

Application Operations Management

API Reference

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1 Before You Start

1.1 Overview

Welcome to use Application Operations Management (AOM). Application Operations Management (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.

1.2 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](#).

1.3 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](#).

1.4 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).

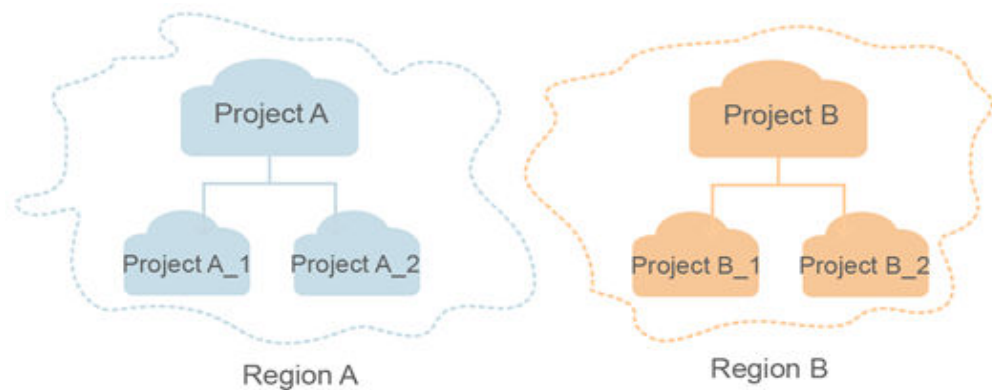
An IAM user can view the account ID and user ID on the **My Credentials** page of the console. The account name, username, and password will be required for API authentication.
- **Region**

Regions are geographic areas isolated from each other. Resources are region-specific and cannot be used across regions through internal network connections. For low network latency and quick resource access, select the nearest region.
- **AZ**

An AZ contains one or more physical data centers. Each AZ has independent cooling, fire extinguishing, moisture-proof, and electricity facilities. Within an AZ, computing, network, storage, and other resources are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to support cross-AZ high-availability systems.
- **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



- **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](#).

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 (AOM 2.0 only)	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 **obtaining a user token** as an example to demonstrate how to call an API. The obtained token can then be used to authenticate the calling of other APIs.

Request URI

A request URI is in the following format:

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

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

- **URI-scheme:** Protocol used to transmit requests. All APIs use HTTPS.
- **Endpoint:** Domain name or IP address of the server where the REST service is deployed. The endpoint varies depending on services and regions.

For example, the endpoint of IAM in the **AP-Singapore** region is **iam.ap-southeast-3.myhwcloud.com**.

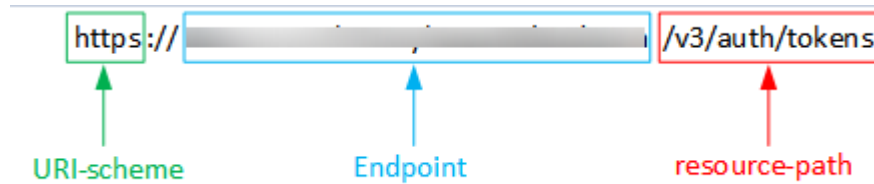
NOTICE

For monitoring, log, and auto scaling APIs, use AOM endpoints. For APM APIs, use APM endpoints. For details, see [1.3 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 obtain an IAM token in the *xxx* region, obtain the endpoint of IAM for this region and the **resource-path** in the URI of the API used to obtain a user token. Then, construct the URI as follows:

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

```
POST https://Endpoint/v3/auth/tokens
```

Request Header

You can also add additional header fields to a request, such as the fields required by a specified URI or HTTP method. For example, to request 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.
- **X-Auth-Token**: specifies a 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.

 NOTE

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

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

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

```
POST https://Endpoint/v3/auth/tokens
Content-Type: application/json
```

Request Body

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

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

In the case of the API used to obtain a user token, the request parameters and parameter description can be obtained from the API request. The following provides an example request with a body included. Replace *username*, *domainname*, ******* (login password), and *xxxxxxxxxxxxxxxxxxxx* (project ID) with the actual values. To learn how to obtain a project ID, see [8.3 Obtaining an Account ID and Project ID](#).

 NOTE

The **scope** parameter specifies where a token takes effect. You can set **scope** to an account or a project under an account.

```
POST https://Endpoint/v3/auth/tokens
Content-Type: application/json
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
          "password": "*****",
          "domain": {
            "name": "domainname"
          }
        }
      }
    }
  },
  "scope": {
    "project": {
      "id": "xxxxxxxxxxxxxxxxxxxx"
    }
  }
}
```

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

3.2 Authentication

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

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

Token-based Authentication

NOTE

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

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

In [3.1 Making an API Request](#), the process of calling the API used to **obtain a user token** is described. When calling an API to obtain a user token, you must set **auth.scope** in the request body to **project**.

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

```
GET https://Endpoint/v3/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

AK/SK-based Authentication

NOTE

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

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

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

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](#).

CAUTION

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

3.3 Response

Status Code

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

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request. For more information, see [8.1 Status Codes](#).

If status code **201** is returned for the calling of the API for [obtaining a user token](#), the request is successful.

Response Header

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

For the API used to obtain a user token, the **x-subject-token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

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

```
connection → keep-alive
content-type → application/json
date → Tue, 12 Feb 2019 06:52:13 GMT
server → Web Server
strict-transport-security → max-age=31536000; includeSubdomains;
transfer-encoding → chunked
via → proxy A
x-content-type-options → nosniff
x-download-options → noopen
x-frame-options → SAMEORIGIN
x-iam-trace-id → 218d45ab-d674-4995-af3a-2d0255ba41b5
x-subject-token → MIIYXQYJKoZIhvcNAQcCoIIYTCCEGoCAQExDTALBglghkgBZQMEAgEwgharBgkqhkiG9w0BBwGgghacBIIWmHsidG9rZW4iOansiZXhwaXJlc19hdCI6IjwMTktMDItMTNUMC
fj3KJs6YgKnpVNRbW2eZ5eb78SZOkajACgkIQ01wi4JIGzrpdl8LGXK5bdfq4lqHCYb8P4NaYONYeJcAgz/VeFYtLWT1GSO0zxKZmlQHq82HBqHdglZO9fuEbL5dMhdavj+33wEl
xHRCE9I87o+k9-
j+CMZSEB7bUGd5Uj6eRASXl1jipPEGA270g1FruooL6jggIFkNPQuFSOU8+uSsttVwRtnfsC+qTp22Rkd5MCqFGQ8LcuUxC3a+9CMBnOintWW7oeRUUVhVpxk8pxiX1wTEboX-
RzT6MUbvpGw-oPNFYxJECKnoH3HRozv0vN--n5d6Nbxg==
x-xss-protection → 1; mode=block;
```

Response Body

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

The following is part of the response body for the API used to obtain a user token.

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

```

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

```
{
  "errorCode": "SVCSTG_AMS_4000001",
  "errorMessage": "Request param invalid"
}
```

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. Minimum: 32 Maximum: 32

Request Parameters

Table 4-2 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 0 Maximum: 40960
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	OK: The request is successful.

Table 4-4 Event2alarmRuleBody

Parameter	Type	Description
user_id	String	Project ID. Minimum: 32 Maximum: 32
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. Minimum: 1 Maximum: 100

Parameter	Type	Description
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. Minimum: 0 Maximum: 1024
create_time	Integer	Creation time. Minimum: 0 Maximum: 999999999999999
update_time	Integer	Update time. Minimum: 0 Maximum: 999999999999999
resource_provider	String	Event source. Minimum: 0 Maximum: 64
metadata	metadata object	Source data.
enable	Boolean	Whether to enable the rule.
trigger_policies	Array of trigger_policies objects	Trigger policy. Array Length: 0 - 1024
alarm_type	String	Alarm type. notification: direct alarm reporting. denoising: alarm noise reduction. Minimum: 0 Maximum: 32 Enumeration values: <ul style="list-style-type: none"> • notification • denoising
action_rule	String	Alarm action rule. Minimum: 0 Maximum: 128
inhibit_rule	String	Alarm suppression rule. Minimum: 0 Maximum: 128

Parameter	Type	Description
route_group_rule	String	Alarm grouping rule. Minimum: 0 Maximum: 128
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. Minimum: 0 Maximum: 1024 Array Length: 0 - 1024

Table 4-6 trigger_policies

Parameter	Type	Description
id	Integer	ID. Minimum: 0 Maximum: 128
name	String	Event name. Minimum: 0 Maximum: 128
trigger_type	String	Trigger type. accumulative: Accumulated trigger. immediately: Immediate trigger. Minimum: 0 Maximum: 128 Enumeration values: <ul style="list-style-type: none"> • accumulative • immediately

Parameter	Type	Description
period	Integer	Trigger cycle. Minimum: 1 Maximum: 86400
operator	String	Comparison operator. Minimum: 0 Maximum: 8
count	Integer	Number of trigger times. Minimum: 1 Maximum: 100
level	String	Alarm severity. Minimum: 0 Maximum: 32

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. Minimum: 1 Maximum: 64
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. Minimum: 1 Maximum: 255
push_policy	Integer	SMN message push policy. Options: 0 and 1. Minimum: 0 Maximum: 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. Minimum: 1 Maximum: 100

Status code: 401

Table 4-8 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 403

Table 4-9 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 500**Table 4-10** Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

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");

        ICredential auth = new BasicCredentials()
            .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

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 = __import__('os').getenv("CLOUD_SDK_AK")
sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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.
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. Minimum: 32 Maximum: 32

Request Parameters

Table 4-12 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 0 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: • application/json

Table 4-13 Request body parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	Project ID. Minimum: 32 Maximum: 32
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. Minimum: 1 Maximum: 100
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. Minimum: 0 Maximum: 1024
create_time	Yes	Integer	Creation time. Minimum: 0 Maximum: 99999999999999

Parameter	Mandatory	Type	Description
update_time	No	Integer	Update time. Minimum: 0 Maximum: 99999999999999
resource_provider	No	String	Event source. Minimum: 0 Maximum: 64
metadata	Yes	metadata object	Source data.
enable	Yes	Boolean	Whether to enable the rule.
trigger_policies	Yes	Array of trigger_policies objects	Trigger policy. Array Length: 0 - 1024
alarm_type	Yes	String	Alarm type. notification: direct alarm reporting. denoising: alarm noise reduction. Minimum: 0 Maximum: 32 Enumeration values: <ul style="list-style-type: none"> • notification • denoising
action_rule	Yes	String	Alarm action rule. Minimum: 0 Maximum: 128
inhibit_rule	No	String	Alarm suppression rule. Minimum: 0 Maximum: 128
route_group_rule	No	String	Alarm grouping rule. Minimum: 0 Maximum: 128
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 4-14 metadata

Parameter	Mandatory	Type	Description
customField	No	Array of strings	Custom tag. Minimum: 0 Maximum: 1024 Array Length: 0 - 1024

Table 4-15 trigger_policies

Parameter	Mandatory	Type	Description
id	No	Integer	ID. Minimum: 0 Maximum: 128
name	No	String	Event name. Minimum: 0 Maximum: 128
trigger_type	No	String	Trigger type. accumulative: Accumulated trigger. immediately: Immediate trigger. Minimum: 0 Maximum: 128 Enumeration values: <ul style="list-style-type: none"> • accumulative • immediately
period	No	Integer	Trigger cycle. Minimum: 1 Maximum: 86400
operator	No	String	Comparison operator. Minimum: 0 Maximum: 8
count	No	Integer	Number of trigger times. Minimum: 1 Maximum: 100
level	No	String	Alarm severity. Minimum: 0 Maximum: 32

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. Minimum: 1 Maximum: 64
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. Minimum: 1 Maximum: 255
push_policy	Yes	Integer	SMN message push policy. Options: 0 and 1. Minimum: 0 Maximum: 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. Minimum: 1 Maximum: 100

Response Parameters

Status code: 400

Table 4-17 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 401**Table 4-18** Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 403

Table 4-19 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 500**Table 4-20** Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

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.

