,
    "name" : "t1",
    "need_synchronize" : false,
    "nodes" : [ {
      "category" : "service",
      "description" : "",
      "id" : "xxxxx",
      "ignore_error" : false,
      "metadata" : {
        "configuration" : {
          "parameters" : {
            "project_id" : "{project_id}",
            "script_param" : "{xxxx}",
            "region_id" : "{region_id}",
            "get_instances" : "{xxxxx}"
          }
        }
      },
      "type" : "operation"
    },
    "name" : "1",
    "task_name" : "CMS::ECS::runScript"
  }, {
    "category" : "service",
    "description" : "",
    "id" : "xxxxx",
    "ignore_error" : false,
    "metadata" : {
      "configuration" : {
```

```
    "parameters" : {
      "package" : "{xxxxx}",
      "project_id" : "{{project_id}}",
      "region_id" : "{{region_id}}",
      "get_instances" : "{xxxxx}"
    }
  },
  "type" : "operation"
},
"name" : "xxx",
"task_name" : "CMS::ECS::Package"
}],
"parameters" : [ ],
"project_id" : "xxxxx",
"quote" : [ ],
"rate_control" : {
  "have_rate_control" : false,
  "max" : 0,
  "time_delay" : 0
},
"share_type" : "private",
"steps" : [ {
  "description" : "",
  "id" : "xxxxx",
  "ignore_error" : false,
  "input" : {
    "script_param" : "{xxxxx}",
    "get_instances" : "{xxxxx}"
  },
  "name" : "xxxx",
  "type" : "script"
}, {
  "description" : "",
  "id" : "xxxxx",
  "ignore_error" : false,
  "input" : {
    "package" : "{xxxxx}",
    "get_instances" : "{xxxxx}"
  },
  "name" : "2",
  "type" : "package"
} ],
"update_by" : "xxxxx",
"update_time" : 1600073877378,
"version" : "v1"
}],
"total_elements" : 1
}
```

Status code: 400

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.31001202",
  "error_msg" : " parameter invalid.",
  "http_code" : 400
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.31009002",
  "error_message" : "auth failed.",
  "http_code" : "401"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query the execution plan list based on the job ID and name.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

public class ListTemplateByJobIdSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListTemplateByJobIdRequest request = new ListTemplateByJobIdRequest();
        request.withJobId("{job_id}");
        ListTemplateByJobIdRequestBody body = new ListTemplateByJobIdRequestBody();
        body.withSortOrder("DESC");
        body.withOrderByColumn("create_time");
        body.withPageSize(10);
        body.withPageNum(0);
        body.withName("xxxxx");
        request.withBody(body);
        try {
            ListTemplateByJobIdResponse response = client.listTemplateByJobId(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Query the execution plan list based on the job ID and name.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListTemplateByJobIdRequest()
        request.job_id = "{job_id}"
        request.body = ListTemplateByJobIdRequestBody(
            sort_order="DESC",
            order_by_column="create_time",
            page_size=10,
            page_num=0,
            name="xxxxxx"
        )
        response = client.list_template_by_job_id(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Query the execution plan list based on the job ID and name.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
```

```

sk := os.Getenv("CLOUD_SDK_SK")
projectId := "{project_id}"

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    WithProjectId(projectId).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.ListTemplateByJobIdRequest{}
request.JobId = "{job_id}"
sortOrderListTemplateByJobIdRequestBody:= "DESC"
pageSizeListTemplateByJobIdRequestBody:= int32(10)
pageNumListTemplateByJobIdRequestBody:= int32(0)
nameListTemplateByJobIdRequestBody:= "xxxxxx"
request.Body = &model.ListTemplateByJobIdRequestBody{
    SortOrder: &sortOrderListTemplateByJobIdRequestBody,
    OrderByColumn: "create_time",
    PageSize: &pageSizeListTemplateByJobIdRequestBody,
    PageNum: &pageNumListTemplateByJobIdRequestBody,
    Name: &nameListTemplateByJobIdRequestBody,
}
response, err := client.ListTemplateByJobId(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The execution plan list is returned.
400	Bad Request: Invalid request. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.

Error Codes

See [Error Codes](#).

4.8.10 Querying the Details of an Execution Plan

Function

This API is used to query the details of an execution plan based on the execution plan ID.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/{project_id}/cms/template/{template_id}

Table 4-594 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
template_id	Yes	String	Plan ID.

Table 4-595 Query Parameters

Parameter	Mandatory	Type	Description
share_type	Yes	String	Template type. Default: private. Options: public and private.

Request Parameters

Table 4-596 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Response Parameters

Status code: 200

Table 4-597 Response body parameters

Parameter	Type	Description
approve_info	ApproveInfo object	Review information.
create_by	String	User who created the template. This parameter is obtained from the token transferred during API calling.
create_time	Long	Time (UTC, in millisecond) when the template was created.
enterprise_project_id	String	Enterprise project ID.
id	String	Template ID, which is unique and generated based on project_id and template_name.
is_collect	Boolean	Whether a template is added to favorites. This parameter cannot be modified when you update the template. To change the template favorites status, call the corresponding API.
is_publish	Boolean	Whether to release as a service.
job_id	String	Job ID.
job_version	Integer	Job version.
name	String	Template name.
need_synchronize	Boolean	Whether synchronization is required.
nodes	Array of Node objects	List of parameters required for executing a task.
parameters	Array of Parameter objects	List of parameters required for executing a task.
project_id	String	Project ID.
quote	Array of strings	Referenced parameter.
rate_control	RateControl object	Execution policy.
share_type	String	Template type. Options: public (default templates) and private (custom templates).
steps	Array of Step objects	Job step.

Parameter	Type	Description
update_by	String	User who updated the template. This parameter is obtained from the token transferred during API calling.
update_time	Long	Template update time (UTC, in milliseconds).
version	String	Template version.

Table 4-598 ApproveInfo

Parameter	Type	Description
topic_selected	String	Selected topic.
need_approve	Boolean	Whether a review is needed. Options: true and false (default).
smn_urn_list	String	Topic URN set.

Table 4-599 Node

Parameter	Type	Description
parent_node	String	Name of the parent node.
category	String	Node type.
description	String	Node description.
id	String	Node ID.
ignore_error	Boolean	Whether to ignore the error.
metadata	Metadata object	Metadata.
name	String	Node name, for example, Node.
task_name	String	Task name.

Table 4-600 Metadata

Parameter	Type	Description
type	String	Node type.
configuration	Map<String, Object>	Configuration information.

Table 4-601 Parameter

Parameter	Type	Description
param_name	String	Parameter name.
param_type	String	Parameter type.
param_group	String	Parameter group.
default_value	String	Initial value of a parameter.
id	String	Parameter ID.
encryption	Boolean	Whether to encrypt the data.
hint	String	Parameter prompt.
quote_param	Boolean	Whether to select a parameter from the parameter library.
required	Boolean	Whether a parameter is mandatory.
description	String	Parameter description.

Table 4-602 RateControl

Parameter	Type	Description
have_rate_control	Boolean	Whether to implement batch release. Default: false.
time_delay	Integer	Interval.
max	Integer	Maximum number of instances supported for batch release.

Table 4-603 Step

Parameter	Type	Description
id	String	Step ID.
name	String	Step name.
type	String	Step type.
input	Map<String,String>	Step parameter.
ignore_error	Boolean	Whether to automatically ignore errors.
description	String	Step description.

Status code: 400

Table 4-604 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 401

Table 4-605 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Example Requests

Query the details of an execution plan based on template_id and share_type.
share_type: The default value is private.

`https://{Endpoint}/v1/{project_id}/cms/template/{template_id}?share_type=private`

Example Responses

Status code: 200

OK: The details of an execution plan are returned.

```
{
  "approve_info": {
    "need_approve": false
  },
  "create_by": "xxxxxxxx",
  "create_time": 1600026634837,
  "enterprise_project_id": "0",
  "id": "xxxxxx",
  "is_collect": false,
  "is_publish": false,
  "job_id": "xxxxxx",
  "job_version": 1,
  "name": "1",
  "need_synchronize": false,
  "nodes": [ {
    "category": "pause",
    "description": "xxxxxx",
    "id": "xxxxxx",
    "ignore_error": false,
    "metadata": {
```

```
    "type" : "pause"
  },
  "name" : "xxx",
  "task_name" : "CMS::PAUSE"
}],
"parameters" : [ {
  "default_value" : "",
  "description" : "",
  "encryption" : false,
  "hint" : "",
  "id" : "xxxxxx",
  "param_group" : "",
  "param_name" : "xxx",
  "param_type" : "STRING",
  "quote_param" : false,
  "required" : true
}, {
  "default_value" : "",
  "description" : "xxxxxx",
  "encryption" : false,
  "hint" : "xxxxxx",
  "id" : "xxxxxx",
  "param_group" : "",
  "param_name" : "xxx",
  "param_type" : "STRING",
  "quote_param" : false,
  "required" : true
} ],
"project_id" : "xxxxxx",
"quote" : [ ],
"rate_control" : {
  "have_rate_control" : false,
  "max" : 0,
  "time_delay" : 0
},
"share_type" : "private",
"steps" : [ {
  "description" : "xxxxxx",
  "id" : "xxxxxx",
  "ignore_error" : false,
  "input" : { },
  "name" : "xxx",
  "type" : "pause"
} ],
"update_by" : "xxx",
"update_time" : 1600026634837,
"version" : "v1"
}
```

Status code: 400

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.31001202",
  "error_msg" : "Invalid plan parameter.",
  "http_code" : 400
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.31009002",
  "error_message" : "auth failed.",
  "http_code" : "401"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

public class SearchTemplateByIdSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        SearchTemplateByIdRequest request = new SearchTemplateByIdRequest();
        request.withTemplateId("{template_id}");
        try {
            SearchTemplateByIdResponse response = client.searchTemplateById(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v1 import *
```

```
if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = SearchTemplateByIdRequest()
        request.template_id = "{template_id}"
        response = client.search_template_by_id(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.SearchTemplateByIdRequest{}
    request.TemplateId = "{template_id}"
    response, err := client.SearchTemplateById(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

```
}  
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The details of an execution plan are returned.
400	Bad Request: Invalid request. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.

Error Codes

See [Error Codes](#).

4.8.11 Querying Tasks

Function

This API is used to query the created tasks. You can query tasks by task name, task status, task type, executor, and update time.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/cms/workflow-list

Table 4-606 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Request Parameters

Table 4-607 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Table 4-608 Request body parameters

Parameter	Mandatory	Type	Description
search	No	String	Search content. You can enter a workflow name or description to search.
type	No	String	Workflow type. Options: cron, event, and manual.
tags	No	Map<String,String>	Workflow tags. Maximum: 10.
page	No	Integer	Number of the current page to be queried. Default: 0.
size	No	Integer	Number of records that can be queried on the current page. Default: 10.
enterprise_project_id	No	String	Enterprise project ID.
create_by	No	String	Workflow creator.
sort_field	Yes	String	Sorting field. Options: create_time, last_execution_start_time, or update_time.
sort_type	Yes	String	Sorting order. Options: ASC and DESC.
search_time_start	No	Long	Start time specified for search.
search_time_end	No	Long	End time specified for search.

Parameter	Mandatory	Type	Description
status	No	String	Task status. Options: success, fail, executing, cancel, waitExecute, waitApproval, approvalFailed, pausing, and canceling.

Response Parameters

Status code: 200

Table 4-609 Response body parameters

Parameter	Type	Description
elements	Array of Workflow objects	Workflow details set.
total_elements	Long	Total number.

Table 4-610 Workflow

Parameter	Type	Description
id	String	Workflow ID, which is unique and generated based on project_id and workflow_name.
name	String	Workflow name.
type	String	Workflow type. Options: cron and manual.
description	String	Workflow description.
tags	Map<String,String >	List of tag keys and values. Maximum key-value pairs: 20.
create_time	Long	Time (UTC, in milliseconds) when a workflow was created.
create_by	String	User who created the workflow. This parameter is obtained from the token transferred during API calling.
update_time	Long	Time (UTC, in milliseconds) when a workflow was updated.
update_by	String	User who updated the workflow. This parameter is obtained from the token transferred during API calling.

Parameter	Type	Description
template_name	String	Template name.
template_id	String	Template ID.
input	Map<String, Object>	List of parameters required for executing a task.
last_execution_id	String	Latest execution ID, which is also the workflow ID.
status	String	Task status. Options: success, fail, and executing.
citation_urns	Array of strings	Reference of a workflow.
last_execution_end_time	Long	End time (UTC, in milliseconds) of the last execution.
last_execution_start_time	Long	Start time (UTC, in milliseconds) of the last execution.
quote	Array of strings	Parameters that are referenced.
job_name	String	Job name.
job_id	String	Job ID.
service_scenario	String	Service scenario.
service_name	String	Service name.
task_type	String	Task type.
project_id	String	Project ID returned by FunctionGraph.
workflow_id	String	Workflow ID returned by FunctionGraph.
task_status	String	Task status.
nodes	Array of Node objects	Task node.
edit_time	Long	Edit time.
execution_action_rules	Array of strings	Fine-grained permissions for executing actions.
execution_permission	Array of strings	Cloud service permissions.
global_parameters	Array of Parameter objects	Global parameters.
is_delete	Boolean	Whether the object has been logically deleted.

Parameter	Type	Description
steps	Array of Step objects	Step.
output	String	Task output.
trigger_id	String	Trigger ID.
trigger_status	String	Trigger status.
approve_id	String	Approval ID.
template_i18n	WorkFlowModel object	Task internationalization field, including English description.
enterprise_project_id	String	Enterprise project to which the task belongs.
last_execute_by	String	Last task executor.

Table 4-611 Node

Parameter	Type	Description
parent_node	String	Name of the parent node.
category	String	Node type.
description	String	Node description.
id	String	Node ID.
ignore_error	Boolean	Whether to ignore the error.
metadata	Metadata object	Metadata.
name	String	Node name, for example, Node.
task_name	String	Task name.

Table 4-612 Metadata

Parameter	Type	Description
type	String	Node type.
configuration	Map<String, Object>	Configuration information.

Table 4-613 Parameter

Parameter	Type	Description
param_name	String	Parameter name.
param_type	String	Parameter type.
param_group	String	Parameter group.
default_value	String	Initial value of a parameter.
id	String	Parameter ID.
encryption	Boolean	Whether to encrypt the data.
hint	String	Parameter prompt.
quote_param	Boolean	Whether to select a parameter from the parameter library.
required	Boolean	Whether a parameter is mandatory.
description	String	Parameter description.

Table 4-614 Step

Parameter	Type	Description
id	String	Step ID.
name	String	Step name.
type	String	Step type.
input	Map<String,String >	Step parameter.
ignore_error	Boolean	Whether to automatically ignore errors.
description	String	Step description.

Table 4-615 WorkFlowModel

Parameter	Type	Description
en-us	Map<String,String >	Description
zh-cn	Map<String,String >	Description

Status code: 400

Table 4-616 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 401

Table 4-617 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 500

Table 4-618 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Example Requests

Query the task list by setting Name to xxx, last_execute_by to xxx, status to xxx, task_type to xxx, and search_time_start to 1600060125000.

```
https://{Endpoint}/v1/{project_id}/cms/workflow-list
```

```
{
  "search": "",
  "tags": {},
  "page": 0,
  "size": 10,
  "enterprise_project_id": "0",
  "create_by": "xxx",
  "sort_field": "update_time",
  "sort_type": "DESC",
  "status": "xxx",
  "type": "manual",
  "search_time_start": 160000000000,
```



```

"dataOutputPath" : "",
"func_app" : "CMS",
"dataInputPath" : "",
"validator" : true,
"func_version" : "latest",
"dataResultsPath" : "",
"parameters" : [ {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "root",
  "isEditor" : false,
  "key" : "properties.cmd_user"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "[xxxxxx]",
  "isEditor" : false,
  "key" : "properties.software_list"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "",
  "isEditor" : false,
  "key" : "properties.pre_install_script"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "install",
  "isEditor" : false,
  "key" : "properties.operate_type"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "",
  "isEditor" : false,
  "key" : "properties.un_install_script"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "1",
  "isEditor" : false,
  "key" : "properties.version_number"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "7200",
  "isEditor" : false,
  "key" : "properties.time_out"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "xxxx",
  "isEditor" : false,
  "key" : "properties.install_script"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "xxxxxx",
  "isEditor" : false,
  "key" : "properties.package_version_id"
}

```



```
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "xxxxx",
  "isEditor" : false,
  "key" : "properties.package_basic_id"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "xxxx",
  "isEditor" : false,
  "key" : "properties.package_name"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "xxx",
  "isEditor" : false,
  "key" : "properties.install_file_dir"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "Linux",
  "isEditor" : false,
  "key" : "properties.plat_form"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "package",
  "isEditor" : false,
  "key" : "properties.group"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "xxxxxx",
  "isEditor" : false,
  "key" : "properties.project_id"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "cn-north-4",
  "isEditor" : false,
  "key" : "properties.region_id"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "{xxxxxx}",
  "isEditor" : false,
  "key" : "properties.frontend_info"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "[xxxxxx]",
  "isEditor" : false,
  "key" : "properties.ecs_id_list"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "cmdb_manual",
  "isEditor" : false,
```

```
"key" : "properties.type"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "ecs_instance",
  "isEditor" : false,
  "key" : "properties.group"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "0",
  "isEditor" : false,
  "key" : "properties.max"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "0",
  "isEditor" : false,
  "key" : "properties.timeDelay"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "rate_control",
  "isEditor" : false,
  "key" : "properties.group"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "$.executionId",
  "isEditor" : false,
  "key" : "properties.executionId"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "xxxxxxx",
  "isEditor" : false,
  "key" : "properties.workflowId"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "CMS::ECS::Package",
  "isEditor" : false,
  "key" : "properties.cmsTaskName2Distribute"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "xxxxxx",
  "isEditor" : false,
  "key" : "properties.cmsAccessPodLb"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "manual",
  "isEditor" : false,
  "key" : "properties.workflowType"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "package-manipulation",
```

```
    "isEditor" : false,
    "key" : "properties.nodeld"
  } ]
},
"type" : "operation"
},
"name" : "package",
"task_name" : "CMS::ECS::Package"
} ],
"project_id" : "xxxxxx",
"quote" : [ ],
"status" : "fail",
"steps" : [ ],
"tags" : { },
"task_type" : "package",
"template_id" : {
  "en-us" : {
    "name" : "Package",
    "description" : "download install plug or uninstall plug"
  },
  "zh-cn" : {
    "name" : "File management",
    "description" : " "
  }
},
"template_name" : "CMS::ECS::Package",
"template_type" : "manual",
"update_time" : 1600000000
} ],
"total_elements" : 1
}
```

Status code: 400

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.31001302",
  "error_msg" : "Invalid input parameter.",
  "http_code" : 400
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.31009003",
  "error_msg" : "auth failed.",
  "http_code" : 401
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "AOM.31001305",
  "error_msg" : "workflow internal server error.",
  "http_code" : 500
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query the task list by setting Name to xxx, last_execute_by to xxx, status to xxx, task_type to xxx, and search_time_start to 1600060125000.

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

import java.util.Map;
import java.util.HashMap;

public class ListWorkflowSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListWorkflowRequest request = new ListWorkflowRequest();
        WorkflowQueryParam body = new WorkflowQueryParam();
        body.withStatus("xxx");
        body.withSearchTimeEnd(1600000000000L);
        body.withSearchTimeStart(1600000000000L);
        body.withSortType("DESC");
        body.withSortField("update_time");
        body.withCreateBy("xxx");
        body.withEnterpriseProjectId("0");
        body.withSize(10);
        body.withPage(0);
        body.withType("manual");
        body.withSearch("");
        request.withBody(body);
        try {
            ListWorkflowResponse response = client.listWorkflow(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

```
}  
}
```

Python

Query the task list by setting Name to xxx, last_execute_by to xxx, status to xxx, task_type to xxx, and search_time_start to 1600060125000.

```
# coding: utf-8  
  
import os  
from huaweicloudsdkcore.auth.credentials import BasicCredentials  
from huaweicloudsdkaom.v1.region.aom_region import AomRegion  
from huaweicloudsdkcore.exceptions import exceptions  
from huaweicloudsdkaom.v1 import *  
  
if __name__ == "__main__":  
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    # variables and decrypted during use to ensure security.  
    # In this example, AK and SK are stored in environment variables for authentication. Before running this  
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak = os.environ["CLOUD_SDK_AK"]  
    sk = os.environ["CLOUD_SDK_SK"]  
    projectId = "{project_id}"  
  
    credentials = BasicCredentials(ak, sk, projectId)  
  
    client = AomClient.new_builder() \  
        .with_credentials(credentials) \  
        .with_region(AomRegion.value_of("<YOUR REGION>")) \  
        .build()  
  
    try:  
        request = ListWorkflowRequest()  
        request.body = WorkflowQueryParam(  
            status="xxx",  
            search_time_end=1600000000000,  
            search_time_start=1600000000000,  
            sort_type="DESC",  
            sort_field="update_time",  
            create_by="xxx",  
            enterprise_project_id="0",  
            size=10,  
            page=0,  
            type="manual",  
            search=""  
        )  
        response = client.list_workflow(request)  
        print(response)  
    except exceptions.ClientRequestException as e:  
        print(e.status_code)  
        print(e.request_id)  
        print(e.error_code)  
        print(e.error_msg)
```

Go

Query the task list by setting Name to xxx, last_execute_by to xxx, status to xxx, task_type to xxx, and search_time_start to 1600060125000.

```
package main  
  
import (  
    "fmt"  
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"  
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
```

```
"github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := aom.NewAomClient(
        aom.AomClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListWorkflowRequest{}
    statusWorkflowQueryParam:= "xxx"
    searchTimeEndWorkflowQueryParam:= int64(160000000000)
    searchTimeStartWorkflowQueryParam:= int64(160000000000)
    createByWorkflowQueryParam:= "xxx"
    enterpriseProjectIdWorkflowQueryParam:= "0"
    sizeWorkflowQueryParam:= int32(10)
    pageWorkflowQueryParam:= int32(0)
    typeWorkflowQueryParam:= "manual"
    searchWorkflowQueryParam:= ""
    request.Body = &model.WorkflowQueryParam{
        Status: &statusWorkflowQueryParam,
        SearchTimeEnd: &searchTimeEndWorkflowQueryParam,
        SearchTimeStart: &searchTimeStartWorkflowQueryParam,
        SortType: "DESC",
        SortField: "update_time",
        CreateBy: &createByWorkflowQueryParam,
        EnterpriseProjectId: &enterpriseProjectIdWorkflowQueryParam,
        Size: &sizeWorkflowQueryParam,
        Page: &pageWorkflowQueryParam,
        Type: &typeWorkflowQueryParam,
        Search: &searchWorkflowQueryParam,
    }
    response, err := client.ListWorkflow(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The task list is returned.
400	Bad Request: Invalid request. The client should not repeat the request without modifications.
401	Unauthorized: The authentication information is incorrect or invalid.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.8.12 Querying the Execution History of a Task

Function

This API is used to query the execution history of a task.

Calling Method

For details, see [Calling APIs](#).

URI

GET /v1/{project_id}/cms/workflow/{workflow_id}/executions

Table 4-619 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
workflow_id	Yes	String	Task ID, which is the workflow ID obtained from the workflow command list.

Table 4-620 Query Parameters

Parameter	Mandatory	Type	Description
x_enterprise_project_id	No	String	ID of the enterprise project.

Request Parameters

Table 4-621 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Response Parameters

Status code: 200

Table 4-622 Response body parameters

Parameter	Type	Description
[items]	Array of WorkflowExecutionBrief objects	Function flow execution summary

Table 4-623 WorkflowExecutionBrief

Parameter	Type	Description
workflow_id	String	Flow instance ID.
execution_id	String	Flow instance ID.
status	String	Flow instance execution status.
begin_time	Long	Time (UTC) when a flow instance was created.
end_time	Long	Time (UTC) when a flow instance was completed.
last_update_time	Long	Time (UTC) when a flow instance was modified.

Parameter	Type	Description
created_by	String	Flow instance creator.
approve_user_name_list	Array of strings	Approver list.
execution_result_list	Array of execution_result_list objects	Execution record.
project_id	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
workflow_edit_time	Long	Time (UTC) when the workflow was modified.
last_record_id_with_snapshot	String	Execution snapshot.

Table 4-624 execution_result_list

Parameter	Type	Description
node_id	String	Flow node ID.
begin_time	Long	Start time of node execution.
end_time	Long	End time of node execution.
function_execution_id	String	FunctionGraph execution ID.
output	Object	Node output.
status	String	Node status.

Status code: 401**Table 4-625** Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 500

Table 4-626 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Example Requests

Query the execution history of a task with a specified workflow ID.

```
https://{endpoint}/v1/{project_id}/cms/workflow/{workflow_id}/executions
```

Example Responses

Status code: 200

OK: The execution history of the specified task is returned.

```
[ {
  "approve_user_name_list" : [ ],
  "begin_time" : 1600000000,
  "create_by" : "xxx",
  "end_time" : 1600000000,
  "execution_id" : "xxxx",
  "execution_result_list" : [ {
    "begin_time" : 16000000,
    "end_time" : 160000000,
    "function_execution_id" : "xxxxx",
    "node_id" : "delete-workload-pod",
    "output" : {
      "fail" : [ ],
      "in_execution" : [ ],
      "success" : [ {
        "app" : "xxxxxx",
        "code" : "0",
        "matchLabels" : "{\"app\":\"xxxxx\",\"version\":\"xxx\"}",
        "current_project" : true,
        "log" : "Restart Success.",
        "replicas" : 1,
        "cmdb_work_load_id" : "xxxxxx",
        "type" : "manual",
        "availableReplicas" : 0,
        "execute_time" : "35505",
        "creationTimestamp" : " ",
        "name" : "xxxxxx",
        "namespace" : "default",
        "cceWorkloadCluster" : "xxxxxx",
        "id" : "xxxxx",
        "cceWorkloadType" : "deployments"
      } ],
      "not_performed" : [ ]
    },
    "status" : "success"
  } ],
  "project_id" : "xxxxxx",
  "status" : "success",
  "workflowEditTime" : 0,
  "workflow_id" : "xxxxxx"
} ]
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.31009004",
  "error_message" : "auth failed.",
  "http_code" : "401"
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "AOM.31001405",
  "error_msg" : "execution internal server error.",
  "http_code" : 500
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

public class ListWorkflowExecutionsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListWorkflowExecutionsRequest request = new ListWorkflowExecutionsRequest();
        request.withWorkflowId("{workflow_id}");
        try {
            ListWorkflowExecutionsResponse response = client.listWorkflowExecutions(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        }
    }
}
```

```
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    # variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListWorkflowExecutionsRequest()
        request.workflow_id = "{workflow_id}"
        response = client.list_workflow_executions(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    // risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    // variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    // example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
```

```

sk := os.Getenv("CLOUD_SDK_SK")
projectId := "{project_id}"

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    WithProjectId(projectId).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.ListWorkflowExecutionsRequest{}
request.WorkflowId = "{workflow_id}"
response, err := client.ListWorkflowExecutions(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}

```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The execution history of the specified task is returned.
401	Unauthorized: The authentication information is incorrect or invalid.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

4.8.13 Executing a Workflow

Function

This API is used to execute a specified task.

Calling Method

For details, see [Calling APIs](#).

URI

POST /v1/{project_id}/cms/workflow/{workflow_id}/executions

Table 4-627 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters.
workflow_id	Yes	String	Task ID, which is the workflow ID obtained from the workflow command list.

Request Parameters

Table 4-628 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM.
Content-Type	Yes	String	Content type, which is application/json.

Response Parameters

Status code: 200

Table 4-629 Response body parameters

Parameter	Type	Description
execution_id	String	Execution ID.

Status code: 401

Table 4-630 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.

Parameter	Type	Description
http_code	Integer	HTTP response code.

Status code: 404

Table 4-631 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Status code: 500

Table 4-632 Response body parameters

Parameter	Type	Description
error_code	String	Response code.
error_msg	String	Error message.
http_code	Integer	HTTP response code.

Example Requests

Execute a task based on a specified workflow ID

```
https://{Endpoint}/v1/{project_id}/cms/workflow/{workflow_id}/executions
```

Example Responses

Status code: 200

OK: The task is successfully delivered.

```
{
  "execution_id" : "xxxxxxx"
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.31009004",
  "error_msg" : "auth failed.",
  "http_code" : 401
}
```

Status code: 404

Bad Request: Invalid request. The client should not repeat the request without modifications.

```
{
  "error_code" : "AOM.31001306",
  "error_msg" : "workflow not exist.",
  "http_code" : 404
}
```

Status code: 500

Internal Server Error: The server is able to receive the request but unable to understand the request.

```
{
  "error_code" : "AOM.31001405",
  "error_msg" : "execution internal server error.",
  "http_code" : 500
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.aom.v1.region.AomRegion;
import com.huaweicloud.sdk.aom.v1.*;
import com.huaweicloud.sdk.aom.v1.model.*;

public class ExecuteWorkflowSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
        // security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
        // environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
        // this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ExecuteWorkflowRequest request = new ExecuteWorkflowRequest();
        request.withWorkflowId("{workflow_id}");
        try {
            ExecuteWorkflowResponse response = client.executeWorkflow(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
```



```
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdfaom.v1.region.aom_region import AomRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdfaom.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = AomClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(AomRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ExecuteWorkflowRequest()
        request.workflow_id = "{workflow_id}"
        response = client.execute_workflow(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    aom "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/aom/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
    risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
    variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
    example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
```

```
ak := os.Getenv("CLOUD_SDK_AK")
sk := os.Getenv("CLOUD_SDK_SK")
projectId := "{project_id}"

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    WithProjectId(projectId).
    Build()

client := aom.NewAomClient(
    aom.AomClientBuilder().
        WithRegion(region.ValueOf("<YOUR REGION>")).
        WithCredential(auth).
        Build())

request := &model.ExecuteWorkflowRequest{}
request.WorkflowId = "{workflow_id}"
response, err := client.ExecuteWorkflow(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in [API Explorer](#). SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK: The task is successfully delivered.
401	Unauthorized: The authentication information is incorrect or invalid.
404	Bad Request: Invalid request. The client should not repeat the request without modifications.
500	Internal Server Error: The server is able to receive the request but unable to understand the request.

Error Codes

See [Error Codes](#).

5 Historical APIs

5.1 Auto Scaling APIs (Offline Soon)

5.1.1 Creating a Policy

Function

This API is used to create a policy.

NOTICE

- The value must be 1 to 64 characters starting with a letter. Only digits, letters, underscores (_), and hyphens (-) are allowed.
 - In an AS group, for the same metric (**metric_name**), the value of **metric_threshold** with **metric_operation** set to > must be greater than that with **metric_operation** set to <.
 - In an AS group, the **metric_operation** for a metric must be unique.
 - In a policy, the logic of **conditions** of metrics with the same **metric_name** cannot conflict.
 - The year in the trigger time (**launch_time**) of a scheduled policy cannot be later than 2099.
 - The year in the start time (**start_time**) and end time (**end_time**) of a periodic policy cannot be later than 2099.
 - An AS group supports a maximum of 10 scheduled and periodic policies, and 10 alarm policies.
 - In an AS group, alarm policies cannot affect each other.
-

URI

POST /v1/{project_id}/pe/policy

Request

Request headers

[Table 5-1](#) describes the request headers.

Table 5-1 Request headers

Parameter	Description	Mandatory	Example
Deployment-Name	Application name.	Yes	-
Content-Type	Content type, which is application/json;charset=utf-8 .	Yes	application/json;charset=utf-8
Cluster-Id	Cluster ID.	Yes	-
Namespace	Namespace.	Yes	-
X-Auth-Token	User token obtained from IAM.	Yes	-
Reserved-Info	Custom parameter of the product.	No	-

Request parameters

[Table 5-2](#) describes the request parameters.

Table 5-2 Request parameters

Parameter	Mandatory	Type	Value Range	Description
name	Yes	String	The value must be 1 to 64 characters starting with a letter. Only digits, letters, underscores (_), and hyphens (-) are allowed.	Policy name.
policy_type	Yes	String	<ul style="list-style-type: none"> • SCHEDULED • RECURRENCE • ALARM 	Policy type.
rule	Yes	See Table 5-3 .	-	Policy trigger rule.

Table 5-3 rule parameters

Parameter	Mandatory	Type	Value Range	Description
conditions	Yes	See Table 5-4 .	Only one condition is allowed.	Condition contents. When multiple alarm policies are used, their conditions cannot overlap. Example: You cannot set a metric greater than 10% in one condition and smaller than 20% in another condition.
actions	Yes	See Table 5-5 .	Only one action is allowed.	Action executed after a specified policy is successfully matched.

Table 5-4 conditions parameters

Parameter	Mandatory	Type	Value Range	Description
launch_time	Yes	String	-	Trigger time, which must comply with ISO 8601 or UTC specifications. <ul style="list-style-type: none"> If the value of policy_type is SCHEDULED, the time format is YYYY-MM-DDThh:mmZ. If the value of policy_type is RECURRENCE, the time format is hh:mm.
recurrence_type	Yes	String	Value: Daily, Weekly, or Monthly. <ul style="list-style-type: none"> Daily: Execution by day Weekly: Execution by week Monthly: Execution by month 	Trigger period.

Parameter	Mandatory	Type	Value Range	Description
recurrence_value	Yes	String	<ul style="list-style-type: none"> When the value of recurrence_type is Daily, the value of this parameter is null. When the value of recurrence_type is Weekly, this parameter indicates the <i>M</i>th day within a week. Its value ranges from 0 to 6. 0 indicates Sunday, 1 indicates Monday, and the same rule applies to other values. To select multiple values, separate them using commas (,). Example: 0,2,4, which indicates Sunday, Tuesday, and Thursday, respectively. When the value of recurrence_type is Monthly, this parameter indicates a day in a month. To select multiple values, separate them using commas (,). Example: 1,10,13,28. 	Number of tasks executed when a periodic policy is triggered.
start_time	Yes	String	-	Time when periodic policy execution starts, which must comply with ISO 8601 or UTC specifications. Format: YYYY-MM-DDThh:mmZ.