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");

        ICredential auth = new BasicCredentials()
            .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("xx=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(0);
body.withCreateTime(1669276173427);
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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = AddEvent2alarmRuleRequest()
        listTriggerPoliciesbody = [
            Event2alarmRuleBodyTriggerPolicies(
                id=0,
                name="",
```

```
        trigger_type="accumulative",
        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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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:= int32(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: int32(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. Minimum: 32 Maximum: 32

Request Parameters

Table 4-22 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	No	String	User token obtained from IAM. Minimum: 0 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: • application/json

Table 4-23 Request body parameters

Parameter	Mandatory	Type	Description
user_id	Yes	String	Project ID. Minimum: 32 Maximum: 32
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. Minimum: 1 Maximum: 100
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. Minimum: 0 Maximum: 1024
create_time	Yes	Integer	Creation time. Minimum: 0 Maximum: 99999999999999

Parameter	Mandatory	Type	Description
update_time	No	Integer	Update time. Minimum: 0 Maximum: 99999999999999
resource_provider	No	String	Event source. Minimum: 0 Maximum: 64
metadata	Yes	metadata object	Source data.
enable	Yes	Boolean	Whether to enable the rule.
trigger_policies	Yes	Array of trigger_policies objects	Trigger policy. Array Length: 0 - 1024
alarm_type	Yes	String	Alarm type. notification: direct alarm reporting. denoising: alarm noise reduction. Minimum: 0 Maximum: 32 Enumeration values: <ul style="list-style-type: none"> • notification • denoising
action_rule	Yes	String	Alarm action rule. Minimum: 0 Maximum: 128
inhibit_rule	No	String	Alarm suppression rule. Minimum: 0 Maximum: 128
route_group_rule	No	String	Alarm grouping rule. Minimum: 0 Maximum: 128
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. Minimum: 0 Maximum: 1024 Array Length: 0 - 1024

Table 4-25 trigger_policies

Parameter	Mandatory	Type	Description
id	No	Integer	ID. Minimum: 0 Maximum: 128
name	No	String	Event name. Minimum: 0 Maximum: 128
trigger_type	No	String	Trigger type. accumulative: Accumulated trigger. immediately: Immediate trigger. Minimum: 0 Maximum: 128 Enumeration values: <ul style="list-style-type: none">• accumulative• immediately
period	No	Integer	Trigger cycle. Minimum: 1 Maximum: 86400
operator	No	String	Comparison operator. Minimum: 0 Maximum: 8
count	No	Integer	Number of trigger times. Minimum: 1 Maximum: 100
level	No	String	Alarm severity. Minimum: 0 Maximum: 32

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. Minimum: 1 Maximum: 64
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. Minimum: 1 Maximum: 255
push_policy	Yes	Integer	SMN message push policy. Options: 0 and 1. Minimum: 0 Maximum: 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. Minimum: 1 Maximum: 100

Response Parameters

Status code: 400

Table 4-27 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 401

Table 4-28 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 403

Table 4-29 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

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

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

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.

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");

        ICredential auth = new BasicCredentials()
            .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(1669276304343);
body.withCreateTime(1669276304343);
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.getHttpStatusCode());
    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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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:= int32(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: int32(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. Minimum: 32 Maximum: 32

Request Parameters

Table 4-32 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: • 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. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 401**Table 4-35** Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

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

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 500

Table 4-37 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Example Requests

Delete event alarm rule "aomTestLts".

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

```
[ "aomTestLts" ]
```

Example Responses

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");

        ICredential auth = new BasicCredentials()
            .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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

auth := basic.NewCredentialsBuilder().
    WithAk(ak).
    WithSk(sk).
    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 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 4-38 Path Parameters

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

Table 4-39 Query Parameters

Parameter	Mandatory	Type	Description
event_sn	No	String	Alarm serial number.

Request Parameters

Table 4-40 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: • application/json

Response Parameters

Status code: 200

Table 4-41 Response body parameters

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

Table 4-42 NotifiedHistoriesResult

Parameter	Type	Description
event_sn	String	Alarm serial number. Minimum: 19 Maximum: 19
notifications	Array of Notifications objects	Notification result. Array Length: 0 - 100

Table 4-43 Notifications

Parameter	Type	Description
action_rule	String	Alarm action rule name. Minimum: 1 Maximum: 100
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 4-44 SmnResponse

Parameter	Type	Description
sent_time	Long	Sending time. Minimum: 0 Maximum: 9999999999
smn_notified_history	Array of SmnInfo objects	Content of a notification. Array Length: 1 - 100
smn_request_id	String	ID for requesting SMN. Minimum: 32 Maximum: 32
smn_response_body	String	Information returned after the SMN service is invoked. Minimum: 0 Maximum: 1024
smn_response_code	String	HTTP status code returned after the SMN service is invoked. Minimum: 3 Maximum: 3
smn_topic	String	SMN topic. Minimum: 1 Maximum: 100

Table 4-45 SmnInfo

Parameter	Type	Description
smn_notified_content	String	SMN message content. Minimum: 1 Maximum: 9999999
smn_subscription_status	String	SMN subscription status. Minimum: 1 Maximum: 1
smn_subscription_type	String	SMN subscription type. Minimum: 1 Maximum: 100

Status code: 401

Table 4-46 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 403**Table 4-47** Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 500


```
\n" to \\\"alarm\\\". The value of \\\"cpuCoreLimit\\\" is \\\"0.250\\\" and meets the threshold criterion \\\">=0\\\"<br>Suggestion: NA;<br></div></td> </table>\",
  \"smn_subscription_status\" : 1,
  \"smn_subscription_type\" : \"email\"
}, {
  \"smn_notified_content\" : \"[AOM][Critical_alarm_generated] \\nAlert Name: lhy_test_001;\\nCAS Application Name: app-1;\\nOccurrence Time: 2022-11-22 18:51:05 GMT+08:00;\\nLink: https://console.xxx/aom/alarmlist;\\nAlert Content: The threshold rule lhy_test_001 status changes from \\\"init\\\" to \\\"alarm\\\". The value of \\\"cpuCoreLimit\\\" is \\\"0.250\\\" and meets the threshold criterion \\\">=0\\\".;\\nThis message is configured in an AOM alarm rule by kaifat est. For more information, go to the AOM console.\\\",\",
  \"smn_subscription_status\" : 0,
  \"smn_subscription_type\" : \"sms\"
}, {
  \"smn_notified_content\" : \"[AOM][Critical_alarm_generated] \\nAlert Name: lhy_test_001;\\nCAS Application Name: app-1;\\nOccurrence Time: 2022-11-22 18:51:05 GMT+08:00;\\nLink: https://console.xxx/aom/alarmlist;\\nAlert Content: The threshold rule lhy_test_001 status changes from \\\"init\\\" to \\\"alarm\\\". The value of \\\"cpuCoreLimit\\\" is \\\"0.250\\\" and meets the threshold criterion \\\">=0\\\".;\\nThis message is configured in an AOM alarm rule by kaifat est. For more information, go to the AOM console.\\\",\",
  \"smn_subscription_status\" : 0,
  \"smn_subscription_type\" : \"sms\"
}],
  \"smn_request_id\" : \"600bfa7447da48068312bba0fb2b3afa\",
  \"smn_response_body\" : \"{\\\"message_id\\\":\\\"b5db3a3419b84cc29d438a7dba336c20\\\",\\\"request_id\\\":\\\"600bfa7447da48068312bba0fb2b3afa\\\"}\",
  \"smn_response_code\" : \"200\",
  \"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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListNotifiedHistoriesRequest request = new ListNotifiedHistoriesRequest();
        request.withEventSn("<event_sn>");
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
sk = __import__('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 = ListNotifiedHistoriesRequest()
    request.event_sn = "<event_sn>"
    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")

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

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

    request := &model.ListNotifiedHistoriesRequest{}
    eventSnRequest := "<event_sn>"
    request.EventSn = &eventSnRequest
    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](#).

4.1.6 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 4-49 Path Parameters

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

Request Parameters

Table 4-50 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none">• application/json

Table 4-51 Request body parameters

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

Table 4-52 DeleteMuteRuleName

Parameter	Mandatory	Type	Description
name	Yes	String	Name of the silence rule to be deleted. Minimum: 1 Maximum: 100

Response Parameters

Status code: 400

Table 4-53 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12

Parameter	Type	Description
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 401

Table 4-54 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 403

Table 4-55 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12

Parameter	Type	Description
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 500

Table 4-56 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 13 Maximum: 13
error_msg	String	Response message. Minimum: 1 Maximum: 100
trace_id	String	Response ID. Minimum: 12 Maximum: 12

Example Requests

Delete silent rule "1112222".

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

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

Example Responses

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");

    ICredential auth = new BasicCredentials()
        .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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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.
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](#).

4.1.7 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 4-57 Path Parameters

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

Request Parameters

Table 4-58 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: • application/json

Table 4-59 Request body parameters

Parameter	Mandatory	Type	Description
create_time	No	Long	Creation time. Minimum: 0 Maximum: 99999999999999
desc	No	String	Rule description. Minimum: 0 Maximum: 1024
match	Yes	Array<Array< Match >>	Match condition of the rule. Up to 10 serial or parallel conditions can be created. Array Length: 1 - 10
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. Minimum: 1 Maximum: 100
timezone	Yes	String	Time zone. Minimum: 1 Maximum: 32

Parameter	Mandatory	Type	Description
update_time	No	Long	Modification time. Minimum: 0 Maximum: 99999999999999
user_id	No	String	User ID. Minimum: 32 Maximum: 32

Table 4-60 Match

Parameter	Mandatory	Type	Description
key	Yes	String	Key specified in the metadata for matching. Minimum: 1 Maximum: 128
operate	Yes	String	Match mode. EXIST: Exist. REGEX: Regular expression. EQUALS: Equal to. Minimum: 1 Maximum: 100 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. Minimum: 1 Maximum: 256 Array Length: 0 - 5

Table 4-61 MuteConfig

Parameter	Mandatory	Type	Description
ends_at	No	Long	End time of the silence rule. Minimum: 0 Maximum: 9999999999

Parameter	Mandatory	Type	Description
scope	No	Array of integers	When type is set to WEEKLY or MONTHLY, scope cannot be empty. Minimum: 0 Maximum: 31 Array Length: 1 - 100
starts_at	Yes	Long	Start time of the silence rule. Minimum: 0 Maximum: 999999999
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. Minimum: 1 Maximum: 100 Enumeration values: <ul style="list-style-type: none"> • FIXED • DAILY • WEEKLY • MONTHLY

Response Parameters

Status code: **400**

Table 4-62 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024

Parameter	Type	Description
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 401**Table 4-63** Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 403**Table 4-64** Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024

Parameter	Type	Description
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 500

Table 4-65 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 13 Maximum: 13
error_msg	String	Response message. Minimum: 1 Maximum: 100
trace_id	String	Response ID. Minimum: 12 Maximum: 12

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: 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 "2xxxxxxxxxxxxxxxxxxxxxxxxcf".

```
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");

        ICredential auth = new BasicCredentials()
            .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("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 {
            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.getStatusCode());
            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
```

```
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 = __import__('os').getenv("CLOUD_SDK_AK")  
    sk = __import__('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 = 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="2xxxxxxxxxxxxxxxxxxxxxxxxxxxxcf",  
            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 "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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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](#).

4.1.8 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 4-66 Path Parameters

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

Request Parameters

Table 4-67 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: <ul style="list-style-type: none"> application/json

Table 4-68 Request body parameters

Parameter	Mandatory	Type	Description
create_time	No	Long	Creation time. Minimum: 0 Maximum: 99999999999999
desc	No	String	Rule description. Minimum: 0 Maximum: 1024
match	Yes	Array<Array< Match >>	Match condition of the rule. Up to 10 serial or parallel conditions can be created. Array Length: 1 - 10
mute_config	Yes	MuteConfig object	Time when the rule takes effect.