Parameter	Mandatory	Type	Value Range	Description
end_time	Yes	String	-	Time when periodic policy execution stops, which must comply with ISO 8601 or UTC specifications. Format: YYYY-MM-DDThh:mmZ.
metric_namespace	Yes	String	<ul style="list-style-type: none"> PAAS.CONTAINER: application metric namespace. PAAS.CUSTOMMETRICS: custom metric namespace. 	Namespace.
metric_name	Yes	String	The value must be 1 to 255 characters long and meet the [a-zA-Z_][a-zA-Z0-9_]* expression. That is, the value must start with a letter, underscore (_), or colon (:). Only letters, digits, underscores, and colons are allowed.	Metric name.
metric_unit	Yes	String	-	Unit.
period	Yes	Integer	20, 60, 300, 900, 1800, or 3600	Statistical period (unit: s).
evaluation_periods	Yes	Integer	1, 2, 3, 4, or 5	Number of consecutive periods.
statistic	Yes	String	Currently, only average is supported.	Statistic.
metric_operation	Yes	String	> and <. For example, you can use > in a threshold criterion (when the value of a metric is greater than metric_thresholdUpdate) to trigger actions.	Metric operator.
metric_threshold	Yes	Float	[0, 2147483647]	Threshold criterion.

The following describes the meaning of each field in the **conditions** parameter.

```
"conditions": [{
  "metric_namespace" : "PAAS.CONTAINER",
  "metric_name" : "cpuUsage",
  "metric_unit" : "Percent",
  "period" : 300,
  "evaluation_periods" : 2,
  "statistic" : "average",
  "metric_operation" : ">",
  "metric_threshold" : 70
}]
```

For **cpuUsage** (**metric_name**) in **PAAS.CONTAINER** (**metric_namespace**), when its **average** value (**statistic**) exceeds 70% (**metric_threshold**) for two (**evaluation_periods**) consecutive periods (with a duration of 300s), the policy is triggered.

Table 5-5 actions parameters

Parameter	Mandatory	Type	Value Range	Description
type	Yes	String	<ul style="list-style-type: none"> scale_out_k8s scale_out_vm scale_in_k8s scale_in_vm scale_set_k8s scale_set_vm 	<ul style="list-style-type: none"> scale_out_k8s and scale_out_vm indicate a scale-out. scale_in_k8s and scale_in_vm indicate a scale-in. scale_set_k8s and scale_set_vm indicate the number of application instances. <p>NOTE The value containing k8s indicates a container application and that containing vm indicates a process application.</p>
parameters	Yes	See Table 5-6 .	-	Number of scale-in or -out instances.

Table 5-6 parameters

Parameter	Mandatory	Type	Value Range	Description
scale_unit	Yes	Integer	Minimum number of instances to the maximum number of instances in a policy group.	Number of scale-in or -out instances.

Example request

- Example of a scheduled policy

```
{
  "name": "policy1",
  "policy_type": "SCHEDULED",
  "rule": {
    "conditions": [{
      "launch_time": "2017-03-04T03:37Z",
      "recurrence_type": null,
      "recurrence_value": null,
      "start_time": null,
      "end_time": null
    }
  ],
  "actions": [{
    "type": "scale_set_k8s",
    "parameters": {
      "scale_unit": 1
    }
  }
]
}
```

- Example of a periodic policy

```
{
  "name": "policy_2",
  "policy_type": "RECURRENCE",
  "rule": {
    "conditions": [{
      "launch_time": "13:45",
      "recurrence_type": "Weekly",
      "recurrence_value": "0,1,4",
      "start_time": "2017-01-26T03:33Z",
      "end_time": "2099-01-31T03:33Z"
    }
  ],
  "actions": [{
    "type": "scale_set_k8s",
    "parameters": {
      "scale_unit": 1
    }
  }
]
}
```

- Example of an alarm policy

```
{
  "name": "policy_1",
  "policy_type": "ALARM",
  "rule": {
```

```

"conditions" : [{
  "metric_namespace" : "PAAS.CONTAINER",
  "metric_name" : "cpuUsage",
  "metric_unit" : "Percent",
  "period" : 60,
  "evaluation_periods" : 1,
  "statistic" : "average",
  "metric_operation" : ">",
  "metric_threshold" : 70
}]
"actions" : [{
  "type" : "scale_out_k8s",
  "parameters" : {
    "scale_unit" : 1
  }
}]
}

```

Response

Response parameters

[Table 5-7](#) describes the response parameters.

Table 5-7 Response parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error details.
policy_id	String	Policy ID.

Example response

```

{
  "errorCode": 0,
  "errorMessage": "",
  "policy_id": "1b9994f0-847a-45e4-aeec-e8b604dddb34"
}

```

Error Code

Table 5-8 Error codes

Error Code	Message	Solution
SVCSTG.PE.4001101	Invalid parameter.	Check whether the parameter meets requirements.
SVCSTG.PE.4031012	Failed to verify the project ID.	Check whether the parameter meets requirements.

Error Code	Message	Solution
SVCSTG.PE.5001201	Failed to insert or update data in the background.	Contact technical support.

5.1.2 Deleting a Policy

Function

This API is used to delete a specified policy.

URI

DELETE /v1/{project_id}/pe/policy

Request

Request headers

[Table 5-9](#) describes the request headers.

Table 5-9 Request headers

Parameter	Description	Mandatory	Example
Deployment-Name	Application name.	Yes	-
Policy-Id	Policy ID.	Yes	-

Request parameters

None

Example request

None

Response

Response parameters

If a policy is successfully deleted, only **204** is returned. If a policy fails to be deleted, the response body containing error information is returned.

[Table 5-10](#) describes the response parameters.

Table 5-10 Response parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error details.

Example response

None

Error Code**Table 5-11** Error codes

Error Code	Message	Solution
SVCSTG.PE.4031012	Failed to verify the project ID.	Check whether the parameter meets requirements.
SVCSTG.PE.5001205	Failed to delete records.	Contact technical support.

5.1.3 Modifying a Policy

Function

This API is used to modify a policy.

NOTICE

Alarm policies can be modified, but scheduled and periodic policies cannot.

URI

PUT /v1/{project_id}/pe/policy/{policy_id}

[Table 5-12](#) describes the parameters.

Table 5-12 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID.
policy_id	Yes	Policy ID.

Request

Request headers

[Table 5-13](#) describes the request headers.

Table 5-13 Request headers

Parameter	Description	Mandatory	Example
Content-Type	Content type, which is application/json;charset=utf-8 .	Yes	application/json;charset=utf-8
Cluster-Id	Cluster ID.	Yes	-
Namespace	Namespace.	Yes	-
Deployment-Name	Application name.	Yes	-

Request parameters

[Table 5-14](#) describes the request parameters.

Table 5-14 Request parameters

Parameter	Mandatory	Type	Value Range	Description
id	Yes	String	-	Policy ID.
name	Yes	String	The value must be 1 to 64 characters starting with a letter. Only digits, letters, underscores (_), and hyphens (-) are allowed.	Policy name, which cannot be modified.
policy_type	Yes	String	ALARM	Policy type. Currently, only ALARM policies are supported.
rule	Yes	See Table 5-15 .	-	Policy trigger rule.

Table 5-15 rule parameters

Parameter	Mandatory	Type	Value Range	Description
conditions	Yes	See Table 5-16 .	1-5	Condition contents. A rule can contain multiple conditions in AND relationships. One condition describes the matching method of one metric.
actions	Yes	See Table 5-17 .	1-5	Action executed after a specified policy is successfully matched.

Table 5-16 conditions parameters

Parameter	Mandatory	Type	Value Range	Description
metric_namespace	Yes	String	<ul style="list-style-type: none"> • PAAS.CONTAINER: application metric namespace • PAAS.CUSTOMMETRICS: custom metric namespace 	Metric namespace.

Parameter	Mandatory	Type	Value Range	Description
metric_name	Yes	String	The value must be 1 to 255 characters long and meet the [a-zA-Z_][a-zA-Z0-9_]* expression. That is, the value must start with a letter, underscore (_), or colon (:). Only letters, digits, underscores, and colons are allowed.	Metric name.
metric_unit	Yes	String	-	Unit. NOTE The value is retrieved from an AMS API and varies with the metric name.
period	Yes	Integer	20, 60, 300, 900, 1800, or 3600	Statistical period (unit: s).
evaluation_periods	Yes	Integer	1, 2, 3, 4, or 5	Number of consecutive periods.
statistic	Yes	String	Currently, only average is supported.	Statistic.

Parameter	Mandatory	Type	Value Range	Description
metric_operat ion	Yes	String	> and <. For example, you can use > in a threshold criterion (when the value of a metric is greater than metric_thres holdUpdate) to trigger actions.	Metric operator.
metric_thresh old	Yes	Float	[0, 2147483647]	Threshold criterion.

Table 5-17 actions parameters

Parameter	Mandatory	Type	Value Range	Description
type	Yes	String	<ul style="list-style-type: none"> • scale_out_k8s • scale_out_vm • scale_in_k8s • scale_in_vm 	<ul style="list-style-type: none"> • scale_out_k8s and scale_out_vm indicate a scale-out. • scale_in_k8s and scale_in_vm indicate a scale-in. <p>NOTE The value containing k8s indicates a container application and that containing vm indicates a process application.</p>
parameters	Yes	See Table 5-18 .	-	Number of scale-in or -out instances.

Table 5-18 parameters

Parameter	Mandatory	Type	Value Range	Description
scale_unit	Yes	Integer	Minimum number of instances to the maximum number of instances in a policy group.	Number of scale-in or -out instances.

Example request

Example of an alarm policy

```
{
  "id" : "5c2eecea-32ac-42c0-be30-f73b15d68429",
  "name" : "policy_1",
  "policy_type" : "ALARM",
  "rule" : {
    "conditions" : [{
      "metric_namespace" : "PAAS.CONTAINER",
      "metric_name" : "cpuUsage",
      "metric_unit" : "Percent",
      "period" : 60,
      "evaluation_periods" : 1,
      "statistic" : "average",
      "metric_operation" : ">",
      "metric_threshold" : 70
    }
  ],
  "actions" : [{
    "type" : "scale_out_k8s",
    "parameters" : {
      "scale_unit" : 1
    }
  }
]
}
```

Response

Response parameters

[Table 5-19](#) describes the response parameters.

Table 5-19 Response parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error details.
context	String	Details about a modified policy.

Example response

```
{
  "errorCode": 0,
  "errorMessage": "",
  "context": {
    "id": "5c2eecea-32ac-42c0-be30-f73b15d68429",
    "name": "policy_1",
    "policy_type": "ALARM",
    "rule": {
      "conditions": [{
        "metric_namespace": "PAAS.CONTAINER",
        "metric_name": "cpuUsage",
        "metric_unit": "Percent",
        "period": 60,
        "evaluation_periods": 1,
        "statistic": "average",
        "metric_operation": ">",
        "metric_threshold": 70
      }
    ],
    "actions": [{
      "type": "scale_out_k8s",
      "parameters": {
        "scale_unit": 1
      }
    }
  ]
}
}
```

Error Code

Table 5-20 Error codes

Error Code	Message	Solution
SVCSTG.PE.4001101	Invalid parameter.	Check whether the parameter meets requirements.
SVCSTG.PE.4031012	Failed to verify the project ID.	Check whether the parameter meets requirements.
SVCSTG.PE.4033008	Failed to update the scheduled or periodic policy.	Check whether the parameter meets requirements.
SVCSTG.PE.5001201	Failed to insert or update data in the background.	Contact technical support.
SVCSTG.PE.5001203	Query error.	Contact technical support.
SVCSTG.PE.5003007	Failed to update the threshold rule.	Contact technical support.

5.1.4 Querying a Policy List

Function

This API is used to query details about all policies of a specified project.

URI

GET /v1/{project_id}/pe/policy

[Table 5-21](#) describes the parameters.

Table 5-21 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID.

Request

Request headers

None

Request parameters

None

Example request

None

Response

Response parameters

[Table 5-22](#) describes the response parameters.

Table 5-22 Response parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error details.
policy	See Table 5-23 .	Details about a modified policy.

Table 5-23 policy parameters

Parameter	Type	Description
id	String	Policy ID.
name	String	Policy name.
policy_type	String	Policy type.
rule	See Table 5-24 .	Policy trigger rule.
create_time	String	Creation time.
update_time	String	Update time.
status	String	Status

Table 5-24 rule parameters

Parameter	Type	Description
name	String	Policy name.
conditions	See Table 5-25 .	Condition contents.
actions	See Table 5-26 .	Action executed after a specified policy is successfully matched.

Table 5-25 conditions parameters

Parameter	Type	Description
metric_namespace	String	Namespace.
metric_name	String	Metric name.
metric_unit	String	Unit.
period	Integer	Statistical period (unit: s).
evaluation_periods	Integer	Number of consecutive periods.
statistic	String	Statistic.
metric_operation	String	Metric operator.
metric_threshold	Float	Threshold criterion.

Table 5-26 actions parameters

Parameter	Type	Description
type	String	Scale-in or -out. The value containing k8s indicates a container application and that containing vm indicates a process application.
parameters	See Table 5-27 .	Number of scale-in or -out instances.

Table 5-27 parameters

Parameter	Type	Description
scale_unit	Integer	Number of scale-in or -out instances.

Example response

```
{
  "errorCode": "SVCSTG.PE.0",
  "errorMessage": "",
  "policies": [{
    "id": "8accffb6-e0ed-4433-b216-ccf6960eb1ad",
    "name": "alarm",
    "group_id": "77c37e1f-aa0c-438d-8445-39b3997786a2",
    "policy_type": "ALARM",
    "rule": {
      "name": "",
      "conditions": [{
        "metric_namespace": "PAAS.CONTAINER",
        "metric_name": "cpuCoreLimit",
        "metric_unit": "Percent",
        "period": 60,
        "evaluation_periods": 1,
        "statistic": "average",
        "metric_operation": "\u003e",
        "metric_threshold": 100,
        "metric_dimensions": null
      }
    ],
    "actions": [{
      "type": "scale_out_k8s",
      "parameters": {
        "scale_unit": 1
      }
    }
  ]
}, {
  "create_time": "2017-12-21T09:13:42Z",
  "update_time": "2017-12-21T09:13:42Z",
  "status": "enabled"
}, {
  "id": "9aafb3d-eac4-4a92-a342-5b6f8d60fff2",
  "name": "dingshi2",
  "group_id": "77c37e1f-aa0c-438d-8445-39b3997786a2",
  "policy_type": "SCHEDULED",

```

```

"rule" : {
  "name" : "",
  "conditions" : [{
    "launch_time" : "2017-12-22T06:30Z",
    "recurrence_type" : "",
    "recurrence_value" : "",
    "start_time" : "",
    "end_time" : ""
  }
],
  "actions" : [{
    "type" : "scale_set_k8s",
    "parameters" : {
      "scale_unit" : 1
    }
  }
]
},
"create_time" : "2017-12-21T09:14:00Z",
"update_time" : "2017-12-21T09:14:00Z",
"status" : "enabled"
}
]
}

```

Error Code

Table 5-28 Error codes

Error Code	Message	Solution
SVCSTG.PE.4031012	Failed to verify the project ID.	Check whether the parameter meets requirements.
SVCSTG.PE.5001203	Query error.	Contact technical support.

5.1.5 Querying a Policy

Function

This API is used to query details about a policy of a specified project.

URI

GET /v1/{project_id}/pe/policy/{policy_id}

[Table 5-29](#) describes the parameters.

Table 5-29 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID.
policy_id	Yes	Policy ID.

Request

Request headers

None

Request parameters

None

Example request

None

Response

Response parameters

[Table 5-30](#) describes the response parameters.

Table 5-30 Response parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error details.
policy	See Table 5-31 .	Details about a modified policy.

Table 5-31 policy parameters

Parameter	Type	Description
id	String	Policy ID.
name	String	Policy name.
policy_type	String	Policy type.
rule	See Table 5-32 .	Policy trigger rule.
create_time	String	Creation time.
update_time	String	Update time.
status	String	Status.

Table 5-32 rule parameters

Parameter	Type	Description
name	String	Policy name.
conditions	See Table 5-33 .	Condition contents.
actions	See Table 5-34 .	Action executed after a specified policy is successfully matched.

Table 5-33 conditions parameters

Parameter	Type	Description
metric_namespace	String	Namespace.
metric_name	String	Metric name.
metric_unit	String	Unit.
period	Integer	Statistical period (unit: s).
evaluation_periods	Integer	Number of consecutive periods.
statistic	String	Statistic.
metric_operation	String	Metric operator.
metric_threshold	Float	Threshold criterion.

Table 5-34 actions parameters

Parameter	Type	Description
type	String	Scale-in or -out. The value containing k8s indicates a container application and that containing vm indicates a process application.
parameters	See Table 5-35 .	Number of scale-in or -out instances.

Table 5-35 parameters

Parameter	Type	Description
scale_unit	Integer	Number of scale-in or -out instances.

Example response

```
{
  "errorCode": "SVCSTG.PE.0",
  "errorMessage": "",
  "policy": {
    "id": "8accffb6-e0ed-4433-b216-ccf6960eb1ad",
    "name": "alarm",
    "group_id": "77c37e1f-aa0c-438d-8445-39b3997786a2",
    "policy_type": "ALARM",
    "rule": {
      "name": "",
      "conditions": [{
        "metric_namespace": "PAAS.CONTAINER",
        "metric_name": "cpuCoreLimit",
        "metric_unit": "Percent",
        "period": 60,
        "evaluation_periods": 1,
        "statistic": "average",
        "metric_operation": "\u003e",
        "metric_threshold": 100,
        "metric_dimensions": null
      }
    ],
    "actions": [{
      "type": "scale_out_k8s",
      "parameters": {
        "scale_unit": 1
      }
    }
  ]
},
  "create_time": "2017-12-21T09:13:42Z",
  "update_time": "2017-12-21T09:13:42Z",
  "status": "enabled"
}
```

Error Code

Table 5-36 Error codes

Error Code	Message	Solution
SVCSTG.PE.4031012	Failed to verify the project ID.	Check whether the parameter meets requirements.
SVCSTG.PE.5001203	Query error.	Contact technical support.

5.1.6 Modifying Policy Group Attributes

Function

This API is used to modify policy group attributes.

URI

PUT /v1/{project_id}/pe/policy/config

[Table 5-37](#) describes the parameters.

Table 5-37 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID.

Request

Request headers

[Table 5-38](#) describes the request headers.

Table 5-38 Request headers

Parameter	Description	Mandatory	Example
ResourceType	Resource type.	Yes	Default value: app, indicates modifying the policy group attributes of an application.
Cluster-Id	Cluster ID.	Yes	-
Namespace	Namespace.	Yes	-
Deployment-Name	Application name.	Yes	-

Request parameters

[Table 5-39](#) describes the request parameters.

Table 5-39 Request parameters

Parameter	Type	Description
max_instances	Integer	Maximum number of instances.
min_instances	Integer	Minimum number of instances.
cooldown_time	Integer	Cooldown period (unit: s).
deployment_name	String	Microservice name.
cluster_id	String	Cluster ID.

Parameter	Type	Description
namespace	String	Namespace.

Example request

```
{
  "max_instances": 100,//Maximum number of instances
  "min_instances": 1,//Minimum number of instances
  "cooldown_time": 60//Cooldown period, which is the execution interval between two policies.
}
```

Response

Response parameters

[Table 5-40](#) describes the response parameters.

Table 5-40 Response parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error details.

Example response

```
{
  "errorCode": "SVCSTG.PE.0",
  "errorMessage": ""
}
```

Error Code

Table 5-41 Error codes

Error Code	Message	Solution
SVCSTG.PE.4001101	Invalid parameter.	Check whether the parameter meets requirements.
SVCSTG.PE.4031012	Failed to verify the project ID.	Check whether the parameter meets requirements.
SVCSTG.PE.5001201	Failed to insert or update data in the background.	Contact technical support.
SVCSTG.PE.5001203	Query error.	Contact technical support.

5.1.7 Querying Policy Group Attributes

Function

This API is used to query policy group attributes.

URI

GET /v1/{project_id}/pe/policy/config

[Table 5-42](#) describes the parameters.

Table 5-42 Parameters

Parameter	Mandatory	Description
project_id	Yes	Project ID.

Request

Request headers

[Table 5-43](#) describes the request headers.

Table 5-43 Request headers

Parameter	Description	Mandatory	Example
ResourceType	Resource type.	Yes	Default value: app, indicates querying the policy group attributes of an application.
Content-Type	Content type, which is application/json; charset=utf-8 .	Yes	application/json; charset=utf-8
Cluster-Id	Cluster ID.	Yes	-
Namespace	Namespace.	Yes	-
Deployment-Name	Application name.	Yes	-

Response

Response parameters

Table 5-44 describes the response parameters.

Table 5-44 Response parameters

Parameter	Type	Description
errorCode	String	Error code.
errorMessage	String	Error details.
config	See Table 5-45 .	Set of policy group attributes.

Table 5-45 config parameters

Parameter	Type	Description
id	String	ID of a policy group attribute.
max_instances	Integer	Maximum number of instances.
min_instances	Integer	Minimum number of instances.
cooldown_time	Integer	Cooldown period (unit: s).

Example response

```
{
  "errorCode": "SVCSTG.PE.0",
  "errorMessage": "",
  "config": {
    "id": "f9c7f57e-b1dc-4ef0-a009-ff2848776803",
    "max_instances": 100, //Maximum number of instances
    "min_instances": 1, //Minimum number of instances
    "cooldown_time": 60 //Cooldown period, which is the execution interval between two policies.
  }
}
```

Error Code

Table 5-46 Error codes

Error Code	Message	Solution
SVCSTG.PE.4031012	Failed to verify the project ID.	Check whether the parameter meets requirements.
SVCSTG.PE.5001203	Query error.	Contact technical support.

5.2 Common Monitoring APIs (Offline Soon)

5.2.1 Adding or Modifying One or More Application Discovery Rules (Offline Soon)

Function

This API is used to add or modify one or more application discovery rules. A maximum of 100 rules can be added to a project.

URI

PUT /v1/{project_id}/inv/servicediscoveryrules

Request

Request parameters

[Table 5-47](#) describes the request parameter.

Table 5-47 Request parameter

Parameter	Mandatory	Type	Value Range	Description
appRules	No	Array	-	See Table 5-48 .

Table 5-48 appRules parameters

Parameter	Mandatory	Type	Value Range	Description
projectid	Yes	String	-	Project ID obtained from IAM. Generally, a project ID contains 32 characters.

Parameter	Mandatory	Type	Value Range	Description
id	Yes	String	-	Rule ID. When creating a discovery rule, leave this parameter blank. When modifying a discovery rule, enter a rule ID.
name	Yes	String	The value can contain a maximum of 64 characters. It must start with a lowercase letter but cannot end with a hyphen (-). Only digits, lowercase letters, and hyphens are allowed.	Rule name.
createTime	No	String	-	Creation time. When creating a discovery rule, leave this parameter blank. When modifying a discovery rule, enter the returned createTime .
enable	Yes	Boolean	true or false	Whether to enable a rule.
hostid	No	Array	-	Host ID. Currently, this parameter is not used and can be left blank.

Parameter	Mandatory	Type	Value Range	Description
eventName	Yes	String	aom_inventor y_rules_event	Rule event name. For application discovery, the value is fixed to aom_inventor y_rules_event .
spec	Yes	Object	-	Rule details. See Table 5-49 .

Table 5-49 spec parameters

Parameter	Mandatory	Type	Value Range	Description
detectLog	Yes	String	true or false	Whether to enable log collection.
logFileFix	Yes	Array	log, trace, or out	Log file suffix.

Parameter	Mandatory	Type	Value Range	Description
discoveryRule	Yes	Array	<ul style="list-style-type: none"> If the value of checkType is cmdLine, set the value of checkMode to contain. checkContent is in the format of ["xxx"], indicating that the process must contain the xxx parameter. If the value of checkType is env, set the value of checkMode to contain. checkContent is in the format of ["k1","v1"], indicating that the process must contain the environment variable whose name is k1 and value is v1. If the value of 	Discovery rule. When it is an array consisting of multiple conditions, only the processes that meet all the conditions are filtered. See Table 5-50 .

Parameter	Mandatory	Type	Value Range	Description
			<p>checkType is scope, set the value of checkMode to equals. checkContent is in the format of ["hostId1", "hostId2"], indicating that the rule takes effect only on specified nodes. If no nodes are specified, the rule applies to all nodes of the project.</p>	
attrList	No	Array	cmdLine or env	Attribute list. Currently, this parameter is not used and can be left blank.
isDetect	Yes	String	true or false	Whether the scenario is a pre-check scenario. No rules will be saved in the pre-check scenario. This scenario is designed only to check rules before they are delivered.

Parameter	Mandatory	Type	Value Range	Description
isDefaultRule	Yes	String	true or false	Whether this rule will become the default rule.
priority	Yes	Integer	An integer from 1 to 9999. Default value: 9999.	Rule priority.
nameRule	Yes	Object	-	Naming requirements of the application discovery rule. See Table 5-51 .
appType	Yes	String	-	Application type, which is used to categorize applications and is used only for rule classification and UI display. Enter any field. For example, enter Java or Python by technology stack, or enter collector or database by function.

Parameter	Mandatory	Type	Value Range	Description
logPathRule	No	Array	<ul style="list-style-type: none"> If cmdLineH ash is a fixed string, a log path or log file is specified. Otherwise, only the files whose names end with .log and .trace are collected. If the value of nameType is cmdLineH ash, args is in the format of ["00001"] and value is in the format of ["/xxx/xx.log"], indicating that the log path is /xxx/xx.log when the startup command is 00001. 	Log path configuration rule. See Table 5-54 .

Table 5-50 discoveryRule parameters

Parameter	Mandatory	Type	Value Range	Description
checkType	Yes	String	cmdLine , env , or scope	Match type.
checkMode	Yes	String	contain or equals	Match condition.

Parameter	Mandatory	Type	Value Range	Description
checkContent	Yes	Array	-	Matched value.

Table 5-51 nameRule parameters

Parameter	Mandatory	Type	Value Range	Description
appNameRule	Yes	Array	<ul style="list-style-type: none"> If the value of nameType is cmdLine, args is in the format of ["start", "end"], indicating that the characters between start and end in the command are extracted. If the value of nameType is cmdLine, args is in the format of ["aa"], indicating that the environment variable named aa is extracted. If the value of nameType is str, args is in the format of ["fix"], indicating that the application name is suffixed with fix. 	Application name rule. If there are multiple objects in an array, the character strings extracted from these objects constitute the application name. See Table 5-52 .

Parameter	Mandatory	Type	Value Range	Description
			<ul style="list-style-type: none"> If the value of nameType is cmdLineHash, args is in the format of ["0001"] and value is in the format of ["ser"], indicating that the application name is ser when the startup command is 0001. 	

Parameter	Mandatory	Type	Value Range	Description
applicationNameRule	Yes	Array	<ul style="list-style-type: none"> If the value of nameType is cmdLine, args is in the format of ["start", "end"], indicating that the characters between start and end in the command are extracted. If the value of nameType is cmdLine, args is in the format of ["aa"], indicating that the environment variable named aa is extracted. If the value of nameType is str, args is in the format of ["fix"], indicating that the application name is suffixed with fix. If the value of 	Application name rule. See Table 5-53 .

Parameter	Mandatory	Type	Value Range	Description
			nameType is cmdLineHash , args is in the format of ["0001"] and value is in the format of ["ser"] , indicating that the application name is ser when the startup command is 0001 .	

Table 5-52 appNameRule parameters

Parameter	Mandatory	Type	Value Range	Description
nameType	Yes	String	cmdLineHash , cmdLine , env , or str	Value type.
args	Yes	Array	-	Input value.
value	No	Array	-	Application name, which is mandatory only when the value of nameType is cmdLineHash .

Table 5-53 applicationNameRule parameters

Parameter	Mandatory	Type	Value Range	Description
nameType	Yes	String	cmdLineHash , cmdLine , env , or str	Value type.
args	Yes	Array	-	Input value.

Parameter	Mandatory	Type	Value Range	Description
value	No	Array	-	Application name, which is mandatory only when the value of nameType is cmdLineHash .

Table 5-54 logPathRule parameters

Parameter	Mandatory	Type	Value Range	Description
nameType	Yes	String	cmdLineHash	Value type.
args	Yes	Array	-	Command.
value	Yes	Array	-	Log path.

Request headers

Table 5-55 describes the request headers.

Table 5-55 Request headers

Parameter	Mandatory	Description
X-Auth-Token	Yes	User token obtained from IAM.
Content-Type	Yes	Content type, which is application/json .

Example request

```
{
  "appRules": [
    {
      "id": "",
      "name": "bytest",
      "createTime": "",
      "projectId": "5a6036f48e954fcd84d198cb28db311a",
      "enable": true,
      "hostid": [],
      "eventName": "aom_inventory_rules_event",
      "spec": {
        "detectLog": "true",
        "logFileFix": ["log","trace"],
        "discoveryRule": [
          {
            "checkType": "cmdLine",
```

```

        "checkMode": "contain",
        "checkContent": ["default"]
    },{
        "checkType": "scope",
        "checkMode": "equals",
        "checkContent": [
            "44d6c4bb-f673-4bf4-8d33-313832f37b28"
        ]
    }
],
"attrList": ["cmdLine"],
"isDetect": "false",
"priority": "1",
"nameRule": {
    "appNameRule": [
        {
            "nameType": "cmdLineHash",
            "args": ["0000000001"],
            "value": ["serviceName1"]
        },
        {
            "nameType": "cmdLine",
            "args": [
                "/var/paas/kubernetes/", "/kubefconfig"
            ]
        },
        {
            "nameType": "env",
            "args": ["APP_NAME"]
        },
        {
            "nameType": "str",
            "args": ["kube"]
        }
    ],
    "applicationNameRule": [
        {
            "nameType": "cmdLineHash",
            "args": ["0000000001"],
            "value": ["applicationName1"]
        },
        {
            "nameType": "str",
            "args": ["kubeproxy"]
        }
    ]
},
"appType": "",
"isDefaultRule": "false",
"logPathRule": [
    {
        "nameType": "cmdLineHash",
        "args": ["0000000001"],
        "value": ["/xx/xxx/xx.log", "/xx/xxx/xx"]
    }
]
}
}
}
]
}

```

Response

Response parameters

[Table 5-56](#) describes the response parameters.

Table 5-56 Response

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.

Example response

```
{  
  "errorCode": "SVCSTG.INV.2000000",  
  "errorMessage": ""  
}
```

Status Code

- Success response
[Table 5-57](#) describes the status code.

Table 5-57 Status code

Status Code	Message	Description
200	OK	The request is successful.

- Error response
[Table 5-58](#) describes the status codes. For more information, see [8.1 Status Codes](#).

Table 5-58 Status codes

Status Code	Message	Description
400	Bad Request	Invalid request. The client should not repeat the request without modifications.
401	Unauthorized	The authentication information is incorrect or invalid.
403	Forbidden	The request is rejected. The server has received the request and understood it, but the server refuses to respond to it. The client should not repeat the request without modifications.
500	Internal Server Error	The server is able to receive the request but unable to understand the request.

Status Code	Message	Description
503	Service Unavailable	The requested service is invalid. The client should not repeat the request without modifications.

Error Code

Table 5-59 Error codes

Error Code	Error Message	Solution
SVCSTG.INV.4030000	Forbidden	Use an authorized account.
SVCSTG.INV.4000115	Invalid request parameter.	Check the parameter.
SVCSTG.INV.5000002	The Elasticsearch execution is abnormal.	Contact technical support.
SVCSTG.INV.5000003	The call ICMGR is abnormal.	Contact technical support.
SVCSTG.INV.5000001	The Elasticsearch session is null.	Contact technical support.
SVCSTG.INV.5000006	The apprule name already exists.	Use another name.
SVCSTG.INV.5000007	The maximum number of rules has been reached.	Delete unnecessary rules and add new rules.

5.2.2 Querying Threshold Rules (Offline Soon)

Function

This API is used to query a threshold rule list.

URI

GET /v1/{project_id}/ams/alarms

For details about the substitute of this API, see [Querying the Threshold Rule List](#).

Request

Request parameters

Table 5-60 describes the request parameters.

Table 5-60 Request parameters

Parameter	Mandatory	Type	Value Range	Description
project_id	Yes	String	-	Project ID applied from Identity and Access Management (IAM). Generally, it is a string containing 32 characters.
limit	No	Integer	(0,1000]	Maximum number of returned records. Value range: 1–1000. Default value: 1000.
start	No	String	-	Pagination information.

Request headers

Table 5-61 describes the request headers.

Table 5-61 Request headers

Name	Mandatory	Description
X-Auth-Token	Yes	User token obtained from IAM.
Content-Type	Yes	Content type, which is application/json .

Response

Response parameters

Table 5-62 describes the response parameters.

Table 5-62 Response parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.
metaData	Object	Metadata, including pagination information.
metaData.count	Integer	Number of returned records.
metaData.total	Integer	Total number of records.
metaData.start	String	Start of the next page, which is used for pagination.
thresholds	Array	Threshold rule list.

Example response

```
{
  "errorCode": "SVCSTG.AMS.2000",
  "errorMessage": "success",
  "metaData": {
    "count": 10,
    "start": null,
    "total": 100
  },
  "thresholds": [
    {
      "id": "2137",
      "alarmName": "aaaaaaaa",
      "alarmDescription": "",
      "actionEnabled": false,
      "okActions": [],
      "alarmActions": [],
      "insufficientDataActions": [],
      "stateValue": "alarm",
      "stateReason": "",
      "stateUpdatedTimestamp": null,
      "metricName": "cpuCoreLimit",
      "namespace": "PAAS.CONTAINER",
      "statistic": "average",
      "dimensions": [
        {
          "name": "appName",
          "value": "rhm-broker"
        }
      ],
      "period": 60000,
      "evaluationPeriods": 1,
      "unit": "Core",
      "threshold": "0",
      "comparisonOperator": ">=",
      "alarmAdvice": "",
      "alarmLevel": 3
    }
  ]
}
```

Status Code

- Success response
[Table 5-63](#) describes the status code.

Table 5-63 Status code

Status Code	Message	Description
200	OK	The request has succeeded.

- Error response
[Table 5-64](#) describes the status codes. For more information, see [8.1 Status Codes](#).

Table 5-64 Status codes

Status Code	Message	Description
400	Bad Request	The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized	The authorization information provided by the client is incorrect or invalid.
403	Forbidden	The request is rejected. The server has received the request and understood it, but the server is refusing to respond to it. The client should not repeat the request without modifications.
500	InternalServerError	The server is able to receive the request but unable to understand the request.
503	Service Unavailable	The requested service is invalid. The client should not repeat the request without modifications.