Parameter	Mandatory	Type	Description
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. Minimum: 1 Maximum: 100
timezone	Yes	String	Time zone. Minimum: 1 Maximum: 32
update_time	No	Long	Modification time. Minimum: 0 Maximum: 99999999999999
user_id	No	String	User ID. Minimum: 32 Maximum: 32

Table 4-69 Match

Parameter	Mandatory	Type	Description
key	Yes	String	Key specified in the metadata for matching. Minimum: 1 Maximum: 128
operate	Yes	String	Match mode. EXIST: Exist. REGEX: Regular expression. EQUALS: Equal to. Minimum: 1 Maximum: 100 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. Minimum: 1 Maximum: 256 Array Length: 0 - 5

Table 4-70 MuteConfig

Parameter	Mandatory	Type	Description
ends_at	No	Long	End time of the silence rule. Minimum: 0 Maximum: 999999999
scope	No	Array of integers	When type is set to WEEKLY or MONTHLY, scope cannot be empty. Minimum: 0 Maximum: 31 Array Length: 1 - 100
starts_at	Yes	Long	Start time of the silence rule. Minimum: 0 Maximum: 999999999
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. Minimum: 1 Maximum: 100 Enumeration values: <ul style="list-style-type: none"> ● FIXED ● DAILY ● WEEKLY ● MONTHLY

Response Parameters

Status code: 400

Table 4-71 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 401**Table 4-72** Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 403

Table 4-73 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 500

Table 4-74 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 13 Maximum: 13
error_msg	String	Response message. Minimum: 1 Maximum: 100
trace_id	String	Response ID. Minimum: 12 Maximum: 12

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" : "2xxxxxxxxxxxxxxxxxxxxxxxxcf"
}
```

Example Responses

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");

        ICredential auth = new BasicCredentials()
            .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("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 {
    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.getHttpStatusCode());
    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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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](#).

4.1.9 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 4-75 Path Parameters

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

Request Parameters

Table 4-76 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: • application/json

Response Parameters

Status code: **200**

Table 4-77 Response body parameters

Parameter	Type	Description
[items]	Array of MuteRule objects	OK: The request is successful.

Table 4-78 MuteRule

Parameter	Type	Description
create_time	Long	Creation time. Minimum: 0 Maximum: 999999999999999
desc	String	Rule description. Minimum: 0 Maximum: 1024
match	Array<Array< Match >>	Match condition of the rule. Up to 10 serial or parallel conditions can be created. Array Length: 1 - 10
mute_config	MuteConfig object	Time when the rule takes effect.
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. Minimum: 1 Maximum: 100
timezone	String	Time zone. Minimum: 1 Maximum: 32
update_time	Long	Modification time. Minimum: 0 Maximum: 999999999999999
user_id	String	User ID. Minimum: 32 Maximum: 32

Table 4-79 Match

Parameter	Type	Description
key	String	Key specified in the metadata for matching. Minimum: 1 Maximum: 128

Parameter	Type	Description
operate	String	Match mode. EXIST: Exist. REGEX: Regular expression. EQUALS: Equal to. Minimum: 1 Maximum: 100 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. Minimum: 1 Maximum: 256 Array Length: 0 - 5

Table 4-80 MuteConfig

Parameter	Type	Description
ends_at	Long	End time of the silence rule. Minimum: 0 Maximum: 999999999
scope	Array of integers	When type is set to WEEKLY or MONTHLY, scope cannot be empty. Minimum: 0 Maximum: 31 Array Length: 1 - 100
starts_at	Long	Start time of the silence rule. Minimum: 0 Maximum: 999999999

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. Minimum: 1 Maximum: 100 Enumeration values: <ul style="list-style-type: none"> ● FIXED ● DAILY ● WEEKLY ● MONTHLY

Status code: 401

Table 4-81 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 403

Table 4-82 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 500

Table 4-83 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 13 Maximum: 13
error_msg	String	Response message. Minimum: 1 Maximum: 100
trace_id	String	Response ID. Minimum: 12 Maximum: 12

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");

        ICredential auth = new BasicCredentials()
            .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.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

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

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 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 4-84 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
rule_name	Yes	String	Alarm rule name. Minimum: 1 Maximum: 100

Request Parameters

Table 4-85 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
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 4-86** 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. Minimum: 1 Maximum: 100
project_id	String	Project ID. Minimum: 32 Maximum: 32
user_name	String	Member account name. Minimum: 1 Maximum: 100
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. Minimum: 0 Maximum: 1024

Parameter	Type	Description
type	String	Action type. Default: Notification. Minimum: 1 Maximum: 1 Enumeration values: <ul style="list-style-type: none"> • 1 • 2
notification_template	String	Message template. Minimum: 1 Maximum: 100
create_time	Long	Creation time. Minimum: 0 Maximum: 999999999999999
update_time	Long	Modification time Minimum: 0 Maximum: 999999999999999
time_zone	String	Time zone. Minimum: 1 Maximum: 100
smn_topics	Array of SmnTopics objects	SMN topic. The total number of topics cannot exceed 5. Array Length: 1 - 5

Table 4-87 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. Minimum: 1 Maximum: 64
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. Minimum: 1 Maximum: 255

Parameter	Type	Description
push_policy	Integer	SMN message push policy. Options: 0 and 1. Minimum: 0 Maximum: 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. Minimum: 1 Maximum: 100

Status code: 400

Table 4-88 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 13 Maximum: 13
error_msg	String	Response message. Minimum: 1 Maximum: 100
trace_id	String	Response ID. Minimum: 12 Maximum: 12

Status code: 401

Table 4-89 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 403**Table 4-90** Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 500

Table 4-91 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 13 Maximum: 13
error_msg	String	Response message. Minimum: 1 Maximum: 100
trace_id	String	Response ID. Minimum: 12 Maximum: 12

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" : ""
}
```

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 ShowActionRuleSolution {

    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();
ShowActionRuleRequest request = new ShowActionRuleRequest();
try {
    ShowActionRuleResponse response = client.showActionRule(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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ShowActionRuleRequest()
        response = client.show_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")

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

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

request := &model.ShowActionRuleRequest{}
response, err := client.ShowActionRule(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 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 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 4-92 Path Parameters

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

Request Parameters

Table 4-93 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: • application/json

Table 4-94 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. Minimum: 1 Maximum: 100
project_id	Yes	String	Project ID. Minimum: 32 Maximum: 32
user_name	Yes	String	Member account name. Minimum: 1 Maximum: 100
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. Minimum: 0 Maximum: 1024
type	Yes	String	Action type. Default: Notification. Minimum: 1 Maximum: 1 Enumeration values: <ul style="list-style-type: none">• 1• 2
notification_template	Yes	String	Message template. Minimum: 1 Maximum: 100
create_time	No	Long	Creation time. Minimum: 0 Maximum: 999999999999999

Parameter	Mandatory	Type	Description
update_time	No	Long	Modification time Minimum: 0 Maximum: 99999999999999
time_zone	No	String	Time zone. Minimum: 1 Maximum: 100
smn_topics	Yes	Array of SmnTopics objects	SMN topic. The total number of topics cannot exceed 5. Array Length: 1 - 5

Table 4-95 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. Minimum: 1 Maximum: 64
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. Minimum: 1 Maximum: 255
push_policy	Yes	Integer	SMN message push policy. Options: 0 and 1. Minimum: 0 Maximum: 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. Minimum: 1 Maximum: 100

Response Parameters

Status code: 400

Table 4-96 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 13 Maximum: 13
error_msg	String	Response message. Minimum: 1 Maximum: 100
trace_id	String	Response ID. Minimum: 12 Maximum: 12

Status code: 401

Table 4-97 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 403**Table 4-98** Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 500

Table 4-99 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 13 Maximum: 13
error_msg	String	Response message. Minimum: 1 Maximum: 100
trace_id	String	Response ID. Minimum: 12 Maximum: 12

Example Requests

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".

```
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": "kxxxxxxxxt",
  "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");  
  
        ICredential auth = new BasicCredentials()  
            .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("kxxxxxxt");
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 "kxxxxxxt", user ID is "21axxxxxxxxxxxxxxxxx47c", and notification template is "aom.built-in.template.en".

```
# coding: utf-8

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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="kxxxxxxx",  
        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 "kxxxxxxx", 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")  
  
    auth := basic.NewCredentialsBuilder().  
        WithAk(ak).  
        WithSk(sk).  
        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.
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 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 4-100 Path Parameters

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

Request Parameters

Table 4-101 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: • application/json

Table 4-102 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 4-103 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 13 Maximum: 13
error_msg	String	Response message. Minimum: 1 Maximum: 100
trace_id	String	Response ID. Minimum: 12 Maximum: 12

Status code: 401

Table 4-104 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 403

Table 4-105 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 500**Table 4-106** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 13 Maximum: 13
error_msg	String	Response message. Minimum: 1 Maximum: 100
trace_id	String	Response ID. Minimum: 12 Maximum: 12

Example Requests

Delete alarm action rule 1112222.

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

```
[ "1112222" ]
```

Example Responses**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");

        ICredential auth = new BasicCredentials()
            .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("111222");
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = DeleteActionRuleRequest()
listBodybody = [
    "1112222"
]
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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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.
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 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 4-107 Path Parameters

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

Request Parameters

Table 4-108 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Enumeration values: • application/json

Table 4-109 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. Minimum: 1 Maximum: 100
project_id	Yes	String	Project ID. Minimum: 32 Maximum: 32
user_name	Yes	String	Member account name. Minimum: 1 Maximum: 100
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. Minimum: 0 Maximum: 1024

Parameter	Mandatory	Type	Description
type	Yes	String	Action type. Default: Notification. Minimum: 1 Maximum: 1 Enumeration values: <ul style="list-style-type: none"> • 1 • 2
notification_template	Yes	String	Message template. Minimum: 1 Maximum: 100
create_time	No	Long	Creation time. Minimum: 0 Maximum: 999999999999999
update_time	No	Long	Modification time Minimum: 0 Maximum: 999999999999999
time_zone	No	String	Time zone. Minimum: 1 Maximum: 100
smn_topics	Yes	Array of SmnTopics objects	SMN topic. The total number of topics cannot exceed 5. Array Length: 1 - 5

Table 4-110 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. Minimum: 1 Maximum: 64

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. Minimum: 1 Maximum: 255
push_policy	Yes	Integer	SMN message push policy. Options: 0 and 1. Minimum: 0 Maximum: 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. Minimum: 1 Maximum: 100

Response Parameters

Status code: **400**

Table 4-111 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 13 Maximum: 13

Parameter	Type	Description
error_msg	String	Response message. Minimum: 1 Maximum: 100
trace_id	String	Response ID. Minimum: 12 Maximum: 12

Status code: 401

Table 4-112 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 403

Table 4-113 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024

Parameter	Type	Description
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 500

Table 4-114 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 13 Maximum: 13
error_msg	String	Response message. Minimum: 1 Maximum: 100
trace_id	String	Response ID. Minimum: 12 Maximum: 12

Example Requests

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

```
https://{endpoint}/v2/{project_id}/alert/action-rules
{
  "project_id": "2xxxxxxxxxxxxxxxxxxxxcf",
  "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: 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 "2xxxxxxxxxxxxxxxxxxcf".

```
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");

        ICredential auth = new BasicCredentials()
            .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();
            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 "2xxxxxxxxxxxxxxxxxxxxcf".

```
# coding: utf-8

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = UpdateActionRuleRequest()
        listSmnTopicsbody = [
            SmnTopics(
                display_name="",
                name="lhy_test01",
                push_policy=0,
                topic_urn="urn:smn:xxx:2xxxxxxxxxxxxxxxxx:cf: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="kxxxxxxx",
            project_id="2xxxxxxxxxxxxxxxxx:cf",
            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 "2xxxxxxxxxxxxxxxxx:cf".

```
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")

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

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.

Error Codes

See [Error Codes](#).

4.1.14 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 4-115 Path Parameters

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

Request Parameters

Table 4-116 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
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 4-117 Response body parameters

Parameter	Type	Description
action_rules	Array of ActionRule objects	Alarm action rule list. Array Length: 0 - 1000

Table 4-118 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. Minimum: 1 Maximum: 100
project_id	String	Project ID. Minimum: 32 Maximum: 32
user_name	String	Member account name. Minimum: 1 Maximum: 100

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. Minimum: 0 Maximum: 1024
type	String	Action type. Default: Notification. Minimum: 1 Maximum: 1 Enumeration values: <ul style="list-style-type: none"> • 1 • 2
notification_template	String	Message template. Minimum: 1 Maximum: 100
create_time	Long	Creation time. Minimum: 0 Maximum: 999999999999999
update_time	Long	Modification time Minimum: 0 Maximum: 999999999999999
time_zone	String	Time zone. Minimum: 1 Maximum: 100
smn_topics	Array of SmnTopics objects	SMN topic. The total number of topics cannot exceed 5. Array Length: 1 - 5

Table 4-119 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. Minimum: 1 Maximum: 64

Parameter	Type	Description
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. Minimum: 1 Maximum: 255
push_policy	Integer	SMN message push policy. Options: 0 and 1. Minimum: 0 Maximum: 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. Minimum: 1 Maximum: 100

Status code: 401

Table 4-120 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128

Parameter	Type	Description
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 403

Table 4-121 Response body parameters

Parameter	Type	Description
error_code	String	Error code. Minimum: 12 Maximum: 12
error_msg	String	Error message. Minimum: 0 Maximum: 1024
error_type	String	Error type. Minimum: 0 Maximum: 128
trace_id	String	Request ID. Minimum: 32 Maximum: 32

Status code: 500

Table 4-122 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 13 Maximum: 13
error_msg	String	Response message. Minimum: 1 Maximum: 100
trace_id	String	Response ID. Minimum: 12 Maximum: 12

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" : "2xxxxxxxxxxxxxxxxxxxxf",
    "rule_name" : "1112222",
    "smn_topics" : [ {
      "display_name" : "",
      "name" : "gcmtest",
      "push_policy" : 0,
      "status" : 0,
      "topic_urn" : "urn:smn:xxx:2xxxxxxxxxxxxxxxxxxxxf: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");

        ICredential auth = new BasicCredentials()
            .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.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

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 = __import__('os').getenv("CLOUD_SDK_AK")
sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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](#).