Error Code

Table 5-65 Error codes

Error Code	Message	Solution
SVCSTG_AMS_4000109	Invalid project ID.	Check whether the parameter meets requirements.

Error Code	Message	Solution
SVCSTG_AMS_4000110	Invalid limit.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000111	Invalid start.	Check whether the parameter meets requirements.
SVCSTG_AMS_5030001	The Cassandra session is null.	Contact technical support.
SVCSTG_AMS_5030002	The Cassandra execution is abnormal.	Contact technical support.

5.2.3 Modifying a Threshold Rule (Offline Soon)

Function

This API is used to modify a threshold rule.

URI

PUT /v1/{project_id}/ams/alarms

For details about the substitute of this API, see [Modifying a Threshold Rule](#).

Request

Request parameters

[Table 5-66](#) describes the request parameters.

Table 5-66 Request parameters

Parameter	Mandatory	Type	Value Range	Description
project_id	Yes	String	-	Project ID applied from Identity and Access Management (IAM). Generally, it is a string containing 32 characters.
statistic	Yes	String	maximum, minimum, average, sum, or sampleCount.	Statistic.

Parameter	Mandatory	Type	Value Range	Description
namespace	Yes	String	-	Namespace. The value of this parameter is saved in the backend when a threshold rule is added. It cannot be changed.
metricName	Yes	String	Enter 1 to 255 characters. The value must meet the expression [a-zA-Z_][a-zA-Z0-9_]* and start with a letter, underscore (_), or colon (:). Only letters, digits, underscores, and colons are allowed.	Metric name. The value of this parameter is saved in the backend when a threshold rule is added. It cannot be changed.
period	Yes	Integer	-	Statistical period.
alarmLevel	Yes	Integer	-	Alarm severity.
evaluationPeriods	Yes	Integer	-	Number of consecutive periods.
comparisonOperator	Yes	String	-	Threshold criterion expression.
threshold	Yes	String	-	Threshold.
alarmName	Yes	String	-	Threshold name.
dimensions	Yes	String	-	Metric dimension. The value of this parameter is saved in the backend when a threshold rule is added. It cannot be changed.

Parameter	Mandatory	Type	Value Range	Description
unit	Yes	String	-	Metric unit. The value of this parameter is saved in the backend when a threshold rule is added. It cannot be changed.
actionEnabled	No	Boolean	-	Whether to enable the alarm function.
alarmActions	No	Array	-	Alarm action.
alarmAdvice	No	String	-	Alarm suggestion, which is an empty string.
alarmDescription	No	String	-	Threshold rule description.
insufficientDataActions	No	Array	-	Action to be taken when data is insufficient.
okActions	No	Array	-	Recovery action.

Request headers

[Table 5-67](#) describes the request headers.

Table 5-67 Request headers

Name	Mandatory	Description
X-Auth-Token	Yes	User token obtained from IAM.
Content-Type	Yes	Content type, which is application/json .

Example request

```
{
  "actionEnabled": false,
  "alarmActions": [],
  "alarmAdvice": "",
  "alarmDescription": "",
  "alarmLevel": 3,
  "alarmName": "aaaaaaaa",
  "comparisonOperator": ">=",
```

```

"dimensions": [
  {
    "name": "appName",
    "value": "rhm-broker"
  }
],
"evaluationPeriods": 1,
"insufficientDataActions": [],
"metricName": "cpuCoreLimit",
"namespace": "PAAS.CONTAINER",
"okActions": [],
"period": 60000,
"statistic": "average",
"threshold": 0,
"unit": "Core"
}

```

Response

Response parameters

[Table 5-68](#) describes the response parameters.

Table 5-68 Response parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.
alarmId	Integer	Threshold rule code.

Example response

```

{
  "errorCode": "SVCSTG.AMS.2000",
  "errorMessage": "success",
  "alarmId": 12345678
}

```

Status Code

- Success response
[Table 5-69](#) describes the status code.

Table 5-69 Status code

Status Code	Message	Description
200	OK	The request has succeeded.

- Error response
[Table 5-70](#) describes the status codes. For more information, see [8.1 Status Codes](#).

Table 5-70 Status codes

Status Code	Message	Description
400	Bad Request	The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized	The authorization information provided by the client is incorrect or invalid.
403	Forbidden	The request is rejected. The server has received the request and understood it, but the server is refusing to respond to it. The client should not repeat the request without modifications.
500	InternalServerError	The server is able to receive the request but unable to understand the request.
503	Service Unavailable	The requested service is invalid. The client should not repeat the request without modifications.

Error Code

Table 5-71 Error codes

Error Code	Message	Solution
SVCSTG_AMS_4000101	Invalid alarm name.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000102	The threshold rule name already exists.	Use another name.
SVCSTG_AMS_4000103	Invalid alarm description.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000104	Invalid alarm threshold.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000105	Invalid alarm period.	Check whether the parameter meets requirements.

Error Code	Message	Solution
SVCSTG_AMS_4000106	Invalid email list.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000107	The maximum number of threshold rules has been reached.	Contact technical support to expand the capacity.
SVCSTG_AMS_4000108	Invalid time range for alarm queries.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000109	Invalid project ID.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000115	Invalid request parameter.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000118	Invalid number of consecutive periods.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000119	Invalid alarm statistic.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000120	Invalid alarm comparison operator.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000121	The alarm does not exist.	Check whether the threshold rule exists.
SVCSTG_AMS_5000000	Internal server error.	Contact technical support.

5.2.4 Adding a Threshold Rule (Offline Soon)

Function

This API is used to add a threshold rule.

URI

POST /v1/{project_id}/ams/alarms

For details about the substitute of this API, see [Adding a Threshold Rule](#).

Request

Request parameters

[Table 5-72](#) describes the request parameters.

Table 5-72 Request parameters

Parameter	Mandatory	Type	Value Range	Description
project_id	Yes	String	-	Project ID applied from Identity and Access Management (IAM). Generally, it is a string containing 32 characters.
statistic	Yes	String	maximum, minimum, average, sum, or sampleCount.	Statistic.
namespace	Yes	String	-	Namespace.
metricName	Yes	String	Enter 1 to 255 characters. The value must meet the expression [a-zA-Z_][a-zA-Z0-9_]* and start with a letter, underscore (_), or colon (:). Only letters, digits, underscores, and colons are allowed.	Metric name.
period	Yes	Integer	-	Statistical period.
alarmLevel	Yes	Integer	-	Alarm severity.
evaluationPeriods	Yes	Integer	-	Number of consecutive periods.
comparisonOperator	Yes	String	-	Threshold criterion expression.
threshold	Yes	String	-	Threshold.

Parameter	Mandatory	Type	Value Range	Description
alarmName	Yes	String	-	Threshold name.
dimensions	Yes	String	-	Metric dimension.
unit	Yes	String	-	Metric unit.
actionEnabled	No	Boolean	-	Whether to enable the alarm function.
alarmActions	No	Array	-	Alarm action.
alarmAdvice	No	String	-	Suggestion.
alarmDescription	No	String	-	Threshold rule description.
insufficientDataActions	No	Array	-	Action to be taken when data is insufficient.
okActions	No	Array	-	Recovery action.

Request headers

[Table 5-73](#) describes the request headers.

Table 5-73 Request headers

Name	Mandatory	Description
X-Auth-Token	Yes	User token obtained from IAM.
Content-Type	Yes	Content type, which is application/json .

Example request

```
{
  "actionEnabled": false,
  "alarmActions": [],
  "alarmAdvice": "",
  "alarmDescription": "",
  "alarmLevel": 3,
  "alarmName": "aaaaaaaa",
  "comparisonOperator": ">=",
  "dimensions": [
    {
      "name": "appName",
      "value": "rhm-broker"
    }
  ],
}
```



```

"evaluationPeriods": 1,
"insufficientDataActions": [],
"metricName": "cpuCoreLimit",
"namespace": "PAAS.CONTAINER",
"okActions": [],
"period": 60000,
"statistic": "average",
"threshold": 0,
"unit": "Core"
}

```

Response

Response parameters

[Table 5-74](#) describes the response parameters.

Table 5-74 Response parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.
alarmId	Integer	Threshold rule code.

Example response

```

{
  "errorCode": "SVCSTG.AMS.2000",
  "errorMessage": "success",
  "alarmId": 12345678
}

```

Status Code

- Success response
[Table 5-75](#) describes the status code.

Table 5-75 Status code

Status Code	Message	Description
200	OK	The request has succeeded.

- Error response
[Table 5-76](#) describes the status codes. For more information, see [8.1 Status Codes](#).

Table 5-76 Status codes

Status Code	Message	Description
400	Bad Request	The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized	The authorization information provided by the client is incorrect or invalid.
403	Forbidden	The request is rejected. The server has received the request and understood it, but the server is refusing to respond to it. The client should not repeat the request without modifications.
500	InternalServerError	The server is able to receive the request but unable to understand the request.
503	Service Unavailable	The requested service is invalid. The client should not repeat the request without modifications.

Error Code

Table 5-77 Error codes

Error Code	Message	Solution
SVCSTG_AMS_4000101	Invalid alarm name.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000102	The threshold rule name already exists.	Use another name.
SVCSTG_AMS_4000103	Invalid alarm description.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000104	Invalid alarm threshold.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000105	Invalid alarm period.	Check whether the parameter meets requirements.

Error Code	Message	Solution
SVCSTG_AMS_4000106	Invalid email list.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000107	The maximum number of threshold rules has been reached.	Contact technical support to expand the capacity.
SVCSTG_AMS_4000108	Invalid time range for alarm queries.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000109	Invalid project ID.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000115	Invalid request parameter.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000118	Invalid number of consecutive periods.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000119	Invalid alarm statistic.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000120	Invalid alarm comparison operator.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000121	The alarm does not exist.	Check whether the threshold rule exists.
SVCSTG_AMS_5000000	Internal server error.	Contact technical support.

5.2.5 Querying Monitoring Data (Offline Soon)

Function

This API is used to query monitoring data of metrics within a specified time period. You can specify a dimension or period to query data.

URI

POST /v1/{project_id}/ams/metricdata?fillValue=xx

For details about the substitute API, see [Querying Monitoring Data](#).

[Table 5-78](#) describes the parameters.

Table 5-78 Parameters

Parameter	Mandatory	Type	Value Range	Description
project_id	Yes	String	-	Project ID applied from Identity and Access Management (IAM). Generally, it is a string containing 32 characters.
fillValue	No	String	-1, 0, null, and average	<p>Filled value for breakpoints in monitoring data. Default value: -1.</p> <ul style="list-style-type: none"> -1: Breakpoints are filled with -1. 0: Breakpoints are filled with 0. null: Breakpoints are filled with null. average: Breakpoints are filled with the average value of adjacent valid data. If there is no valid data, breakpoints are filled with null.

Request

Request parameters

[Table 5-79](#) describes the request parameters.

Table 5-79 Request parameters

Parameter	Mandatory	Type	Value Range	Description
metrics	Yes	Array	The JSON array can contain a maximum of 20 metrics.	List of metrics.
namespace	Yes	String	PAAS.CONTAINER, PAAS.NODE, PAAS.SLA, PAAS.AGGR, and CUSTOMMETRICS.	Metric namespace.

Parameter	Mandatory	Type	Value Range	Description
metricName	Yes	String	1–255 characters.	Metric name.
dimensions	Yes	Array	Neither the array, nor the name/value of any dimension in the array can be left blank.	Metric dimension. dimensions.name: dimension name. Example: appName. dimensions.value: dimension value, such as a specific application name.
period	Yes	Integer	Enumerated value. Options: <ul style="list-style-type: none">• 60: The data monitoring granularity is 1 minute.• 300: The data monitoring granularity is 5 minutes.• 900: The data monitoring granularity is 15 minutes.• 3600: The data monitoring granularity is 1 hour.	Data monitoring granularity.

Parameter	Mandatory	Type	Value Range	Description
timerange	Yes	String	Format: start time (UTC, in ms).end time (UTC, in ms).number of minutes in the time period When the start time and end time are -1, it indicates the latest <i>N</i> minutes. <i>N</i> indicates the time period by the granularity of minute.	Query time period. For example, -1.-1.5 indicates the latest 5 minutes. 1501545600000.1501632000000.1440 indicates the fixed time period from 08:00:00 on August 1, 2017 to 08:00:00 August 2, 2017. NOTE Time range/period ≤ 1440 During calculation, timerange and period must be in the same unit.
statistics	Yes	Array	maximum, minimum, sum, average, or sampleCount.	Statistic.

Request headers

[Table 5-80](#) describes the request headers.

Table 5-80 Request headers

Name	Mandatory	Description
X-Auth-Token	Yes	User token obtained from IAM.
Content-Type	Yes	Content type, which is application/json .

Example request

```
{
  "metrics": [
    {
      "namespace": "abc",
      "metricName": "def",
      "dimensions": [
        {
          "name": "instance_id",
```

```

        "value": "demo1"
      }
    ]
  },
  "period": 60,
  "timerange": "-1.-1.5", //Last 5 minutes
  "statistics": [
    "maximum",
    "minimum",
    "sum"
  ]
}

```

Response

Response parameters

[Table 5-81](#) describes the response parameters.

Table 5-81 Response parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.
metrics	Object	-

Example response

```

{
  "errorCode": "SVCSTG.AMS.2000",
  "errorMessage": "success",
  "metrics": [{
    "metric": {
      "namespace": "abc",
      "metricName": "def",
      "dimensions": [{
        "name": "ghi",
        "value": "lmn"
      }]
    }
  },
  "dataPoints": [{
    "timestamp": 1467892800000,
    "unit": "Percent",
    "statistics": [{
      "statistic": "maximum",
      "value": 23
    }]
  }]
}

```

Status Code

- Success response
[Table 5-82](#) describes the status code.

Table 5-82 Status code

Status Code	Message	Description
200	OK	The request has succeeded.

- Error response

[Table 5-83](#) describes the status codes. For more information, see [8.1 Status Codes](#).

Table 5-83 Status codes

Status Code	Message	Description
400	Bad Request	The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized	The authorization information provided by the client is incorrect or invalid.
403	Forbidden	The request is rejected. The server has received the request and understood it, but the server is refusing to respond to it. The client should not repeat the request without modifications.
500	InternalServerError	The server is able to receive the request but unable to understand the request.
503	Service Unavailable	The requested service is invalid. The client should not repeat the request without modifications.

Error Code

Table 5-84 Error codes

Error Code	Message	Solution
SVCSTG_AMS_4000101	Projectid is left blank.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000102	The metric data parameter is null.	Check whether the parameter meets requirements.

Error Code	Message	Solution
SVCSTG_AMS_4000103	Invalid period.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000104	Invalid statistics.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000105	Invalid metrics.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000106	Invalid time range.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000107	The number of data points in a time range exceeds 1440.	Check whether the parameter meets requirements.
SVCSTG_AMS_4000110	Invalid fillValue.	Check whether the parameter meets requirements.
SVCSTG_AMS_5000000	Internal server error.	Contact technical support.

6 Examples

6.1 Querying Time Series Objects

Scenario

This section describes how to query time series objects about a node's CPU usage.

Obtaining Basic Information

Before querying time series objects, obtain the value of the node ID from **dimensions** on the ECS console, and the value of the cluster ID from **dimensions** on the cluster management page of the CCE console.

For **metric_name** of CPU usage, see [Host Metrics](#). For the **name** corresponding to the cluster ID or node ID, see [Host Metrics - Dimension](#). For the namespace, see [Table 4-200](#).

Querying Time Series Objects

- URI format

POST `/v2/{project_id}/series`

- Example request

POST `https://{aom_endpoint}/v2/{project_id}/series`

To obtain the value of `{aom_endpoint}`, see [Regions and Endpoints](#).

Body:

```
{
  "series": [
    {
      "namespace": "PAAS.NODE",
      "metric_name": "aom_node_cpu_usage",
      "dimensions": [
        {
          "name": "clusterId",
          "value": "4fae3587-0202-11eb-9ba9-0255ac100b02"
        },
        {
          "name": "hostID",
          "value": "4100f512-c4e9-4b65-b0dd-2b94ea5e1a84"
        }
      ]
    }
  ]
}
```

```
    }  
  ]  
}  
• Example response  
{  
  "meta_data": {  
    "count": 0,  
    "offset": 0,  
    "total": 1,  
    "nextToken": 9007148492074133276  
  },  
  "series": [{  
    "namespace": "PAAS.NODE",  
    "metric_name": "cpuUsage",  
    "unit": "Percent",  
    "dimensions": [{  
      "name": "clusterId",  
      "value": "4fae3587-0202-11eb-9ba9-0255ac100b02"  
    },  
    {  
      "name": "clusterName",  
      "value": "testdiskrate"  
    },  
    {  
      "name": "hostID",  
      "value": "4100f512-c4e9-4b65-b0dd-2b94ea5e1a84"  
    },  
    {  
      "name": "nameSpace",  
      "value": "default"  
    },  
    {  
      "name": "nodeIP",  
      "value": "192.168.0.123"  
    },  
    {  
      "name": "nodeName",  
      "value": "192.168.0.123"  
    }  
  ]  
}]  
}
```

6.2 Querying Time Series Data

Scenario

This section describes how to query the time series data about a node's CPU usage.

Obtaining Basic Information

Before querying time series data, obtain the value of the node ID from **dimensions** on the ECS console, and the value of the cluster ID from **dimensions** on the cluster management page of the CCE console.

Some metrics may be renamed due to format standardization. For the input parameter **metric_name** for CPU usage used in this scenario, see the **metric_name** (not renamed) returned when you call the API for [querying time series objects](#) (to call this API, set the input parameter **metric_name** to the name queried in [Host Metrics](#). In this example, the name is **aom_node_cpu_usage** (renamed)). For the **name** corresponding to the cluster ID or node ID, see [Host Metrics - Dimension](#). For the namespace, see [Table 4-210](#).

Querying Time Series Data

- URI format

POST `/v2/{project_id}/samples`

- Example request

POST `https://{aom_endpoint}/v2/{project_id}/samples`

To obtain the value of `{aom_endpoint}`, see [Regions and Endpoints](#).

Body:

```
{
  "samples": [
    {
      "namespace": "PAAS.NODE",
      "metric_name": "cpuUsage",
      "dimensions": [ {
        "name": "clusterId",
        "value": "4fae3587-0202-11eb-9ba9-0255ac100b02"
      },
      {
        "name": "hostID",
        "value": "4100f512-c4e9-4b65-b0dd-2b94ea5e1a84"
      }
    ]
  }
],
  "period": 60,
  "time_range": "-1.-1.2",
  "statistics": [
    "maximum",
    "minimum",
    "sum"
  ]
}
```

- Example response

```
{
  "samples": [{
    "sample": {
      "namespace": "PAAS.NODE",
      "metric_name": "cpuUsage",
      "dimensions": [{
        "name": "clusterId",
        "value": "4fae3587-0202-11eb-9ba9-0255ac100b02"
      },
      {
        "name": "hostID",
        "value": "4100f512-c4e9-4b65-b0dd-2b94ea5e1a84"
      }
    ]
  },
  "data_points": [{
    "timestamp": 1608191880000,
    "unit": "Percent",
    "statistics": [{
      "statistic": "maximum",
      "value": 14.5
    },
    {
      "statistic": "minimum",
      "value": 14.5
    },
    {
      "statistic": "sum",
      "value": 14.5
    }
  ]
},
  {
    "timestamp": 1608191940000,
```

```
    "unit": "Percent",
    "statistics": [{
      "statistic": "maximum",
      "value": 12.0
    },
    {
      "statistic": "minimum",
      "value": 12.0
    },
    {
      "statistic": "sum",
      "value": 12.0
    }
  ]
}
```

6.3 Querying Details About a Specified Alarm Action Rule

Scenario

This section describes how to query an alarm action rule by name.

Obtaining Basic Information

Before querying the details about an alarm action rule, obtain its rule name first. You can call the API for obtaining the alarm action rule list or go to the AOM 2.0 console to obtain the rule name.

Querying Details About a Specified Alarm Action Rule

- URI format
URI format: GET `/v2/{project_id}/alert/action-rules/{rule_name}`
- Example request
GET `https://{Endpoint}/v2/{project_id}/alert/action-rules/{rule_name}`
You can obtain the value of `{aom_endpoint}` from [Regions and Endpoints](#).
- Example response

```
{
  "create_time": 1665991889597,
  "notification_template": "aom.built-in.template.zh",
  "project_id": "2xxxxxxxxxxxxxxxxxxxxxf",
  "rule_name": "1112222",
  "smn_topics": [{
    "display_name": "",
    "name": "gxxxxxt",
    "push_policy": 0,
    "status": 0,
    "topic_urn": "urn:smn:xxx:2xxxxxxxxxxxxxxxxxxxxxf:gxxxxxt"
  }],
  "time_zone": "xx/XXX",
  "type": "1",
  "update_time": 1665991889597,
  "user_name": "kxxxxxt"
}
```

7 Permissions Policies and Supported Actions

7.1 Introduction

You can use Identity and Access Management (IAM) for fine-grained permissions management of your AOM. If your HUAWEI ID does not need individual IAM users, you can skip this topic.

With IAM, you can control access to specific Huawei Cloud resources. IAM supports role/policy-based authorization and identity policy-based authorization.

The following table describes the differences between the two authorization models.

Table 7-1 Differences between role/policy-based and identity policy-based authorization

Authorization Model	Core Relationship	Permissions	Authorization Method	Description
Role/Policy	User-permission-authorization scope	<ul style="list-style-type: none"> System-defined roles System-defined policies Custom policies 	Assigning roles or policies to principals	To authorize a user, you need to add it to a user group first and then specify the scope of authorization. It provides a limited number of condition keys and cannot meet the requirements of fine-grained permissions control. This method is suitable for small- and medium-sized enterprises.

Authorization Model	Core Relationship	Permissions	Authorization Method	Description
Identity policy	User-policy	<ul style="list-style-type: none"> System-defined identity policies Custom identity policies 	<ul style="list-style-type: none"> Assigning identity policies to principals Attaching identity policies to principals 	You can authorize a user by attaching an identity policy to it. User-specific authorization and a variety of key conditions allow for more fine-grained permissions control. However, this model can be hard to set up. It requires a certain amount of expertise and is suitable for medium- and large-sized enterprises.

Assume that you want to grant IAM users permission to create ECSs in CN North-Beijing4 and OBS buckets in CN South-Guangzhou. With role/policy-based authorization, the administrator needs to create two custom policies and assign both to the IAM users. With identity policy-based authorization, the administrator only needs to create one custom policy, configure the condition key **g:RequestedRegion** for the policy, and then attach the policy to the principals or grant the principals the access permissions to the specified regions. Identity policy-based authorization is more flexible than role/policy-based authorization.

Policies/identity policies and actions in the two authorization models are not interoperable. You are advised to use the identity policy-based authorization model.

If you use IAM users in your account to call an API, the IAM users must be granted the required permissions. The required permissions are determined by the actions supported by the API. Only users with the policies allowing for those actions can call the API successfully.

Assume that an IAM user wants to call an API to query metrics. With role/policy-based authorization, the IAM user must be granted the permissions allowing for action **aom:metric:get**. With identity policy-based authorization, the IAM user must be granted the permissions allowing for action **aom:metric:list**.

7.2 Actions Supported by Policy-based Authorization

This section describes the actions supported by AOM in policy-based authorization.

Supported Actions

AOM provides system-defined policies that can be directly used in IAM. You can also create custom policies to supplement system-defined policies for more refined

access control. Operations supported by policies are specific to APIs. The following are common concepts related to policies:

- **Permissions:** statements in a policy that allow or deny certain operations.
- **APIs:** REST APIs that can be called by a user who has been granted specific permissions.
- **Actions:** specific operations that are allowed or denied in a custom policy.
- **Dependencies:** actions which a specific action depends on. When allowing an action for a user, you also need to allow any existing action dependencies for that user.
- **IAM projects/Enterprise projects:** the authorization scope of a custom policy. A custom policy can be applied to IAM projects or enterprise projects or both. Policies that contain actions for both IAM and enterprise projects can be used and applied for both IAM and Enterprise Management. Policies that contain actions only for IAM projects can be used and applied to IAM only. Administrators can check whether an action supports IAM projects or enterprise projects in the action list. For details about the differences between IAM and enterprise management, see [What Are the Differences Between IAM and Enterprise Management?](#)

AOM supports the following actions that can be defined in custom policies:

- **Alarm APIs:** actions supported by alarm APIs, such as the API for querying alarms.
- **Monitoring APIs:** actions supported by monitoring APIs, such as the API for querying metrics.
- **Prometheus monitoring APIs:** actions supported by Prometheus monitoring APIs, such as the API for querying the expression calculation result in a specified period.
- **Log APIs:** actions supported by log APIs, such as the API for querying logs.
- **Prometheus instance APIs:** actions supported by Prometheus instance APIs, such as the API for uninstalling a hosted Prometheus instance.
- **CMDB APIs:** actions supported by CMDB APIs, such as the API for adding an application.
- **Automation APIs:** actions supported by automation APIs, such as the API for creating a task.

7.2.1 Alarm APIs

NOTE

√: supported; x: not supported

Table 7-2 Alarm APIs

Permission	API	Action	IAM Project	Enterprise Project
Adding an event alarm rule	POST /v2/{project_id}/event2alarm-rule	aom:event2AlarmRule:create	√	×
Querying the event alarm rule list	GET /v2/{project_id}/event2alarm-rule	aom:event2AlarmRule:list	√	×
Modifying an event alarm rule	PUT /v2/{project_id}/event2alarm-rule	aom:event2AlarmRule:set	√	×
Deleting an event alarm rule	DELETE /v2/{project_id}/event2alarm-rule	aom:event2AlarmRule:delete	√	×
Obtaining the sent alarm content	GET /v2/{project_id}/alarm-notified-histories	aom:alarm:list	√	×
Deleting a silence rule	DELETE /v2/{project_id}/alert/mute-rules	aom:muteRule:delete	√	√
Adding a silence rule	POST /v2/{project_id}/alert/mute-rules	aom:muteRule:create	√	√
Modifying a silence rule	PUT /v2/{project_id}/alert/mute-rules	aom:muteRule:update	√	√
Querying the silence rule list	GET /v2/{project_id}/alert/mute-rules	aom:muteRule:list	√	√
Querying an alarm action rule by name	GET /v2/{project_id}/alert/action-rules/{rule_name}	aom:actionRule:get	√	√

Permission	API	Action	IAM Project	Enterprise Project
Adding an alarm action rule	POST /v2/{project_id}/alert/action-rules	aom:action Rule:create	√	√
Deleting an alarm action rule	DELETE /v2/{project_id}/alert/action-rules	aom:action Rule:delete	√	√
Modifying an alarm action rule	PUT /v2/{project_id}/alert/action-rules	aom:action Rule:update	√	√
Querying the alarm rule list	GET /v2/{project_id}/alert/action-rules	aom:action Rule:list	√	√
Querying events and alarms	POST /v2/{project_id}/events	aom:alarm:list	√	×
Counting events and alarms	POST /v2/{project_id}/events/statistic	aom:alarm:list	√	×
Reporting events and alarms	PUT /v2/{project_id}/push/events	aom:alarm:put	√	×
Querying metric or event alarm rules	GET /v4/{project_id}/alarm-rules	aom:alarm Rule:list	√	√
Adding or modifying metric or event alarm rules	POST /v4/{project_id}/alarm-rules	aom:alarm Rule:create	√	√

Permission	API	Action	IAM Project	Enterprise Project
Deleting metric or event alarm rules	DELETE /v4/{project_id}/alarm-rules	aom:alarmRule:delete	√	√

7.2.2 Monitoring APIs

 NOTE

√: supported; x: not supported

Table 7-3 Monitoring APIs

Permission	API	Action	IAM Project	Enterprise Project
Querying time series objects	POST /v2/{project_id}/series	aom:metric:list	√	x
Querying time series data	POST /v2/{project_id}/samples	aom:metric:list	√	x
Querying metrics	POST /v1/{project_id}/ams/metrics	aom:metric:get	√	x
Querying monitoring data	POST /v1/{project_id}/ams/metricdata	aom:metric:get	√	x
Adding monitoring data	POST /v1/{project_id}/ams/report/metricdata	aom:metric:put	√	x
Adding or modifying a service discovery rule	PUT /v1/{project_id}/inv/servicediscoveryrules	aom:discoveryRule:set	√	x
Deleting a service discovery rule	DELETE /v1/{project_id}/inv/servicediscoveryrules	aom:discoveryRule:delete	√	x

Permission	API	Action	IAM Project	Enterprise Project
Querying existing service discovery rules	GET /v1/{project_id}/inv/servicediscoveryrules	aom:discoveryRule:list	√	×
Adding a threshold rule	POST /v2/{project_id}/alarm-rules	aom:alarmRule:create	√	×
Querying the threshold rule list	GET /v2/{project_id}/alarm-rules	aom:alarmRule:get	√	×
Modifying a threshold rule	PUT /v2/{project_id}/alarm-rules	aom:alarmRule:set	√	×
Deleting a threshold rule	DELETE /v2/{project_id}/alarm-rules/{alarm_rule_id}	aom:alarmRule:delete	√	×
Querying a threshold rule	GET /v2/{project_id}/alarm-rules/{alarm_rule_id}	aom:alarmRule:get	√	×
Deleting threshold rules in batches	POST /v2/{project_id}/alarm-rules/delete	aom:alarmRule:delete	√	×

7.2.3 Prometheus Monitoring APIs

 NOTE

√: supported; x: not supported

Table 7-4 Prometheus monitoring APIs

Permission	API	Action	IAM Project	Enterprise Project
Querying the expression calculation result in a specified period	GET /v1/{project_id}/aom/api/v1/query_range	aom:metric:list	√	√
Querying the expression calculation result in a specified period	POST /v1/{project_id}/aom/api/v1/query_range	aom:metric:list	√	√
Querying the expression calculation result at a specified time point	GET /v1/{project_id}/aom/api/v1/query	aom:metric:list	√	√
Querying the expression calculation result at a specified time point	POST /v1/{project_id}/aom/api/v1/query	aom:metric:list	√	√
Querying tag values	GET /v1/{project_id}/aom/api/v1/label/{label_name}/values	aom:metric:list	√	√
Obtaining the tag name list	GET /v1/{project_id}/aom/api/v1/labels	aom:metric:list	√	√

Permission	API	Action	IAM Project	Enterprise Project
Obtaining the tag name list	POST /v1/{project_id}/aom/api/v1/labels	aom:metric:list	√	√
Querying metadata	GET /v1/{project_id}/aom/api/v1/metadata	aom:metric:list	√	√

7.2.4 Prometheus Instance APIs

 NOTE

√: supported; x: not supported

Table 7-5 Prometheus instance APIs

Permission	API	Action	IAM Project	Enterprise Project
Uninstalling a hosted Prometheus instance	DELETE /v1/{project_id}/aom/prometheus	aom:metric:delete	√	√
Querying a Prometheus instance	GET /v1/{project_id}/aom/prometheus	aom:metric:list	√	√
Adding a Prometheus instance	POST /v1/{project_id}/aom/prometheus	aom:metric:put	√	√
Creating a recording rule for a Prometheus instance	POST /v1/{project_id}/aom/prometheus/instance/rules	aom:metric:put	√	√

Permission	API	Action	IAM Project	Enterprise Project
Obtaining the credential for calling a Prometheus instance	GET /v1/{project_id}/access-code	aom:icmgr:get	√	√

7.2.5 Log APIs

 NOTE

√: supported; x: not supported

Table 7-6 Log APIs

Permission	API	Action	IAM Project	Enterprise Project
Querying logs	POST /v1/{project_id}/als/action	aom:log:list	√	×

7.2.6 CMDB APIs

 NOTE

√: supported; x: not supported

Table 7-7 CMDB APIs

Permission	API	Action	IAM Project	Enterprise Project
Adding an application	POST /v1/applications	aom:cmdbApplication:create	√	×
Deleting an application	DELETE /v1/applications/{application_id}	aom:cmdbApplication:delete	√	×

Permission	API	Action	IAM Project	Enterprise Project
Querying the details about an application	GET /v1/applications/{application_id}	aom:cmdbApplication:get	√	×
Modifying an application	PUT /v1/applications/{application_id}	aom:cmdbApplication:update	√	×
Adding a component	POST /v1/components	aom:cmdbComponent:create	√	×
Deleting a component	DELETE /v1/components/{component_id}	aom:cmdbComponent:delete	√	×
Querying the details about a component	GET /v1/components/{component_id}	aom:cmdbComponent:get	√	×
Modifying a component	PUT /v1/components/{component_id}	aom:cmdbComponent:update	√	×
Creating an environment	POST /v1/environments	aom:cmdbEnvironment:create	√	×

Permission	API	Action	IAM Project	Enterprise Project
Deleting an environment	DELETE /v1/environments/{environment_id}	aom:cmdbEnvironment:delete	√	×
Querying the details about an environment	GET /v1/environments/{environment_id}	aom:cmdbEnvironment:get	√	×
Modifying an environment	PUT /v1/environments/{environment_id}	aom:cmdbEnvironment:update	√	×
Querying the list of resources bound to a node	POST /v1/resource/{rf_resource_type}/type/{type}/ci-relationships	aom:cmdbResources:list	√	×
Querying the details about an application	GET /v1/applications	aom:cmdbApplication:get	√	×

Permission	API	Action	IAM Project	Enterprise Project
Querying the details about an environment	GET /v1/environments/ name/ {environment_name}	aom:cmdbEnvironment:get	√	×
Querying the details about a component	GET /v1/components/ application/ {application_id}/name/ {component_name}	aom:cmdbComponent:get	√	×

7.2.7 Automation APIs

 NOTE

√: supported; x: not supported

Table 7-8 Automation APIs

Permission	API	Action	IAM Project	Enterprise Project
Creating a task	POST /v1/{project_id}/cms/ workflow	cms:workflow:create	√	×
Modifying a task	PUT /v1/{project_id}/cms/ workflow/{workflow_id}/ trigger/action	cms:workflow:update	√	×

Permission	API	Action	IAM Project	Enterprise Project
Operating a task that has been paused	POST /v1/{project_id}/cms/workflow/{workflow_id}/executions/{execution_id}/operation	cms:execution:create	√	×
Obtaining the execution details about a workflow	GET /v1/{project_id}/cms/workflow/{workflow_id}/executions/{execution_id}/status	cms:execution:get	√	×
Terminating a task	POST /v1/{project_id}/cms/workflow/{workflow_id}/executions/{execution_id}/terminate	cms:execution:create	√	×
Querying a script	POST /v1/{project_id}/cms/script/list	cms:script:list	√	×
Querying the script version	POST /v1/{project_id}/cms/script-version-list	cms:script:list	√	×
Performing fuzzy search on the job management page	POST /v1/{project_id}/cms/job/list	cms:job:list	√	×

Permission	API	Action	IAM Project	Enterprise Project
Querying the plan (custom template) list based on the job ID	POST /v1/{project_id}/cms/template-list/{job_id}	cms:template:list	√	×
Querying a plan	GET /v1/{project_id}/cms/template/{template_id}	cms:template:get	√	×
Querying the task list	POST /v1/{project_id}/cms/workflow-list	cms:workflow:list	√	×
Querying task execution records	GET /v1/{project_id}/cms/workflow/{workflow_id}/executions	cms:execution:get	√	×
Executing a workflow	POST /v1/{project_id}/cms/workflow/{workflow_id}/executions	cms:execution:create	√	×

8 Appendix

8.1 Status Codes

[Table 8-1](#) describes status codes.