4.1.15 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 4-123 Path Parameters

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

Table 4-124 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 4-125 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 4-126 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 4-127 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 4-128 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 4-129 Response body parameters

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

Table 4-130 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).
metadata	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	Map<String,Object>	Additional field for an event or alarm, which can be left blank.
attach_rule	Map<String,Object>	Reserved field for an event or alarm, which can be left blank.

Parameter	Type	Description
id	String	Event or alarm ID, which is automatically generated by the system.

Status code: 400

Table 4-131 Response body parameters

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

Status code: 401

Table 4-132 Response body parameters

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

Status code: 403

Table 4-133 Response body parameters

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

Status code: 500

Table 4-134 Response body parameters

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

Status code: 503

Table 4-135 Response body parameters

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

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_probableCause_zh_cn": "Possible Causes",
      "message": "Alarm Details",
      "alarm_fix_suggestion_zh_cn": "Suggestions"
    }
  } ]
}
```



```
},
"attach_rule" : { },
"ends_at" : 0,
"id" : "6775161208461480000",
"metadata" : {
  "event_type" : "alarm",
  "event_severity" : "Major",
  "resource_type" : "vm",
  "event_name" : "test",
  "resource_id" : "ecs123",
  "resource_provider" : "ecs"
},
"starts_at" : 16377362908000,
"timeout" : 60000
}]
}
```

Status code: 400

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

```
{
  "error_code" : "AOM.0400",
  "error_message" : "param error",
  "error_type" : "SC_BAD_REQUEST"
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{
  "error_code" : "AOM.0401",
  "error_message" : "you dont have permission",
  "error_type" : "SC_UNAUTHORIZED"
}
```

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" : "you dont have permission",
  "error_type" : "SC_FORBIDDEN"
}
```

Status code: 500

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

```
{
  "error_code" : "AOM.0500",
  "error_message" : "SC_INTERNAL_SERVER_ERROR",
  "error_type" : "SC_INTERNAL_SERVER_ERROR"
}
```

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");  
  
        ICredential auth = new BasicCredentials()  
            .withAk(ak)  
            .withSk(sk);  
  
        AomClient client = AomClient.newBuilder()  
            .withCredential(auth)  
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))  
            .build();  
        ListEventsRequest request = new ListEventsRequest();  
        request.withType(ListEventsRequest.TypeEnum.fromValue("<type>"));  
        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.getHttpStatusCode());
    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
```

```
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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListEventsRequest()
```

```
        request.type = "<type>"
```

```
        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")

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

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

    request := &model.ListEventsRequest{}
    typeRequest := model.GetListEventsRequestTypeEnum().<TYPE>
    request.Type = &typeRequest
    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.
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](#).

4.1.16 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 4-136 Path Parameters

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

Table 4-137 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 4-138 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 4-139 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 4-140 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 4-141 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 4-142 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.

Table 4-143 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 4-144 Response body parameters

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

Status code: 401

Table 4-145 Response body parameters

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

Status code: 403**Table 4-146** Response body parameters

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

Status code: 500**Table 4-147** Response body parameters

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

Status code: 503**Table 4-148** Response body parameters

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

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": "Minor",  
    "values": [ 0, 0, 0, 0, 0, 0 ]  
  }, {  
    "event_severity": "Info",  
    "values": [ 0, 0, 0, 0, 0, 0 ]  
  } ],  
  "step": 60000,  
  "timestamps": [ 1642820700000, 1642820760000, 1642820820000, 1642820880000, 1642820940000,  
1642821000000 ]  
}
```

Status code: 400

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

```
{  
  "error_code": "AOM.0400",  
  "error_message": "param error",  
  "error_type": "SC_BAD_REQUEST"  
}
```

Status code: 401

Unauthorized: The authentication information is incorrect or invalid.

```
{  
  "error_code": "AOM.0401",  
  "error_message": "you dont have permission",  
  "error_type": "SC_UNAUTHORIZED"  
}
```

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": "you dont have permission",  
  "error_type": "SC_FORBIDDEN"  
}
```

Status code: 500

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

```
{  
  "error_code": "AOM.0500",  
  "error_message": "SC_INTERNAL_SERVER_ERROR",  
}
```

```
"error_type" : "SC_INTERNAL_SERVER_ERROR"
}
```

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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        CountEventsRequest request = new CountEventsRequest();
        request.withType(CountEventsRequest.TypeEnum.fromValue("<type>"));
        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();
        }
    }
}
```

```
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 on the step basis in a specified time range.

```
# coding: utf-8

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = CountEventsRequest()
        request.type = "<type>"
        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")

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

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

request := &model.CountEventsRequest{}
typeRequest:= model.GetCountEventsRequestTypeEnum().<TYPE>
request.Type = &typeRequest
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](#).

4.1.17 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 4-149 Path Parameters

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

Table 4-150 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 4-151 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
x-enterprise-prject-id	No	String	ID of the enterprise project to which the alarm belongs.

Table 4-152 Request body parameters

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

Table 4-153 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

None

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

None

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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
```

```
.withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
PushEventsRequest request = new PushEventsRequest();
request.setAction(PushEventsRequest.ActionEnum.fromValue("<action>"));
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
```

```
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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = PushEventsRequest()
    request.action = "<action>"
    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")

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

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

```

Build()

request := &model.PushEventsRequest{}
actionRequest:= model.GetPushEventsRequestActionEnum().<ACTION>
request.Action = &actionRequest
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.

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 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. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

POST /v2/{project_id}/series

Table 4-154 Path Parameters

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

Table 4-155 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	String	Maximum number of returned records. Value range: 1–1000. Default value: 1000.

Parameter	Mandatory	Type	Description
offset	No	String	Start position of a pagination query. The value is a non-negative integer.

Request Parameters

Table 4-156 Request body parameters

Parameter	Mandatory	Type	Description
series	Yes	Array of QuerySeries OptionParam objects	Array for querying time series objects.

Table 4-157 QuerySeriesOptionParam

Parameter	Mandatory	Type	Description
namespace	Yes	String	Namespace of time series objects. Value range: PAAS.CONTAINER, PAAS.NODE, PAAS.SLA, PAAS.AGGR, or CUSTOMMETRICS. PAAS.CONTAINER: namespace of application time series objects. PAAS.NODE: namespace of node time series objects. PAAS.SLA: namespace of SLA time series objects. PAAS.AGGR: namespace of cluster time series objects. CUSTOMMETRICS: namespace of custom time series objects.
metric_name	No	String	Time series name. Length: 1 to 255 characters. Values: cpuUsage: CPU usage. cpuCoreUsed: used CPU cores. Custom time series names.

Parameter	Mandatory	Type	Description
dimensions	No	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.

Table 4-158 DimensionSeries

Parameter	Mandatory	Type	Description
name	No	String	Dimension name.
value	No	String	Dimension value.

Response Parameters

Status code: 200

Table 4-159 Response body parameters

Parameter	Type	Description
series	Array of SeriesQueryItemResult objects	List of time series objects.
meta_data	MetaDataSeries object	Metadata, including pagination information.

Table 4-160 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 4-161 DimensionSeries

Parameter	Type	Description
name	String	Dimension name.
value	String	Dimension value.

Table 4-162 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.

Status code: 400

Table 4-163 Response body parameters

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

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"  
  } ]  
} ]  
}
```

Status code: 400

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

```
{  
  "error_code" : "AOM.04007001",  
  "error_msg" : "please check request param",  
  "error_type" : "BAD_REQUEST"  
}
```

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");  
  
        ICredential auth = new BasicCredentials()  
            .withAk(ak)  
            .withSk(sk);  
  
        AomClient client = AomClient.newBuilder()  
            .withCredential(auth)  
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
```

```
        .build();
ListSeriesRequest request = new ListSeriesRequest();
request.withLimit("<limit>");
request.withOffset("<offset>");
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.getHttpStatusCode());
    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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListSeriesRequest()
        request.limit = "<limit>"
        request.offset = "<offset>"
        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")

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

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

    request := &model.ListSeriesRequest{}
    limitRequest := "<limit>"
    request.Limit = &limitRequest
    offsetRequest := "<offset>"
    request.Offset = &offsetRequest
    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.
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 time period. You can specify a dimension or period to query. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

POST /v2/{project_id}/samples

Table 4-164 Path Parameters

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

Table 4-165 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 4-166 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.endTimeInMi llis.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 4-167 QuerySample

Parameter	Mandatory	Type	Description
namespace	Yes	String	Namespace of time series objects. Value range: PAAS.CONTAINER, PAAS.NODE, PAAS.SLA, PAAS.AGGR, or CUSTOMMETRICS. PAAS.CONTAINER: namespace of application time series objects. PAAS.NODE: namespace of node time series objects. PAAS.SLA: namespace of SLA time series objects. PAAS.AGGR: namespace of cluster time series objects. CUSTOMMETRICS: namespace of custom time series objects.
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	Time series name. Length: 1 to 255 characters. Values: cpuUsage: CPU usage. cpuCoreUsed: used CPU cores. Custom time series names.

Table 4-168 DimensionSeries

Parameter	Mandatory	Type	Description
name	No	String	Dimension name.
value	No	String	Dimension value.

Response Parameters

Status code: 200

Table 4-169 Response body parameters

Parameter	Type	Description
samples	Array of SampleData Value objects	List of time series objects.

Table 4-170 SampleDataValue

Parameter	Type	Description
sample	QuerySample object	List of time series objects.
data_points	Array of MetricDataPoints objects	Time series data.

Table 4-171 QuerySample

Parameter	Type	Description
namespace	String	Namespace of time series objects. Value range: PAAS.CONTAINER, PAAS.NODE, PAAS.SLA, PAAS.AGGR, or CUSTOMMETRICS. PAAS.CONTAINER: namespace of application time series objects. PAAS.NODE: namespace of node time series objects. PAAS.SLA: namespace of SLA time series objects. PAAS.AGGR: namespace of cluster time series objects. CUSTOMMETRICS: namespace of custom time series objects.
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.
metric_name	String	Time series name. Length: 1 to 255 characters. Values: cpuUsage: CPU usage. cpuCoreUsed: used CPU cores. Custom time series names.

Table 4-172 DimensionSeries

Parameter	Type	Description
name	String	Dimension name.
value	String	Dimension value.

Table 4-173 MetricDataPoints

Parameter	Type	Description
statistics	Array of StatisticValue objects	Statistic.
timestamp	Long	Timestamp.
unit	String	Time series unit.

Table 4-174 StatisticValue

Parameter	Type	Description
statistic	String	Statistic.
value	Double	Statistical result.

Status code: 400

Table 4-175 Response body parameters

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

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.04008001",  
  "error_msg": "please check request param",  
  "error_type": "BAD_REQUEST"  
}
```

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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListSampleRequest request = new ListSampleRequest();
        request.withFillValue("<fill_value>");
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListSampleRequest()
        request.fill_value = "<fill_value>"
        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")  
  
    auth := basic.NewCredentialsBuilder().  
        WithAk(ak).  
        WithSk(sk).  
        Build()  
  
    client := aom.NewAomClient(  
        aom.AomClientBuilder().  
            WithRegion(region.ValueOf("<YOUR REGION>")).  
            WithCredential(auth).  
            Build())  
  
    request := &model.ListSampleRequest{}  
    fillValueRequest := "<fill_value>"  
    request.FillValue = &fillValueRequest  
    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. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

POST /v1/{project_id}/ams/metrics

Table 4-176 Path Parameters

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

Table 4-177 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. Minimum: 0 Maximum: 4
start	No	String	Start position of a pagination query. The value is a non-negative integer.

Request Parameters

Table 4-178 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 4-179 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.

Parameter	Mandatory	Type	Description
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 4-180 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.
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 4-181 Dimension

Parameter	Mandatory	Type	Description
name	Yes	String	Dimension name.

Parameter	Mandatory	Type	Description
value	Yes	String	Dimension value.

Response Parameters

Status code: 200

Table 4-182 Response body parameters

Parameter	Type	Description
metaData	MetaDataSet object	Metadata, including pagination information.
metrics	Array of MetricItemResultAPI objects	Metric list.

Table 4-183 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.