Table 8-1 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 the initial part of the requests has been received and not rejected by the server.
101	Switching Protocols	The protocol should be switched. The protocol can only be switched to a more advanced protocol. For example, a new HTTP protocol.
200	OK	The request has succeeded.
201	Created	The request has been fulfilled, resulting in the creation of a new resource.
202	Accepted	The request has been accepted, but the processing has not been completed.
203	Non-Authoritative Information	The server successfully processed the request, but is returning information that may be from another source.
204	No Content	The server has successfully processed the request, but does not return any content. The status code is returned in response to an HTTP OPTIONS request.
205	Reset Content	The server has fulfilled the request, but the requester is required to reset the content.

Status Code	Message	Description
206	Partial Content	The server has successfully processed a part of the GET request.
300	Multiple Choices	There are multiple options for the location of the requested resource. The response contains a list of resource characteristics and addresses from which a user terminal (such as a browser) can choose the most appropriate one.
301	Moved Permanently	The requested resource has been assigned with a new permanent URI. This 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. It should be retrieved using a GET or POST method.
304	Not Modified	The requested resource has not been modified. When the server returns this status code, it does not return any resources.
305	Use Proxy	The requested resource must be accessed through a proxy.
306	Unused	This HTTP status code is no longer used.
400	Bad Request	The request is invalid. The client should not repeat the request without modifications.
401	Unauthorized	The authorization information provided by the client is incorrect or invalid.
402	Payment Required	This status code is reserved for future use.
403	Forbidden	The request is rejected. The server has received the request and understood it, but the server is refusing to respond to it. The client should not repeat the request without modifications.
404	Not Found	The requested resource cannot be found. The client should not repeat the request without modifications.

Status Code	Message	Description
405	Method Not Allowed	The method specified in the request is not supported by the requested resource. The client should not repeat the request without modifications.
406	Not Acceptable	The server cannot fulfill the request based on the content characteristics of the request.
407	Proxy Authentication Required	This status code is similar to 401, but indicates that the client must authenticate itself with the proxy first.
408	Request Timeout	The client does not produce a request within the time that the server was prepared to wait. The client may repeat the request without modifications later.
409	Conflict	The request cannot be processed due to a conflict. The resource that the client attempts to create already exists, or the request fails to be processed because of the update of the conflict request.
410	Gone	The requested resource cannot be found. The requested resource has been deleted permanently.
411	Length Required	The server refuses to process the request without a defined Content-Length.
412	Precondition Failed	The server does not meet one of the preconditions that the requester puts on the request.
413	Request Entity Too Large	The server refuses to process a request because the request entity is too large. The server may disable the connection to prevent the client from sending requests consecutively. If the server cannot process the request temporarily, the response will contain a Retry-After field.
414	Request-URI Too Long	The request URI is too long for the server to process.
415	Unsupported Media Type	The server cannot process the media format in the request.
416	Requested Range Not Satisfiable	The requested range is invalid.
417	Expectation Failed	The server fails to meet the requirements of the Expect request-header field.

Status Code	Message	Description
422	Unprocessable Entity	The request is well-formed but is unable to be processed due to semantic errors.
429	Too Many Requests	The client sends excessive requests to the server within a given time (exceeding the limit on the access frequency of the client), or the server receives excessive requests within a given time (beyond its processing capability). In this case, the client should repeat requests after the time specified in the Retry-After header of the response expires.
500	Internal Server Error	The server is able to receive the request but unable to understand the request.
501	Not Implemented	The server does not support the function required to fulfill the request.
502	Bad Gateway	The server acting as a gateway or proxy receives an invalid response from a remote server.
503	Service Unavailable	The requested service is invalid. The client should not repeat the request without modifications.
504	Server Timeout	The request cannot be fulfilled within a given time. This status code is returned to the client only when the timeout parameter is specified in the request.
505	HTTP Version Not Supported	The server does not support the HTTP protocol version used in the request.

8.2 Error Codes

If an error code starting with **APIGW** is returned after you call an API, rectify the fault according to [APIG Error Codes](#).

Status Code	Error Code	Message	Description	Solution
200	SVCSTG.INV.2000000	null	The request is properly executed.	No action is required after the request is executed.

Status Code	Error Code	Message	Description	Solution
200	SVCSTG_AMS_2000000	null	The request is properly executed.	No action is required after the request is executed.
300	AOM.08001300	The maximum number of rules has been reached.	The maximum number of rules has been reached.	Delete unneeded rules and try again.
400	AOM.0400	Bad request.	Incorrect request parameter.	Check whether the parameter meets requirements.
400	AOM.02001101	Invalid rule name.	Invalid rule name.	Check whether the parameter meets requirements.
400	AOM.02001102	The rule name already exists.	The rule name already exists.	Check whether the parameter meets requirements.
400	AOM.02001103	Invalid description.	Invalid description.	Check whether the parameter meets requirements.
400	AOM.02001104	Invalid threshold.	Invalid threshold.	Check whether the parameter meets requirements.
400	AOM.02001105	Invalid period.	Invalid period.	Check whether the parameter meets requirements.
400	AOM.02001106	Invalid email.	Invalid email.	Check whether the parameter meets requirements.
400	AOM.02001107	The maximum number of rules has been reached.	The maximum number of rules has been reached.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.02001108	Invalid time range.	Invalid time range.	Check whether the parameter meets requirements.
400	AOM.02001109	Threshold rule xxx does not exist.	Threshold rule xxx does not exist.	Check whether the parameter meets requirements.
400	AOM.02001110	Invalid limit.	Invalid limit.	Check whether the parameter meets requirements.
400	AOM.02001111	Invalid offset.	Invalid offset.	Check whether the parameter meets requirements.
400	AOM.02001112	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.02001115	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.02001118	Invalid number of consecutive periods.	Invalid number of consecutive periods.	Check whether the parameter meets requirements.
400	AOM.02001119	Invalid statistic.	Invalid statistic.	Check whether the parameter meets requirements.
400	AOM.02001120	Invalid comparison operator.	Invalid comparison operator.	Check whether the parameter meets requirements.
400	AOM.02001121	The rule does not exist.	The rule does not exist.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.02001400	Bad request.	Bad request.	Check whether the parameter meets requirements.
400	AOM.02002101	Invalid rule.	Invalid rule.	Check whether the parameter meets requirements.
400	AOM.02002102	The rule name already exists.	The rule name already exists.	Check whether the parameter meets requirements.
400	AOM.02002103	Invalid description.	Invalid description.	Check whether the parameter meets requirements.
400	AOM.02002104	Invalid threshold.	Invalid threshold.	Check whether the parameter meets requirements.
400	AOM.02002105	Invalid period.	Invalid period.	Check whether the parameter meets requirements.
400	AOM.02002106	Invalid email.	Invalid email.	Check whether the parameter meets requirements.
400	AOM.02002107	The maximum number of rules has been reached.	The maximum number of rules has been reached.	Check whether the parameter meets requirements.
400	AOM.02002108	Invalid time range.	Invalid time range.	Check whether the parameter meets requirements.
400	AOM.02002109	Invalid project ID.	Invalid project ID.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.02002110	Invalid limit.	Invalid limit.	Check whether the parameter meets requirements.
400	AOM.02002111	Invalid offset.	Invalid offset.	Check whether the parameter meets requirements.
400	AOM.02002112	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.02002115	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.02002118	Invalid number of consecutive periods.	Invalid number of consecutive periods.	Check whether the parameter meets requirements.
400	AOM.02002119	Invalid statistic.	Invalid statistic.	Check whether the parameter meets requirements.
400	AOM.02002120	Invalid comparison operator.	Invalid comparison operator.	Check whether the parameter meets requirements.
400	AOM.02002121	The rule does not exist.	The rule does not exist.	Check whether the parameter meets requirements.
400	AOM.02002400	Bad request.	Bad request.	Check whether the parameter meets requirements.
400	AOM.02003101	Invalid rule.	Invalid rule.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.0200310 2	The rule name already exists.	The rule name already exists.	Check whether the parameter meets requirements.
400	AOM.0200310 3	Invalid description.	Invalid description.	Check whether the parameter meets requirements.
400	AOM.0200310 4	Invalid threshold.	Invalid threshold.	Check whether the parameter meets requirements.
400	AOM.0200310 5	Invalid period.	Invalid period.	Check whether the parameter meets requirements.
400	AOM.0200310 6	Invalid email.	Invalid email.	Check whether the parameter meets requirements.
400	AOM.0200310 7	The maximum number of rules has been reached.	The maximum number of rules has been reached.	Check whether the parameter meets requirements.
400	AOM.0200310 8	Invalid time range.	Invalid time range.	Check whether the parameter meets requirements.
400	AOM.0200310 9	Invalid project ID.	Invalid project ID.	Check whether the parameter meets requirements.
400	AOM.0200311 0	Invalid limit.	Invalid limit.	Check whether the parameter meets requirements.
400	AOM.0200311 1	Invalid offset.	Invalid offset.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.02003112	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.02003115	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.02003118	Invalid number of consecutive periods.	Invalid number of consecutive periods.	Check whether the parameter meets requirements.
400	AOM.02003119	Invalid statistic.	Invalid statistic.	Check whether the parameter meets requirements.
400	AOM.02003120	Invalid comparison operator.	Invalid comparison operator.	Check whether the parameter meets requirements.
400	AOM.02003121	The rule does not exist.	The rule does not exist.	Check whether the parameter meets requirements.
400	AOM.02003400	Bad request.	Bad request.	Check whether the parameter meets requirements.
400	AOM.02004101	Invalid rule.	Invalid rule.	Check whether the parameter meets requirements.
400	AOM.02004102	The rule name already exists.	The rule name already exists.	Check whether the parameter meets requirements.
400	AOM.02004103	Invalid description.	Invalid description.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.02004104	Invalid threshold.	Invalid threshold.	Check whether the parameter meets requirements.
400	AOM.02004105	Invalid period.	Invalid period.	Check whether the parameter meets requirements.
400	AOM.02004106	Invalid email.	Invalid email.	Check whether the parameter meets requirements.
400	AOM.02004107	The maximum number of rules has been reached.	The maximum number of rules has been reached.	Check whether the parameter meets requirements.
400	AOM.02004108	Invalid time range.	Invalid time range.	Check whether the parameter meets requirements.
400	AOM.02004109	Invalid project ID.	Invalid project ID.	Check whether the parameter meets requirements.
400	AOM.02004110	Invalid limit.	Invalid limit.	Check whether the parameter meets requirements.
400	AOM.02004111	Invalid offset.	Invalid offset.	Check whether the parameter meets requirements.
400	AOM.02004112	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.02004115	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.02004118	Invalid number of consecutive periods.	Invalid number of consecutive periods.	Check whether the parameter meets requirements.
400	AOM.02004119	Invalid statistic.	Invalid statistic.	Check whether the parameter meets requirements.
400	AOM.02004120	Invalid comparison operator.	Invalid comparison operator.	Check whether the parameter meets requirements.
400	AOM.02004121	The rule does not exist.	The rule does not exist.	Check whether the parameter meets requirements.
400	AOM.02004400	Bad request.	Bad request.	Check whether the parameter meets requirements.
400	AOM.02005101	Invalid rule.	Invalid rule.	Check whether the parameter meets requirements.
400	AOM.02005102	The rule name already exists.	The rule name already exists.	Check whether the parameter meets requirements.
400	AOM.02005103	Invalid description.	Invalid description.	Check whether the parameter meets requirements.
400	AOM.02005104	Invalid threshold.	Invalid threshold.	Check whether the parameter meets requirements.
400	AOM.02005105	Invalid period.	Invalid period.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.02005106	Invalid email.	Invalid email.	Check whether the parameter meets requirements.
400	AOM.02005107	The maximum number of rules has been reached.	The maximum number of rules has been reached.	Check whether the parameter meets requirements.
400	AOM.02005108	Invalid time range.	Invalid time range.	Check whether the parameter meets requirements.
400	AOM.02005109	Invalid project ID.	Invalid project ID.	Check whether the parameter meets requirements.
400	AOM.02005110	Invalid limit.	Invalid limit.	Check whether the parameter meets requirements.
400	AOM.02005111	Invalid offset.	Invalid offset.	Check whether the parameter meets requirements.
400	AOM.02005112	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.02005115	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.02005118	Invalid number of consecutive periods.	Invalid number of consecutive periods.	Check whether the parameter meets requirements.
400	AOM.02005119	Invalid statistic.	Invalid statistic.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.02005120	Invalid comparison operator.	Invalid comparison operator.	Check whether the parameter meets requirements.
400	AOM.02005121	The rule does not exist.	The rule does not exist.	Check whether the parameter meets requirements.
400	AOM.02005400	Bad request.	Bad request.	Check whether the parameter meets requirements.
400	AOM.02021011	The number of alarm rules exceeds the limit.	The number of alarm rules exceeds the limit.	Delete unnecessary alarm rules.
400	AOM.02017001	Invalid param.	Invalid parameters.	Check whether the parameter meets requirements.
400	AOM.04007101	Invalid namespace.	Invalid namespace.	Check whether the parameter meets requirements.
400	AOM.04007102	Invalid inventory ID.	Invalid inventory ID.	Check whether the parameter meets requirements.
400	AOM.04007103	The project ID cannot be left blank.	The project ID cannot be left blank.	Check whether the parameter meets requirements.
400	AOM.04007104	Invalid type.	Invalid type.	Check whether the parameter meets requirements.
400	AOM.04007105	Invalid limit.	Invalid limit.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.04007106	Invalid offset.	Invalid offset.	Check whether the parameter meets requirements.
400	AOM.04007107	Invalid parent inventory ID.	Invalid parent inventory ID.	Check whether the parameter meets requirements.
400	AOM.04007108	Invalid type and relation.	Invalid type and relation.	Check whether the parameter meets requirements.
400	AOM.04007109	Invalid metric name.	Invalid metric name.	Check whether the parameter meets requirements.
400	AOM.04007110	Invalid relation.	Invalid relation.	Check whether the parameter meets requirements.
400	AOM.04007111	The type and relation cannot be left blank.	The type and relation cannot be left blank.	Check whether the parameter meets requirements.
400	AOM.04007112	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.04007115	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.04007118	Invalid number of consecutive periods.	Invalid number of consecutive periods.	Check whether the parameter meets requirements.
400	AOM.04007119	Invalid statistic.	Invalid statistic.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.04007120	Invalid comparison operator.	Invalid comparison operator.	Check whether the parameter meets requirements.
400	AOM.04007400	Bad request.	Bad request.	Check whether the parameter meets requirements.
400	AOM.04008101	Invalid namespace.	Invalid namespace.	Check whether the parameter meets requirements.
400	AOM.04008102	Invalid inventory ID.	Invalid inventory ID.	Check whether the parameter meets requirements.
400	AOM.04008103	The project ID cannot be left blank.	The project ID cannot be left blank.	Check whether the parameter meets requirements.
400	AOM.04008104	Invalid type.	Invalid type.	Check whether the parameter meets requirements.
400	AOM.04008105	Invalid limit.	Invalid limit.	Check whether the parameter meets requirements.
400	AOM.04008106	Invalid offset.	Invalid offset.	Check whether the parameter meets requirements.
400	AOM.04008107	Invalid parent inventory ID.	Invalid parent inventory ID.	Check whether the parameter meets requirements.
400	AOM.04008108	Invalid type and relation.	Invalid type and relation.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.04008109	Invalid metric name.	Invalid metric name.	Check whether the parameter meets requirements.
400	AOM.04008110	Invalid relation.	Invalid relation.	Check whether the parameter meets requirements.
400	AOM.04008111	The type and relation cannot be left blank.	The type and relation cannot be left blank.	Check whether the parameter meets requirements.
400	AOM.04008112	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.04008115	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.04008118	Invalid number of consecutive periods.	Invalid number of consecutive periods.	Check whether the parameter meets requirements.
400	AOM.04008119	Invalid statistic.	Invalid statistic.	Check whether the parameter meets requirements.
400	AOM.04008120	Invalid comparison operator.	Invalid comparison operator.	Check whether the parameter meets requirements.
400	AOM.04008400	Bad request.	Bad request.	Check whether the parameter meets requirements.
400	AOM.07001400	Invalid parameter.	Invalid parameter.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.11015003	The request body is empty.	The request body is empty.	Check whether the parameter meets requirements.
400	AOM.11015004	Parse request parameter failed.	Parse request parameter failed.	Check whether the parameter meets requirements.
400	AOM.11015005	Too many Prometheus instances.	Too many Prometheus instances.	Check whether the parameter meets requirements.
400	AOM.11017013	The Prometheus instance ID is empty.	The Prometheus instance ID is empty.	Check whether the parameter meets requirements.
400	AOM.11017014	Prometheus instance not found.	Prometheus instance not found.	Check whether the parameter meets requirements.
400	AOM.11017015	Invalid Prometheus instance name	Invalid Prometheus instance name.	Check whether the parameter meets requirements.
400	AOM.11017016	Invalid Prometheus instance ID.	Invalid Prometheus instance ID.	Check whether the parameter meets requirements.
400	AOM.11017017	Invalid Prometheus instance type.	Invalid Prometheus instance type.	Check whether the parameter meets requirements.
400	AOM.11017018	Invalid Prometheus instance status.	Invalid Prometheus instance status.	Check whether the parameter meets requirements.
400	AOM.11017019	Invalid application name.	Invalid application name.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.4001021	Group name repeat.	Duplicate group name.	Check whether the parameter meets requirements.
400	AOM.4001023	Group name must be set.	The group name cannot be empty.	Check whether the parameter meets requirements.
400	AOM.4001024	The recording field cannot be empty.	The recording field cannot be empty.	Check whether the parameter meets requirements.
400	AOM.4001025	The expression cannot be empty.	The expression cannot be empty.	Check whether the parameter meets requirements.
400	AOM.4001026	Recording rule format invalid.	Invalid recording rule format.	Check whether the parameter meets requirements.
400	AOM.4001028	The requested content exceeds the maximum.	The request is too long.	Check whether the parameter meets requirements.
400	AOM.05001002	The dashboard type is empty.	The dashboard type is empty.	Check whether the parameter meets requirements.
400	SVCSTG.INV.4000115	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000001	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000002	Invalid namespace.	Invalid namespace.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	SVCSTG_AMS_4000003	Dimensions cannot be left blank.	Dimensions cannot be left blank.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000005	Invalid metric data type.	Invalid metric data type.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000006	The metric data value cannot be left blank.	The metric data cannot be left blank.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000007	Invalid dimension.	Invalid dimension.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000008	The request exceeds 40 KB.	The request cannot exceed 40 KB.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000009	The number of elements in the dimension array exceeds the allowed limit.	Too many elements in the dimension array.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000010	Invalid collection time.	Invalid collection time.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000101	The namespace or alarm name is invalid, or the project ID is left blank.	The namespace or alarm name is invalid, or the project ID is left blank.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000102	The inventory ID is invalid, the metric data value is left blank, or the threshold rule name already exists.	The inventory ID is invalid, the metric data value is left blank, or the threshold rule name already exists.	Check whether the parameter meets requirements, or change the rule name and try again.