Table 4-184 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 4-185 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,
    "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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListMetricItemsRequest request = new ListMetricItemsRequest();
        request.withType("<type>");
        request.withLimit("<limit>");
        request.withStart("<start>");
        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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListMetricItemsRequest request = new ListMetricItemsRequest();
        request.withType("<type>");
        request.withLimit("<limit>");
        request.withStart("<start>");
        MetricAPIQueryItemParam body = new MetricAPIQueryItemParam();
        body.withInventoryId("application_XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXX3fee10");
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListMetricItemsRequest()
        request.type = "<type>"
        request.limit = "<limit>"
        request.start = "<start>"
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
sk = __import__('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 = ListMetricItemsRequest()
    request.type = "<type>"
    request.limit = "<limit>"
    request.start = "<start>"
    request.body = MetricAPIQueryItemParam(
        inventory_id="application_XXXXXXXX-XXXX-XXXX-XXXX-XXXXX3fee10"
    )
    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")

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

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

    request := &model.ListMetricItemsRequest{}
    typeRequest := "<type>"
    request.Type = &typeRequest
    limitRequest := "<limit>"
```

```
request.Limit = &limitRequest
startRequest:= "<start>"
request.Start = &startRequest
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")

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

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

    request := &model.ListMetricItemsRequest{}
    typeRequest:= "<type>"
    request.Type = &typeRequest
    limitRequest:= "<limit>"
    request.Limit = &limitRequest
    startRequest:= "<start>"
    request.Start = &startRequest
    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.
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 time period. You can specify a dimension or period to query. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

POST /v1/{project_id}/ams/metricdata

Table 4-186 Path Parameters

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

Table 4-187 Query Parameters

Parameter	Mandatory	Type	Description
fillValue	No	String	Value filled for breakpoints in monitoring 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. Default: -1 Enumeration values: <ul style="list-style-type: none"> • -1 • 0 • null • average

Request Parameters

Table 4-188 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 4-189 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.
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.endTimeInMi llis.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 4-190 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.
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.

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.

Table 4-191 Dimension

Parameter	Mandatory	Type	Description
name	Yes	String	Dimension name.
value	Yes	String	Dimension value.

Response Parameters

Status code: 200

Table 4-192 Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.
metrics	Array of MetricDataValue objects	Metric list.

Table 4-193 MetricDataValue

Parameter	Type	Description
dataPoints	Array of MetricDataPoints objects	Key metric.

Parameter	Type	Description
metric	MetricQuery MetricParam object	Query parameters.

Table 4-194 MetricDataPoints

Parameter	Type	Description
statistics	Array of StatisticValue objects	Statistic.
timestamp	Long	Timestamp.
unit	String	Time series unit.

Table 4-195 StatisticValue

Parameter	Type	Description
statistic	String	Statistic.
value	Double	Statistical result.

Table 4-196 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.
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 4-197 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.2000",
  "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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ShowMetricsDataRequest request = new ShowMetricsDataRequest();
        request.withFillValue(ShowMetricsDataRequest.FillValueEnum.fromValue("<fillValue>"));
        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<MetricQueryMeritcParam> listbodyMetrics = new ArrayList<>();
        listbodyMetrics.add(
            new MetricQueryMeritcParam()
                .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
```

```
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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ShowMetricsDataRequest()
```

```
        request.fill_value = "<fillValue>"
```

```
        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")

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

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

    request := &model.ShowMetricsDataRequest{}
    fillValueRequest := model.GetShowMetricsDataRequestFillValueEnum().<FILL_VALUE>
    request.FillValue = &fillValueRequest
    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.
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. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

POST /v1/{project_id}/ams/report/metricdata

Table 4-198 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 4-199 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 4-200 Request body parameters

Parameter	Mandatory	Type	Description
[items]	Yes	Array of MetricDataItem objects	Metric parameters.

Table 4-201 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 4-202 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". Minimum: 3 Maximum: 32

Table 4-203 Dimension2

Parameter	Mandatory	Type	Description
name	Yes	String	Dimension name. Minimum: 1 Maximum: 32
value	Yes	String	Dimension value. Minimum: 1 Maximum: 64

Table 4-204 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. Minimum: 0

Response Parameters

Status code: 200

Table 4-205 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");  
  
        ICredential auth = new BasicCredentials()  
            .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.getStatusCode());
    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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
```

```

WithAk(ak).
WithSk(sk).
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.

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](#).

4.2.6 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. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

PUT /v1/{project_id}/inv/servicediscoveryrules

Table 4-206 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 4-207 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 4-208 Request body parameters

Parameter	Mandatory	Type	Description
appRules	No	Array of AppRules objects	Service parameters.

Table 4-209 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. Default: 1599098476654
enable	Yes	Boolean	Whether a rule is enabled. Values: true and false.
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.

Parameter	Mandatory	Type	Description
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 4-210 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.
detectLog	Yes	String	Whether to enable log collection. Values: true and false.

Parameter	Mandatory	Type	Description
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 4-211 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 4-212 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 4-213 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 4-214 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 4-215 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 4-216 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" : "Request param is invalid",
  "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 **684fc87a79d7xxxx22e62a7da95b**.

```
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");

        ICredential auth = new BasicCredentials()
            .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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = AddOrUpdateServiceDiscoveryRulesRequest()  
  listValueApplicationNameRule = [  
    "aica**nt"  
  ]  
  listArgsApplicationNameRule = [  
    "/opt/***** -DNFW=ica**nt"  
  ]  
  listApplicationNameRuleNameRule = [  
    ApplicationNameRule(  
      name_type="cmdLineHash",  
      args=listArgsApplicationNameRule,  
      value=listValueApplicationNameRule  
    )  
  ]  
  listValueAppNameRule = [  
    "aicagentserver"  
  ]  
  listArgsAppNameRule = [  
    "/opt/***** -DNFW=ica**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=ica**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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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: "684fc87a79d7xxxx22e62a7da95b",
        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. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

DELETE /v1/{project_id}/inv/servicediscoveryrules

Table 4-217 Path Parameters

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

Table 4-218 Query Parameters

Parameter	Mandatory	Type	Description
appRuleIds	Yes	Array	Discovery rule ID. Multiple IDs need to be separated by commas (.). The parameter cannot be empty.

Request Parameters

Table 4-219 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 4-220 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.

Example Requests

Delete a service discovery rule with a specified ID.

```
https://{Endpoint}/v1/{project_id}/inv/servicediscoveryrules?appRuleIds=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.4000118",
  "errorMessage" : "Request param is invalid",
  "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.*;

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

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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        DeleteserviceDiscoveryRulesRequest request = new DeleteserviceDiscoveryRulesRequest();
        request.withAppRuleIds();
        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.getStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

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 = __import__('os').getenv("CLOUD_SDK_AK")
sk = __import__('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 = DeleteserviceDiscoveryRulesRequest()
    request.app_rules_ids =
    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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

GET /v1/{project_id}/inv/servicediscoveryrules

Table 4-221 Path Parameters

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

Table 4-222 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 4-223 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 4-224 Response body parameters

Parameter	Type	Description
appRules	Array of AppRules objects	Rule information.
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 4-225 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. Default: 1599098476654
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 4-226 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.

Parameter	Type	Description
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.
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.

Parameter	Type	Description
aom_metric_r elabel_configs	Object	Metric configuration.

Table 4-227 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 4-228 LogPathRule

Parameter	Type	Description
args	Array of strings	Command.
nameType	String	Value type, which can be cmdLineHash.
value	Array of strings	Log path.

Table 4-229 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.

Parameter	Type	Description
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 4-230 AppNameRule

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.

Table 4-231 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.

Example Requests

None

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "appRules" : [ {
    "createTime" : "1694705814424",
    "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"
  } ],
  "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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListServiceDiscoveryRulesRequest request = new ListServiceDiscoveryRulesRequest();
        request.withId("<id>");
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListServiceDiscoveryRulesRequest()  
    request.id = "<id>"  
    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")  
  
    auth := basic.NewCredentialsBuilder().  
        WithAk(ak).  
        WithSk(sk).  
        Build()  
  
    client := aom.NewAomClient(  
        aom.AomClientBuilder().  
            WithRegion(region.ValueOf("<YOUR REGION>")).  
            WithCredential(auth).  
            Build())  
  
    request := &model.ListServiceDiscoveryRulesRequest{}  
    idRequest := "<id>"  
    request.Id = &idRequest  
    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.
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. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

POST /v2/{project_id}/alarm-rules

Table 4-232 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 4-233 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 4-234 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. Minimum: 0 Maximum: 255
alarm_description	No	String	Threshold rule description. Minimum: 0 Maximum: 1024
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. Minimum: 1 Maximum: 5
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

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 value.
unit	Yes	String	Time series unit.

Table 4-235 Dimension

Parameter	Mandatory	Type	Description
name	Yes	String	Dimension name.
value	Yes	String	Dimension value.

Response Parameters

Status code: 200

Table 4-236 Response body parameters

Parameter	Type	Description
alarm_rule_id	Long	Threshold rule ID.

Status code: 400

Table 4-237 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.04001001",
  "error_msg" : "please check request param",
  "error_type" : "BAD_REQUEST"
}
```

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");

        ICredential auth = new BasicCredentials()
            .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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

GET /v2/{project_id}/alarm-rules

Table 4-238 Path Parameters

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

Table 4-239 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 4-240 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 4-241 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 4-242 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 4-243 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.

Parameter	Type	Description
policy_name	String	Threshold rule name.
resources	Array of strings	Resource information (discarded).
state_reason	String	Cause 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 4-244 Dimension

Parameter	Type	Description
name	String	Dimension name.
value	String	Dimension value.

Status code: 400**Table 4-245** 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

None

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "meta_data": [ {
    "count": 10,
    "total": 100
  } ],
  "thresholds": [ {
    "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.04003001",
  "error_msg": "please check request param",
  "error_type": "BAD_REQUEST"
}
```

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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListAlarmRuleRequest request = new ListAlarmRuleRequest();
        request.withOffset("<offset>");
        request.withLimit(<limit>);
        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.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListAlarmRuleRequest()
    request.offset = "<offset>"
    request.limit = <limit>
    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")

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

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

    request := &model.ListAlarmRuleRequest{}
    offsetRequest := "<offset>"
    request.Offset = &offsetRequest
    limitRequest := int32(<limit>)
    request.Limit = &limitRequest
    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.
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. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

PUT /v2/{project_id}/alarm-rules

Table 4-246 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 4-247 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 4-248 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. Minimum: 0 Maximum: 255
alarm_description	No	String	Threshold rule description, which contains a maximum of 1024 characters. Minimum: 0 Maximum: 1024
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

Parameter	Mandatory	Type	Description
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 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 4-249 Dimension

Parameter	Mandatory	Type	Description
name	Yes	String	Dimension name.
value	Yes	String	Dimension value.

Response Parameters

Status code: 200

Table 4-250 Response body parameters

Parameter	Type	Description
alarm_rule_id	Long	Threshold rule ID.

Status code: 400

Table 4-251 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

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.04003001",
  "error_msg" : "please check request param",
  "error_type" : "BAD_REQUEST"
}
```

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");

        ICredential auth = new BasicCredentials()
            .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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

DELETE /v2/{project_id}/alarm-rules/{alarm_rule_id}

Table 4-252 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 4-253 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 4-254 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.04005001",
  "error_msg" : "please check request param",
  "error_type" : "BAD_REQUEST"
}
```

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");

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

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

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 = __import__('os').getenv("CLOUD_SDK_AK")
sk = __import__('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 = DeleteAlarmRuleRequest()
    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")

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

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

    request := &model.DeleteAlarmRuleRequest{}
    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. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

GET /v2/{project_id}/alarm-rules/{alarm_rule_id}

Table 4-255 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 4-256 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 4-257 Response body parameters

Parameter	Type	Description
meta_data	MetaData object	Metadata, including pagination information.
thresholds	Array of QueryAlarmResult objects	Threshold rule list.

Table 4-258 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 4-259 QueryAlarmResult

Parameter	Type	Description
action_enabled	Boolean	Whether to enable notification.
alarm_actions	Array of strings	List of alarm notifications.

Parameter	Type	Description
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.
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 4-260 Dimension

Parameter	Type	Description
name	String	Dimension name.
value	String	Dimension value.

Status code: 400**Table 4-261** 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

None

Example Responses

Status code: 200

OK: The request is successful.

```
{
  "thresholds": [ {
    "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.04004001",  
  "error_msg" : "please check request param",  
  "error_type" : "BAD_REQUEST"  
}
```

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");  
  
        ICredential auth = new BasicCredentials()  
            .withAk(ak)  
            .withSk(sk);  
  
        AomClient client = AomClient.newBuilder()  
            .withCredential(auth)  
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))  
            .build();  
        ShowAlarmRuleRequest request = new ShowAlarmRuleRequest();  
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ShowAlarmRuleRequest()
        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")

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

    client := aom.NewAomClient(
        aom.AomClientBuilder().
```

```

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

    request := &model.ShowAlarmRuleRequest{}
    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.
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. (This API is not available in LA-Mexico City2, LA-Santiago, or LA-Sao Paulo1.)

Calling Method

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

URI

POST /v2/{project_id}/alarm-rules/delete

Table 4-262 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 4-263 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 4-264 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 4-265 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

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.04004001",  
  "error_msg" : "please check request param",  
  "error_type" : "BAD_REQUEST"  
}
```

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");
```

```
ICredential auth = new BasicCredentials()
    .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();
    System.out.println(e.getHttpStatusCode());
    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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

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

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 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. (This API is available in CN North-Beijing4, CN East-Shanghai1, and CN South-Guangzhou.)

Calling Method

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

URI

GET /v1/{project_id}/aom/api/v1/query_range

Table 4-266 Path Parameters

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

Table 4-267 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
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 4-268 Request header parameters

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

Response Parameters

Status code: 200

Table 4-269 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Object	Response data.

Status code: 400

Table 4-270 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403

Table 4-271 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422

Table 4-272 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503

Table 4-273 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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListRangeQueryAomPromGetRequest request = new ListRangeQueryAomPromGetRequest();
        request.withQuery("<query>");
        request.withStart("<start>");
        request.withEnd("<end>");
        request.withStep("<step>");
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
sk = __import__('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 = ListRangeQueryAomPromGetRequest()
    request.query = "<query>"
    request.start = "<start>"
    request.end = "<end>"
    request.step = "<step>"
    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")

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

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

    request := &model.ListRangeQueryAomPromGetRequest{}
    request.Query = "<query>"
    request.Start = "<start>"
    request.End = "<end>"
    request.Step = "<step>"
    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.
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. (This API is available in CN North-Beijing4, CN East-Shanghai1, and CN South-Guangzhou.)

Calling Method

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

URI

POST /v1/{project_id}/aom/api/v1/query_range

Table 4-274 Path Parameters

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

Table 4-275 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 4-276 Request header parameters

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

Response Parameters

Status code: 200

Table 4-277 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Object	Response data.

Status code: 400**Table 4-278** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403**Table 4-279** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422**Table 4-280** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503**Table 4-281** 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-9ecxxf",  
        "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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListRangeQueryAomPromPostRequest request = new ListRangeQueryAomPromPostRequest();
        request.withQuery("<query>");
        request.withStart("<start>");
        request.withEnd("<end>");
        request.withStep("<step>");
        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.getStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
}
}
```

Python

```
# coding: utf-8

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListRangeQueryAomPromPostRequest()
        request.query = "<query>"
        request.start = "<start>"
        request.end = "<end>"
        request.step = "<step>"
        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")

    auth := basic.NewCredentialsBuilder().
```

```

WithAk(ak).
WithSk(sk).
Build()

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

request := &model.ListRangeQueryAomPromPostRequest{}
request.Query = "<query>"
request.Start = "<start>"
request.End = "<end>"
request.Step = "<step>"
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. (This API is available in CN North-Beijing4, CN East-Shanghai1, and CN South-Guangzhou.)

Calling Method

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

URI

GET /v1/{project_id}/aom/api/v1/query

Table 4-282 Path Parameters

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

Table 4-283 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 4-284 Request header parameters

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

Response Parameters

Status code: 200

Table 4-285 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Object	Response data.

Status code: 400

Table 4-286 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403

Table 4-287 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422

Table 4-288 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503

Table 4-289 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");

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

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

        ListInstantQueryAomPromGetRequest request = new ListInstantQueryAomPromGetRequest();
        request.withQuery("<query>");
        request.withTime("<time>");
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListInstantQueryAomPromGetRequest()
        request.query = "<query>"
        request.time = "<time>"
        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")

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

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

```
request := &model.ListInstantQueryAomPromGetRequest{}
request.Query = "<query>"
timeRequest:= "<time>"
request.Time = &timeRequest
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.
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. (This API is available in CN North-Beijing4, CN East-Shanghai1, and CN South-Guangzhou.)

Calling Method

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

URI

POST /v1/{project_id}/aom/api/v1/query

Table 4-290 Path Parameters

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

Table 4-291 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 4-292 Request header parameters

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

Response Parameters

Status code: 200

Table 4-293 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Object	Response data.

Status code: 400**Table 4-294** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403**Table 4-295** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422**Table 4-296** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503**Table 4-297** 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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListInstantQueryAomPromPostRequest request = new ListInstantQueryAomPromPostRequest();
        request.withQuery("<query>");
        request.withTime("<time>");
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListInstantQueryAomPromPostRequest()
        request.query = "<query>"
        request.time = "<time>"
        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")

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



```

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

request := &model.ListInstantQueryAomPromPostRequest{}
request.Query = "<query>"
timeRequest:= "<time>"
request.Time = &timeRequest
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. (This API is available in CN North-Beijing 4, CN East-Shanghai 1, and CN South-Guangzhou.)

Calling Method

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

URI

GET /v1/{project_id}/aom/api/v1/label/{label_name}/values

Table 4-298 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 4-299 Request header parameters

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

Response Parameters

Status code: 200

Table 4-300 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Array of strings	Tag value.

Status code: 400

Table 4-301 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403

Table 4-302 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422

Table 4-303 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503

Table 4-304 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");

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

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

```
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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListLabelValuesAomPromGetRequest()
        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")

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

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

    request := &model.ListLabelValuesAomPromGetRequest{}
    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.

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](#).

4.3.6 Obtaining the Tag Name List Using the GET Method

Function

This API is used to obtain the tag name list using the GET method. (This API is available in CN North-Beijing4, CN East-Shanghai1, and CN South-Guangzhou.)

Calling Method

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

URI

GET /v1/{project_id}/aom/api/v1/labels

Table 4-305 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 4-306 Request header parameters

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

Response Parameters

Status code: 200

Table 4-307 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Array of strings	Tag value.

Status code: 400**Table 4-308** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403**Table 4-309** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422**Table 4-310** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503

Table 4-311 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");

        ICredential auth = new BasicCredentials()
            .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.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8
```

```
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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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. (This API is available in CN North-Beijing4, CN East-Shanghai1, and CN South-Guangzhou.)

Calling Method

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

URI

POST /v1/{project_id}/aom/api/v1/labels

Table 4-312 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 4-313 Request header parameters

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

Response Parameters

Status code: 200

Table 4-314 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Array of strings	Tag value.

Status code: 400

Table 4-315 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403

Table 4-316 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422

Table 4-317 Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503

Table 4-318 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."
}
```

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 ListLabelsAomPromPostSolution {

    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();
ListLabelsAomPromPostRequest request = new ListLabelsAomPromPostRequest();
try {
    ListLabelsAomPromPostResponse response = client.listLabelsAomPromPost(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
```

```
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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListLabelsAomPromPostRequest()
        response = client.list_labels_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")

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

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

    request := &model.ListLabelsAomPromPostRequest{}
    response, err := client.ListLabelsAomPromPost(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](#).

4.3.8 Querying Metadata

Function

This API is used to query the metadata of time series and corresponding tags. (This API is available in CN North-Beijing 4, CN East-Shanghai 1, and CN South-Guangzhou.)

Calling Method

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

URI

GET /v1/{project_id}/aom/api/v1/metadata

Table 4-319 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 4-320 Request header parameters

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

Response Parameters

Status code: 200

Table 4-321 Response body parameters

Parameter	Type	Description
status	String	Response status.
data	Object	Metadata information.

Status code: 400**Table 4-322** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 403**Table 4-323** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 422**Table 4-324** Response body parameters

Parameter	Type	Description
status	String	Response status.
errorType	String	Error type.
error	String	Error message.

Status code: 503

Table 4-325 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");  
  
        ICredential auth = new BasicCredentials()  
            .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.getStatusCode());  
            System.out.println(e.getRequestId());  
            System.out.println(e.getErrorCode());  
            System.out.println(e.getErrorMsg());  
        }  
    }  
}
```

```
}  
}
```

Python

```
# coding: utf-8  
  
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 = __import__('os').getenv("CLOUD_SDK_AK")  
    sk = __import__('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 = 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")  
  
    auth := basic.NewCredentialsBuilder().  
        WithAk(ak).  
        WithSk(sk).  
        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.
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 4-326 Path Parameters

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

Table 4-327 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 4-328 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 4-329 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).

Parameter	Mandatory	Type	Description
hideSyslog	No	Integer	Whether to hide system logs during log queries. 0: Hide system logs. 1: Show system logs.
keyWord	No	String	Keyword for search. <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. Note: Default delimiters: , "" ; = () [] { } @ & < > / : \ n \ t \ r
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	Number of logs queried each time. Default value: 5000. Recommended value: 100. For the first query, pageSize is used. For subsequent pagination queries, size is used.
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 4-330 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 4-331 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 4-332 Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.

Status code: 401**Table 4-333** Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.

Status code: 403**Table 4-334** Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.

Status code: 500**Table 4-335** Response body parameters

Parameter	Type	Description
errorCode	String	Response code.
errorMessage	String	Response message.

Status code: 503**Table 4-336** 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,
      "time": 153900000983,
      "containerName": "contsssner-0",
      "hostIP": "1xx.xxx.0.1xxx",
      "hostId": "c11xxxx11-0000b-4925-bef4-d0xxxx9b0",
      "hostName": "1x2.168.0.xxx",
      "lineNum": "1xxx23xxxxx2VW5xxxxx0ZWdIcg==",
      "logContent": "warn:2018/10/09 06:57:01 helloworld.go:108: the main process is running now.",
      "logContentSize": null,

```

```
"loghash" : "4xxxxx0d40a83c17f262540xxxxxxxxxfea30eb",
"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");

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

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

        ListLogItemsRequest request = new ListLogItemsRequest();
        request.withType("<type>");
        QueryBodyParam body = new QueryBodyParam();
        SearchKey searchKeybody = new SearchKey();
        searchKeybody.withClusterId("c69xxxx-5xxx-1xxx-8xxx5-02xxxxx40");
        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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        ListLogItemsRequest request = new ListLogItemsRequest();
        request.setType("<type>");
        QueryBodyParam body = new QueryBodyParam();
        SearchKey searchKeybody = new SearchKey();
        searchKeybody.withClusterId("874xxx9a2-xxxf-xxx-8xxe-02xxxxx3");
        body.withType("next");
        body.withStartTime(156946300095L);
        body.withSearchKey(searchKeybody);
        body.withLineNum("1569463900000047");
        body.withKeyWord("");
        body.withHideSyslog(0);
        body.withEndTime(1569460008895L);
        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

```
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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListLogItemsRequest()
    request.type = "<type>"
    searchKeybody = SearchKey(
        cluster_id="c69xxxc-5xxx-1xxx-8xxx5-02xxxxx40"
    )
    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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListLogItemsRequest()
        request.type = "<type>"
        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")

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

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

    request := &model.ListLogItemsRequest{}
    request.Type = "<type>"
    searchKeybody := &model.SearchKey{
        ClusterId: "c69xxx-5xxx-1xxx-8xxx5-02xxxx40",
    }
    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")

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

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

    request := &model.ListLogItemsRequest{}
    request.Type = "<type>"
    searchKeybody := &model.SearchKey{
        ClusterId: "874xxx9a2-xxx-f-xxx-8xxe-02xxxxx3",
    }
    typeQueryBodyParam:= "next"
    lineNumQueryBodyParam:= "1569463900000047"
    keyWordQueryBodyParam:= ""
    hideSyslogQueryBodyParam:= int32(0)
    request.Body = &model.QueryBodyParam{
        Type: &typeQueryBodyParam,
        StartTime: int64(156946300095),
        SearchKey: searchKeybody,
        LineNum: &lineNumQueryBodyParam,
        Keyword: &keyWordQueryBodyParam,
        HideSyslog: &hideSyslogQueryBodyParam,
        EndTime: int64(15694600008895),
        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.

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](#).

4.5 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 4-337 Path Parameters

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

Table 4-338 Query Parameters

Parameter	Mandatory	Type	Description
prom_id	Yes	String	Prometheus instance ID.

Request Parameters

Table 4-339 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.