Status Code	Error Code	Message	Description	Solution
400	SVCSTG_AMS_4000103	Invalid range or alarm description.	Invalid range or alarm description.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000104	Invalid statistics or alarm threshold.	Invalid statistics or alarm threshold.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000105	Invalid limit, metric, or alarm period.	Invalid limit, metric, or alarm period.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000106	Invalid offset, time range, or email.	Invalid offset, time range, or email.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000107	The number of data points in a time range exceeds 1440 or the maximum number of threshold rules has been reached.	The number of data points in a time range exceeds 1440 or the maximum number of threshold rules has been reached.	Check whether the parameter meets the requirements or contact technical support.
400	SVCSTG_AMS_4000108	Invalid time range.	Invalid time range.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000109	Invalid metric name or project ID.	Invalid metric name or project ID.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000110	Invalid filled value or limit.	Invalid filled value or limit.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000111	Invalid offset.	Invalid offset.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	SVCSTG_AMS_4000115	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000118	Invalid number of consecutive periods.	Invalid number of consecutive periods.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000119	Invalid statistic.	Invalid statistic.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000120	Invalid comparison operator.	Invalid comparison operator.	Check whether the parameter meets requirements.
400	SVCSTG_AMS_4000121	The rule does not exist.	The rule does not exist.	Check whether the threshold rule exists.
400	SVCSTG_AMS_4001019	Send MetricData check param invalid	Invalid MetricData parameter.	Check whether the parameter meets requirements.
400	AOM.02006404	The rule to be deleted does not exist.	The rule does not exist.	Check whether the threshold rule exists.
400	AOM.02005404	The rule does not exist.	The rule does not exist.	Check whether the threshold rule exists.
400	AOM.02004404	The rule does not exist.	The rule does not exist.	Check whether the threshold rule exists.
400	AOM.02004001	Incorrect request parameter.	Incorrect request parameter.	Check whether the parameter meets requirements.
400	AOM.02005001	Incorrect request parameter.	Incorrect request parameter.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.02003001	Incorrect request parameter.	Incorrect request parameter.	Check whether the parameter meets requirements.
400	AOM.02021006	This rule actionId is invalid.	The action rule does not exist.	Check whether the parameter meets requirements.
400	AOM.02011400	Incorrect request parameter.	Incorrect request parameter.	Check whether the parameter meets requirements.
400	AOM.02013125	send kafka message failed	Failed to send data to Kafka.	Contact technical support.
400	AOM.02024016	Delete alarm rule name is empty.	The alarm rule is empty.	Check whether the parameter meets requirements.
400	AOM.08015002	The muteName is not exist	The silence rule name does not exist.	Check whether the parameter meets requirements.
400	AOM.08011001	The muteName is exist	The silence rule name already exists.	Check whether the parameter meets requirements.
400	AOM.08012003	Invalid request parameter.	Incorrect request body parameter.	Check whether the parameter meets requirements.
400	AOM.08018012	ActionRule already exists	The alarm action rule already exists.	Check whether the parameter meets requirements.
400	AOM.08020006	The action rule does not exist	The alarm action rule does not exist.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.08019006	The action rule does not exist	The alarm action rule does not exist.	Check whether the parameter meets requirements.
400	AOM.08032002	The request body is illegal	Invalid request body.	Check whether the parameter meets requirements.
400	AOM.08033002	The request body is illegal	Invalid request body.	Check whether the parameter meets requirements.
400	AOM.020015VCSTG_AMS_4000115	Invalid request parameter.	Incorrect request parameter.	Check whether the parameter meets requirements.
400	AOM.020035VCSTG_AMS_4000123	The rule does not exist	The rule does not exist.	Check whether the parameter meets requirements.
400	AOM.02001102	This Threshold rule name has been existed	The threshold rule already exists.	Check whether the parameter meets requirements.
400	AOM.32000003	Invalid parameter.	Invalid parameter.	Enter a valid parameter.
400	AOM.32000005	The object does not exist.	The object does not exist.	Enter a valid parameter.
401	AOM.0401	Unauthorized.	Incorrect authentication information.	Check the authentication information carried in the request.
401	AOM.02001401	Unauthorized.	Unauthorized.	Contact technical support.
401	AOM.02002401	Unauthorized.	Unauthorized.	Contact technical support.
401	AOM.02003401	Unauthorized.	Unauthorized.	Contact technical support.

Status Code	Error Code	Message	Description	Solution
401	AOM.02004401	Unauthorized.	Unauthorized.	Contact technical support.
401	AOM.02005401	Unauthorized.	Unauthorized.	Contact technical support.
401	AOM.04007401	Request unauthorized.	Request unauthorized.	Contact technical support.
401	AOM.04008401	Request unauthorized.	Request unauthorized.	Contact technical support.
401	AOM.05401000	auth failed	Authentication failed.	Check the authentication information carried in the request.
401	SVCSTG.AMS.2000051	auth failed	Authentication failed.	Check the authentication information carried in the request.
401	SVCSTG.AMS.4010000	auth failed	Authentication failed.	Check the authentication information carried in the request.
403	AOM.0403	Forbidden.	Insufficient permissions.	Check your permissions.
403	AOM.02001403	Forbidden.	Forbidden.	Contact technical support.
403	AOM.02002403	Forbidden.	Forbidden.	Contact technical support.
403	AOM.02003403	Forbidden.	Forbidden.	Contact technical support.
403	AOM.02004403	Forbidden.	Forbidden.	Contact technical support.
403	AOM.02005403	Forbidden.	Forbidden.	Contact technical support.
403	AOM.04007403	Request forbidden.	Request forbidden.	Contact technical support.
403	AOM.04008403	Request forbidden.	Request forbidden.	Contact technical support.

Status Code	Error Code	Message	Description	Solution
403	AOM.07001403	Insufficient permissions.	Insufficient permissions.	Obtain required permissions.
403	SVCSTG.INV.4030000	Insufficient permissions.	Insufficient permissions.	Use an authorized account.
403	AOM.32000002	No permission.	No permission.	Contact technical support.
404	SVCSTG.INV.4040000	Inventory does not exist.	The resource does not exist.	Check whether the resource exists.
429	AOM.07001429	The traffic has been restricted.	The traffic has been restricted.	Send fewer API call requests.
429	AOM.08001429	Too many requests.	Too many requests.	Check whether the parameter meets requirements.
500	AOM.0500	Internal server error.	Internal server error.	Contact technical support.
500	AOM.12000002	Internal server error.	Internal server error.	Contact technical support.
500	AOM.02001500	Internal server error.	Internal server error.	Contact technical support.
500	AOM.02001501	The Cassandra session is null.	The Cassandra session is null.	Contact technical support.
500	AOM.02001502	The Cassandra execution is abnormal.	The Cassandra execution is abnormal.	Contact technical support.
500	AOM.02002500	Internal server error.	Internal server error.	Contact technical support.
500	AOM.02002501	The Cassandra session is null.	The Cassandra session is null.	Contact technical support.
500	AOM.02002502	The Cassandra execution is abnormal.	The Cassandra execution is abnormal.	Contact technical support.
500	AOM.02003500	Internal server error.	Internal server error.	Contact technical support.

Status Code	Error Code	Message	Description	Solution
500	AOM.02003501	The Cassandra session is null.	The Cassandra session is null.	Contact technical support.
500	AOM.02003502	The Cassandra execution is abnormal.	The Cassandra execution is abnormal.	Contact technical support.
500	AOM.02004500	Internal server error.	Internal server error.	Contact technical support.
500	AOM.02004501	The Cassandra session is null.	The Cassandra session is null.	Contact technical support.
500	AOM.02004502	The Cassandra execution is abnormal.	The Cassandra execution is abnormal.	Contact technical support.
500	AOM.02005500	Internal server error.	Internal server error.	Contact technical support.
500	AOM.02005501	The Cassandra session is null.	The Cassandra session is null.	Contact technical support.
500	AOM.02005502	The Cassandra execution is abnormal.	The Cassandra execution is abnormal.	Contact technical support.
500	AOM.02021500	Internal server error.	Internal server error.	Contact technical support.
500	AOM.02022500	Internal server error.	Internal server error.	Contact technical support.
500	AOM.02024500	Internal server error.	Internal server error.	Contact technical support.
500	AOM.04007500	Internal server error.	Internal server error.	Contact technical support.
500	AOM.04007501	The Cassandra session is null.	The Cassandra session is null.	Contact technical support.
500	AOM.04007502	The Cassandra execution is abnormal.	The Cassandra execution is abnormal.	Contact technical support.

Status Code	Error Code	Message	Description	Solution
500	AOM.04008500	Internal server error.	Internal server error.	Contact technical support.
500	AOM.04008501	The Cassandra session is null.	The Cassandra session is null.	Contact technical support.
500	AOM.04008502	The Cassandra execution is abnormal.	The Cassandra execution is abnormal.	Contact technical support.
500	AOM.11014001	Internal server error.	Internal server error.	Contact technical support.
500	AOM.11014002	Incorrect conversion result.	Incorrect conversion result.	Contact technical support.
500	AOM.05001005	Internal server error.	Internal server error.	Contact technical support.
500	AOM.5001010	Internal server error.	Internal server error.	Contact technical support.
500	AOM.5001019	Recording rule exist for the prometheus instance.	The rule already exists.	Contact technical support.
500	APM.00000500	Internal Server Error	Internal server error.	Contact technical support.
500	AOM.08001500	Internal Server Error	Internal server error.	Contact technical support.
500	AOM.08020500	Internal server error.	Internal server error.	Contact technical support.
500	AOM.02001500	Internal server error.	Internal server error.	Contact technical support.
500	SVCSTG.INV.5000001	The Elasticsearch session is null.	The Elasticsearch session is null.	Contact technical support.
500	SVCSTG.INV.5000002	The Elasticsearch execution is abnormal.	The Elasticsearch execution is abnormal.	Contact technical support.

Status Code	Error Code	Message	Description	Solution
500	SVCSTG.INV.5000003	The ICMGR invocation is abnormal.	The ICMGR invocation is abnormal.	Contact technical support.
500	SVCSTG.INV.5000006	The rule name already exists.	The rule name already exists.	Use another name.
500	SVCSTG.INV.5000007	The maximum number of rules has been reached.	The maximum number of rules has been reached.	Delete unnecessary rules and add new ones.
500	SVCSTG_AMS_5000000	Internal server error.	Internal server error.	Contact technical support.
500	AOM.32000000	The service internal is abnormal.	An internal error occurred.	Contact technical support.
500	AOM.32000013	The Agent ID does not exist.	The Agent ID does not exist.	Contact technical support.
500	AOM.32000016	Database operation failed.	Database operation failed.	Contact technical support.
500	AOM.32000023	The Agent is abnormal.	The Agent is abnormal.	Contact technical support.
503	AOM.0503	Server unavailable.	Server unavailable.	Contact technical support.
503	AOM.02001503	Server unavailable.	Server unavailable.	Contact technical support.
503	AOM.02002503	Server unavailable.	Server unavailable.	Contact technical support.
503	AOM.02003503	Server unavailable.	Server unavailable.	Contact technical support.
503	AOM.02004503	Server unavailable.	Server unavailable.	Contact technical support.
503	AOM.02005503	Server unavailable.	Server unavailable.	Contact technical support.
503	AOM.04007503	Server unavailable.	Server unavailable.	Contact technical support.

Status Code	Error Code	Message	Description	Solution
503	AOM.04008503	Server unavailable.	Server unavailable.	Contact technical support.
503	AOM.07001503	Service error.	Service error.	Check whether the backend service is normal.
503	SVCSTG_AMS_5030001	The Cassandra session is null.	The Cassandra session is null.	Contact technical support.
503	SVCSTG_AMS_5030002	The Cassandra execution is abnormal.	The Cassandra execution is abnormal.	Contact technical support.

8.3 Obtaining an Account ID, Project ID, and Enterprise Project ID

Obtaining an Account ID and Project ID from the Console

When making API calls, you may need to enter the username, user ID, project name, and project ID in some URIs. You can obtain them on the **My Credentials** page.

- Step 1** Log in to the management console.
- Step 2** Hover over the username in the upper right corner, and choose **My Credentials**.
- Step 3** On the **API Credentials** page, view the username, account ID, project name, and project ID.

----End

Obtaining a Project ID by Calling an API

You can also call the API for [querying project information based on the specified criteria](#) to obtain a project ID.

The API is **GET https://{Endpoint}/v3/projects/**, where *{Endpoint}* indicates the Identity and Access Management (IAM) endpoint. For details, see [Regions and Endpoints](#). For details about API authentication, see [3.2 Authentication](#).

In the following example, **id** indicates the project ID.

```
{
  "projects": [
    {
      "domain_id": "65382450e8f64ac0870cd180d14e684b",
      "is_domain": false,
      "parent_id": "65382450e8f64ac0870cd180d14e684b",
    }
  ]
}
```

```

    "name": "cn-north-4",
    "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"
}
}

```

Obtaining an Enterprise Project ID from the Console

When making API calls, you may need to enter an enterprise project ID in some URIs. You can obtain it on the **Enterprise** page.

- Step 1** Log in to the management console.
- Step 2** Choose **Enterprise > Project Management** in the upper right corner of the page.
- Step 3** Copy the target enterprise project ID in the **Name/ID** column, or click the target enterprise project name to view more details.

----End

8.4 Common Request Headers

Table 8-2 Common request headers

Name	Description	Mandatory	Example
X-Auth-Token	User token.	Yes for token-based authentication	-
Content-Type	Content type. Enter application/json;charset=utf-8 .	Yes	application/json;charset=utf8
x-sdk-date	Time to send a request. The format is <i>YYYYMMDD'T'HHMMSS'Z</i> . GMT time is used.	Yes for AK/SK-based authentication	20160629T101459Z

Name	Description	Mandatory	Example
Authorization	Signature authentication information. It can be obtained from the result of request signing.	Yes for AK/SK-based authentication	-
Host	Request server information, which is obtained from the URL of a service API. The value is hostname[:port] . If no port is specified, the default port will be used. For HTTPS, port 443 is used by default.	Yes for AK/SK-based authentication	-

8.5 Common Response Headers

A response usually contains the following headers:

Table 8-3 Response headers

Name	Description	Example
Date	(Standard HTTP header) Time when a message is sent. This field complies with RFC822 definitions.	Mon, 12 Nov 2007 15:55:01 GMT
Server	(Standard HTTP header) Software that a server uses to process the request.	Apache
Content-Length	(Standard HTTP header) Length of the response body, which is represented by a decimal number and stored in bytes.	xxx

Name	Description	Example
Content-Type	(Standard HTTP header) Media type of the response body sent to the recipient.	application/json