Response Parameters

Status code: 400

Table 4-340 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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        DeletePromInstanceRequest request = new DeletePromInstanceRequest();
        request.withPromId("<prom_id>");
        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.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8
```

```
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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = DeletePromInstanceRequest()
        request.prom_id = "<prom_id>"
        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")

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

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

    request := &model.DeletePromInstanceRequest{}
    request.PromId = "<prom_id>"
    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 4-341 Path Parameters

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

Table 4-342 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_able	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 4-343 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 4-344 Response body parameters

Parameter	Type	Description
prometheus	Array of PromInstanceEpsModel objects	Prometheus instance list.

Table 4-345 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_timestamp	Long	Timestamp when the Prometheus instance is created.
prom_update_timestamp	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	PromConfig Model object	Special configuration of the Prometheus instance.
cce_spec_config	String	Special configuration of the Prometheus instance in the CCE scenario.

Table 4-346 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");
    }
}
```

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

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
ListPromInstanceRequest request = new ListPromInstanceRequest();
request.withPromId("<prom_id>");
request.withPromType(ListPromInstanceRequest.PromTypeEnum.fromValue("<prom_type>"));

request.withCceClusterEnable(ListPromInstanceRequest.CceClusterEnableEnum.fromValue("<cce_cluster_enable>"));
request.withPromStatus(ListPromInstanceRequest.PromStatusEnum.fromValue("<prom_status>"));
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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListPromInstanceRequest()
        request.prom_id = "<prom_id>"
        request.prom_type = "<prom_type>"
        request.cce_cluster_enable = "<cce_cluster_enable>"
        request.prom_status = "<prom_status>"
        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")

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

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

    request := &model.ListPromInstanceRequest{}
    promIdRequest := "<prom_id>"
    request.PromId = &promIdRequest
    promTypeRequest := model.GetListPromInstanceRequestPromTypeEnum().<PROM_TYPE>
    request.PromType = &promTypeRequest
    cceClusterEnableRequest :=
model.GetListPromInstanceRequestCceClusterEnableEnum().<CCE_CLUSTER_ENABLE>
    request.CceClusterEnable = &cceClusterEnableRequest
    promStatusRequest := model.GetListPromInstanceRequestPromStatusEnum().<PROM_STATUS>
    request.PromStatus = &promStatusRequest
    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 4-347 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 4-348 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 4-349 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.
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 4-350 Response body parameters

Parameter	Type	Description
prometheus	Array of PromInstanceEpsCreateModel objects	Prometheus instance list.

Table 4-351 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.
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_timestamp	Long	Timestamp when the Prometheus instance was created.
prom_update_timestamp	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	PromConfig Model object	Special configuration of the Prometheus instance.
cce_spec_config	String	Special configuration of the Prometheus instance in the CCE scenario.

Table 4-352 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

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");

        ICredential auth = new BasicCredentials()
            .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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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 4-353 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 4-354 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 4-355 Request body parameters

Parameter	Mandatory	Type	Description
recording_rule	Yes	String	Recording rule.

Response Parameters

Status code: 500

Table 4-356 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            labels:\n              team: operations"
```

Example Responses

Status code: 204

OK: The request is successful.

```
"""
```

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");

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

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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = CreateRecordingRuleRequest()
        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")

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

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

    request := &model.CreateRecordingRuleRequest{}
    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 4-357 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 4-358 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 4-359 Response body parameters

Parameter	Type	Description
access_codes	Array of AccessCodeModel objects	Access codes.

Table 4-360 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*****tgpb*****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");

        ICredential auth = new BasicCredentials()
            .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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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 4-361 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.
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");

ICredential auth = new BasicCredentials()
    .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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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 4-363 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 4-364 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": "1700577655170",
  "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");

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

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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListAgentsRequest()
        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")

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

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

    request := &model.ListAgentsRequest{}
    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 create an application.

Calling Method

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

URI

POST /v1/applications

Request Parameters

Table 4-365 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 4-366 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	Application description. Minimum: 0 Maximum: 255
display_name	No	String	Application name, which can contain 2 to 64 characters. Only letters, digits, underscores (_), hyphens (-), and periods (.) are allowed. Minimum: 2 Maximum: 64
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.

Parameter	Mandatory	Type	Description
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 4-367 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-368 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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 4-369 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Request Parameters

Table 4-370 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 4-371 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-372 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();
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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()
        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{}
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
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 obtain the details of an application.

Calling Method

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

URI

GET /v1/applications/{application_id}

Table 4-373 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Request Parameters

Table 4-374 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 4-375 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.

Parameter	Type	Description
register_type	String	Registration method. Enumeration values: <ul style="list-style-type: none"> • API • CONSOLE • SERVICE_DISCOVERY

Status code: 400

Table 4-376 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-377 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();
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
sk = __import__('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 = ShowAppRequest()
    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{}
    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 4-378 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.

Request Parameters

Table 4-379 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 4-380 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	Application description. Minimum: 0 Maximum: 255
display_name	No	String	Application name, which can contain 2 to 64 characters. Only letters, digits, underscores (_), hyphens (-), and periods (.) are allowed. Minimum: 2 Maximum: 64
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 4-381 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001

Parameter	Type	Description
error_msg	String	Invalid parameters.

Status code: 403

Table 4-382 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();
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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = UpdateAppRequest()
        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{}
    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	Successful modification.
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 4-383 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 4-384 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	Component description.

Parameter	Mandatory	Type	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 4-385 Response body parameters

Parameter	Type	Description
id	String	Object ID.

Status code: 400

Table 4-386 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-387 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(ComponentParam.ModelTypeEnum.fromValue("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
```

```
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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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: model.GetComponentParamModelTypeEnum().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 4-388 Path Parameters

Parameter	Mandatory	Type	Description
component_id	Yes	String	Component ID.

Request Parameters

Table 4-389 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 4-390 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-391 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();
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = DeleteComponentRequest()
        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{}
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	Successful deletion.
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 4-392 Path Parameters

Parameter	Mandatory	Type	Description
component_id	Yes	String	Component ID.

Request Parameters

Table 4-393 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 4-394 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

Parameter	Type	Description
sub_app_id	String	Sub-application ID.

Status code: 400

Table 4-395 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-396 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();
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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()
  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{}
    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 4-397 Path Parameters

Parameter	Mandatory	Type	Description
component_id	Yes	String	Component ID.

Request Parameters

Table 4-398 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 4-399 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	Component description.
name	Yes	String	Component name.

Response Parameters

Status code: 400

Table 4-400 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-401 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();
        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.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Modify a component.

```
# coding: utf-8

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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.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{
        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 4-402 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.

Table 4-403 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 4-404 Response body parameters

Parameter	Type	Description
id	String	Object ID.

Status code: 400**Table 4-405** Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403**Table 4-406** 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(EnvParam.RegisterTypeEnum.fromValue("API"));
        body.withRegion("xxx");
        body.withOsType(EnvParam.OsTypeEnum.fromValue("LINUX"));
        body.withEnvType(EnvParam.EnvTypeEnum.fromValue("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.getStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Create an environment.

```
# coding: utf-8

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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:= model.GetEnvParamRegisterTypeEnum().API
regionEnvParam:= "xxx"
descriptionEnvParam:= "Environment description."
request.Body = &model.EnvParam{
    RegisterType: &registerTypeEnvParam,
    Region: &regionEnvParam,
    OsType: model.GetEnvParamOsTypeEnum().LINUX,
    EnvType: model.GetEnvParamEnvTypeEnum().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 4-407 Path Parameters

Parameter	Mandatory	Type	Description
environment_id	Yes	String	Environment ID.

Request Parameters

Table 4-408 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 4-409 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-410 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30001005

Parameter	Type	Description
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();
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = DeleteEnvRequest()
        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{}
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 4-411 Path Parameters

Parameter	Mandatory	Type	Description
environment_id	Yes	String	Environment ID.

Request Parameters

Table 4-412 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 4-413** 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 4-414 TagNameAndIdVo

Parameter	Type	Description
tag_id	String	Tag ID.
tag_name	String	Tag name.

Status code: 400

Table 4-415 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-416 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();
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ShowEnvRequest()
        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{}
        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 4-417 Path Parameters

Parameter	Mandatory	Type	Description
environment_id	Yes	String	Environment ID.

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. This parameter is mandatory only when the body exists.

Table 4-419 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: 400

Table 4-420 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-421 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();
        EnvParam body = new EnvParam();
        body.withRegisterType(EnvParam.RegisterTypeEnum.fromValue("API"));
        body.withRegion("xxx");
        body.withOsType(EnvParam.OsTypeEnum.fromValue("LINUX"));
        body.withEnvType(EnvParam.EnvTypeEnum.fromValue("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

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 = __import__('os').getenv("CLOUD_SDK_AK")
sk = __import__('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 = UpdateEnvRequest()
    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{}
    registerTypeEnvParam := model.GetEnvParamRegisterTypeEnum().API
    regionEnvParam := "xxx"
    descriptionEnvParam := "Environment description."
    request.Body = &model.EnvParam{
```

```
RegisterType: &registerTypeEnvParam,  
Region: &regionEnvParam,  
OsType: model.GetEnvParamOsTypeEnum().LINUX,  
EnvType: model.GetEnvParamEnvTypeEnum().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 4-422 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 4-423 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 4-424 Request body parameters

Parameter	Mandatory	Type	Description
marker	No	String	Pagination marker, which is the ID of the last record on the previous page.
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.

Parameter	Mandatory	Type	Description
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 4-425 Response body parameters

Parameter	Type	Description
data	Array of objects	Data displayed during page query.
page_info	Object	Pagination information.

Status code: 400

Table 4-426 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-427 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();
PageResourceListParam body = new PageResourceListParam();
List<String> listbodyCilds = new ArrayList<>();
listbodyCilds.add("63c2195e9da846258b113205184b2b53");
body.withCiRelationships(true);
body.withCilds(listbodyCilds);
body.withCiType(PageResourceListParam.CiTypeEnum.fromValue("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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListResourceUnderNodeRequest()
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{}
    var listCildsbody = []string{
        "63c2195e9da846258b113205184b2b53",
    }
    ciRelationshipsPageResourceListParam:= true
    request.Body = &model.PageResourceListParam{
        CiRelationships: &ciRelationshipsPageResourceListParam,
        Cilds: &listCildsbody,
        CiType: model.GetPageResourceListParamCiTypeEnum().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 4-428 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.

Parameter	Mandatory	Type	Description
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 4-429 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 4-430 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.

Parameter	Type	Description
register_type	String	Registration method. Enumeration values: <ul style="list-style-type: none"> • API • CONSOLE • SERVICE_DISCOVERY

Status code: 400

Table 4-431 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-432 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();
        request.withName("<name>");
        request.withDisplayName("<display_name>");
        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();
            System.out.println(e.getHttpStatusCode());
            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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ShowAppByNameRequest()
        request.name = "<name>"
        request.display_name = "<display_name>"
        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{}
nameRequest:= "<name>"
request.Name = &nameRequest
displayNameRequest:= "<display_name>"
request.DisplayName = &displayNameRequest
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 4-433 Path Parameters

Parameter	Mandatory	Type	Description
environment_name	Yes	String	Environment name.

Table 4-434 Query Parameters

Parameter	Mandatory	Type	Description
region	Yes	String	Region associated with the environment.
component_id	Yes	String	Component 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.

Response Parameters

Status code: 200

Table 4-436 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 4-437 TagNameAndIdVo

Parameter	Type	Description
tag_id	String	Tag ID.
tag_name	String	Tag name.

Status code: 400**Table 4-438** Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-439 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.withRegion("<region>");
request.withComponentId("<component_id>");
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.getStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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.region = "<region>"
        request.component_id = "<component_id>"
        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.Region = "<region>"
    request.ComponentId = "<component_id>"
    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 based on the component name.

Calling Method

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

URI

GET /v1/components/application/{application_id}/name/{component_name}

Table 4-440 Path Parameters

Parameter	Mandatory	Type	Description
application_id	Yes	String	Application ID.
component_name	Yes	String	Component name.

Request Parameters

Table 4-441 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 4-442 Response body parameters

Parameter	Type	Description
name	String	Component name.
id	String	Component ID.
aom_id	String	aomId
app_id	String	Application ID.

Status code: 400

Table 4-443 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-444 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" : "9616a75c75af4bcdac38d77ff72a88e"
}
```

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();
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
sk = __import__('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()
    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{}
    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 4-445 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.

Table 4-446 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. Minimum: 0 Maximum: 255

Response Parameters

Status code: 400

Table 4-447 Response body parameters

Parameter	Type	Description
error_code	String	AOM.30005001
error_msg	String	Invalid parameters.

Status code: 403

Table 4-448 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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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 4-449 Path Parameters

Parameter	Mandatory	Type	Description
sub_app_id	Yes	String	Sub-application ID.

Request Parameters

Table 4-450 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 4-451 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

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();
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = DeleteSubAppRequest()
        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{}
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 4-453 Path Parameters

Parameter	Mandatory	Type	Description
sub_app_id	Yes	String	Sub-application 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
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. Minimum: 0 Maximum: 255

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 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();
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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = UpdateSubAppRequest()
        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{
        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	The modification is successful.
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 4-458 Path Parameters

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

Request Parameters

Table 4-459 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Minimum: 1 Maximum: 32

Table 4-460 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. Minimum: 1 Maximum: 64
type	Yes	String	Workflow type. Options: cron and manual. Minimum: 1 Maximum: 32
description	No	String	Workflow description. Minimum: 1 Maximum: 128
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. Minimum: 1 Maximum: 64

Parameter	Mandatory	Type	Description
template_id	Yes	String	Template ID. Minimum: 1 Maximum: 64
input	Yes	Map<String, Object>	List of parameters required for executing a task.
quote	No	Array of strings	Parameters that are referenced. Minimum: 1 Maximum: 128 Array Length: 1 - 128
job_name	No	String	Job name. Minimum: 1 Maximum: 64
job_id	No	String	Job ID. Minimum: 1 Maximum: 64
service_scenario	No	String	Service scenario. Minimum: 1 Maximum: 64
service_name	No	String	Service name. Minimum: 1 Maximum: 128
task_type	Yes	String	Task type. Options: package, script, job, cloud, standard, and customize. Minimum: 1 Maximum: 32

Response Parameters

Status code: 200

Table 4-461 Response body parameters

Parameter	Type	Description
id	String	Workflow ID, which is unique and generated based on project_id and workflow_name. Minimum: 1 Maximum: 64
name	String	Workflow name. Minimum: 1 Maximum: 64
type	String	Workflow type. Options: cron and manual. Minimum: 1 Maximum: 16
description	String	Workflow description. Minimum: 1 Maximum: 128
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. Minimum: 0 Maximum: 9999999999999
create_by	String	User who created the workflow. This parameter is obtained from the token transferred during API calling. Minimum: 1 Maximum: 64
update_time	Long	Time (UTC, in milliseconds) when a workflow was updated. Minimum: 0 Maximum: 9999999999999
update_by	String	User who updated the workflow. This parameter is obtained from the token transferred during API calling. Minimum: 1 Maximum: 64
template_name	String	Template name. Minimum: 1 Maximum: 64

Parameter	Type	Description
template_id	String	Template ID. Minimum: 1 Maximum: 64
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. Minimum: 1 Maximum: 64
status	String	Task status. Options: success, fail, and executing. Minimum: 1 Maximum: 16
citation_urns	Array of strings	Reference of a workflow. Minimum: 1 Maximum: 256 Array Length: 0 - 200
last_execution_end_time	Long	End time (UTC, in milliseconds) of the last execution. Minimum: 0 Maximum: 9999999999999
last_execution_start_time	Long	Start time (UTC, in milliseconds) of the last execution. Minimum: 0 Maximum: 9999999999999
quote	Array of strings	Parameters that are referenced. Minimum: 1 Maximum: 256 Array Length: 1 - 999
job_name	String	Job name. Minimum: 1 Maximum: 64
job_id	String	Job ID. Minimum: 1 Maximum: 64

Parameter	Type	Description
service_scenario	String	Service scenario. Minimum: 1 Maximum: 64
service_name	String	Service name. Minimum: 1 Maximum: 64
task_type	String	Task type. Minimum: 1 Maximum: 16
project_id	String	Project ID returned by FunctionGraph. Minimum: 1 Maximum: 32
workflow_id	String	Workflow ID returned by FunctionGraph. Minimum: 1 Maximum: 64
task_status	String	Task status. Minimum: 1 Maximum: 32
nodes	Array of Node objects	Task node. Array Length: 1 - 20
edit_time	Long	Edit time. Minimum: 0 Maximum: 9999999999999
execution_action_rules	Array of strings	Fine-grained permissions for executing actions. Minimum: 1 Maximum: 128 Array Length: 0 - 200
execution_permission	Array of strings	Cloud service permissions. Minimum: 1 Maximum: 128 Array Length: 1 - 32
global_parameters	Array of Parameter objects	Global parameters. Array Length: 0 - 20
is_delete	Boolean	Whether the object has been logically deleted.

Parameter	Type	Description
steps	Array of Step objects	Step. Array Length: 1 - 10
output	String	Task output. Minimum: 1 Maximum: 40960
trigger_id	String	Trigger ID. Minimum: 1 Maximum: 64
trigger_status	String	Trigger status. Minimum: 1 Maximum: 64
approve_id	String	Approval ID. Minimum: 1 Maximum: 64
template_i18n	WorkFlowModel object	Task internationalization field, including English description.
enterprise_project_id	String	Enterprise project to which the task belongs. Minimum: 1 Maximum: 64
last_execute_by	String	Last task executor. Minimum: 1 Maximum: 64

Table 4-462 Node

Parameter	Type	Description
parent_node	String	Name of the parent node. Minimum: 1 Maximum: 64
category	String	Node type. Minimum: 1 Maximum: 32
description	String	Node description. Minimum: 1 Maximum: 1024

Parameter	Type	Description
id	String	Node ID. Minimum: 1 Maximum: 64
ignore_error	Boolean	Whether to ignore the error.
metadata	Metadata object	Metadata.
name	String	Node name, for example, Node. Minimum: 1 Maximum: 64
task_name	String	Task name. Minimum: 1 Maximum: 64

Table 4-463 Metadata

Parameter	Type	Description
type	String	Node type. Minimum: 1 Maximum: 32
configuration	Map<String, Object>	Configuration information.

Table 4-464 Parameter

Parameter	Type	Description
param_name	String	Parameter name.
param_type	String	Parameter type. Minimum: 1 Maximum: 16
param_group	String	Parameter group. Minimum: 1 Maximum: 32
default_value	String	Initial value of a parameter. Minimum: 1 Maximum: 40960

Parameter	Type	Description
id	String	Parameter ID. Minimum: 1 Maximum: 64
encryption	Boolean	Whether to encrypt the data.
hint	String	Parameter prompt. Minimum: 1 Maximum: 1000
quote_param	Boolean	Whether to select a parameter from the parameter library.
required	Boolean	Whether a parameter is mandatory.
description	String	Parameter description. Minimum: 1 Maximum: 1000

Table 4-465 Step

Parameter	Type	Description
id	String	Step ID. Minimum: 1 Maximum: 64
name	String	Step name. Minimum: 1 Maximum: 32
type	String	Step type. Minimum: 1 Maximum: 16
input	Map<String,String>	Step parameter.
ignore_error	Boolean	Whether to automatically ignore errors.
description	String	Step description. Minimum: 1 Maximum: 1000

Table 4-466 WorkFlowModel

Parameter	Type	Description
en-us	Map<String,String>	Description
zh-cn	Map<String,String>	Description

Status code: 400**Table 4-467** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 401**Table 4-468** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 500

Table 4-469 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

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": "xxxxshcd",
  "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-b1x6-8dxxxcae7b021",
      "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": "47xxxd67-bxx5-45x9-860x-cb3d6xxxx745",
      "sourceId": "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": "2xxxxxcca5xx8373xxx1bffxxcf",
  "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\":\"xxxx627611xxd\"}",
    "type" : "cmdb_dynamic_node",
    "group" : "ecs_instance"
  },
  "rate_control" : {
    "max" : "1",
    "timeDelay" : "10",
    "group" : "rate_control"
  }
},
"is_delete" : false,
"last_execute_by" : "xxx",
"last_execution_end_time" : 1670328823670,
"last_execution_id" : "adxxxxb-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:xxxxec14exxxx79b44xxxx57:function:CMS:CMS_DEFAULT_JAVA_FUN_NAME",
      "dataOutputPath" : "",
      "func_app" : "CMS",
      "dataInputPath" : "",
      "validator" : true,
      "func_version" : "latest",
      "dataResultsPath" : "",
      "parameters" : [ {
        "default" : "",
        "showFormat" : false,
        "format" : "",
        "value" : "2a47xxxx487f837xxxxxfc1cf",
```

```
"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" : "{$\`cmdbApplicationId\`:\`xxxxxxx96627xxxxxa3cd\`}",
  "isEditor" : false,
  "key" : "properties.frontend_info"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "cmdb_dynamic_node",
  "isEditor" : false,
  "key" : "properties.type"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "ecs_instance",
  "isEditor" : false,
  "key" : "properties.group"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "1",
  "isEditor" : false,
  "key" : "properties.max"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "10",
  "isEditor" : false,
  "key" : "properties.timeDelay"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "rate_control",
  "isEditor" : false,
  "key" : "properties.group"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : ".$.executionId",
  "isEditor" : false,
  "key" : "properties.executionId"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
```



```
"value" : "xxxx9ce-xxxx-4822-xxxx-a296xxxxxc",
"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" : "2axxxx5487f83xxxx891xxx1cf",
"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");

        ICredential auth = new BasicCredentials()
            .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");

        ICredential auth = new BasicCredentials()
            .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\": \"[\\\"4bxxxxx-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", "{\"sourceld\": \"script\", \"cmd_user\": \"xxxxx\", \"sensitive_param\": false, \"script_content\": \"cd /xxx/xxx\", \"name\": \"zzy\", \"version_number\": \"1.0\", \"script_id\": \"xxx-7e9e-4eed-8xxf-5f1fxx6ebb7d\", \"script_type\": \"SHELL\", \"script_version_id\": \"e005xxx4-1fc-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("xxxxxshced");
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");

ICredential auth = new BasicCredentials()
    .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-a4x4-4dx-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");

    ICredential auth = new BasicCredentials()
        .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");

        ICredential auth = new BasicCredentials()
            .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", "{\"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\"}");
        listbodyInput.put("get_instances", "{\"ecs_id_list\": \"[\\\"xxx\\\"]\", \"type\": \"manual\", \"group
        \": \"ecs_instance\"}");
        listbodyInput.put("rate_control", "{\"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"}");
        listbodyInput.put("approve", "{\"need_approve\": \"false\", \"group\": \"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");

        ICredential auth = new BasicCredentials()
            .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  \"ecs_id_list\": \"[\\\"xxx\\\"]\",\n  \"type\": \"manual\",\n  \"group\n  \": \"ecs_instance\"}");
        listbodyInput.put("stop_ecs_type", "{\n  \"stop_ecs_type\": \"SOFT\",\n  \"group\": \"stop_ecs_type\"}");
        listbodyInput.put("rate_control", "{\n  \"max\": \"0\",\n  \"timeDelay\": \"0\",\n  \"group\": \"rate_control\"}");
        listbodyInput.put("approve", "{\n  \"need_approve\": \"false\",\n  \"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");

        ICredential auth = new BasicCredentials()
            .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  \"ecs_id_list\": \"[\n    \"xxx\n  ]\n\", \"type\": \"manual\", \"group\n  \": \"ecs_instance\n\"}");
        listbodyInput.put("clean_disk", "{\n  \"path\": \"[\n    \"path\": \"\n    /xxx\n    \", \"fileName\": \"\n    xxxx.xx\n    \",\n  \"date\": \"\n    1\n    \", \"platform\": \"linux\", \"group\": \"clean_disk\n  \"}");
        listbodyInput.put("rate_control", "{\n  \"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\n  \"}");
        listbodyInput.put("approve", "{\n  \"need_approve\": \"false\", \"group\": \"approve\n  \"}");
        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.getStatusCode());
            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");

        ICredential auth = new BasicCredentials()
            .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\": \"[\\\"xxxx\\\"]\", \"type\": \"manual\", \"group
\": \"ecs_instance\"}");
        listbodyInput.put("user_password", "{ \"password\": \"xxxx\", \"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", "xxxx");
        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("xxxx");
        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");

        ICredential auth = new BasicCredentials()
            .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");  
  
        ICredential auth = new BasicCredentials()  
            .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", "{ \"cce_workload_id_list\": [\"xxx\"]  
\", \"cce_workload_cluster\": \"xxx\", \"type\": \"manual\", \"cce_workload_type\": \"deployments\", \"group  
\": \"cce_workload_instance\"}");  
        listbodyInput.put("cce_workload_restart_info", "{ \"time_interval\": \"300\", \"group  
\": \"cce_workload_restart_info\"}");  
        listbodyInput.put("rate_control", "{ \"max\": \"2\", \"timeDelay\": \"2\", \"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::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.getStatusCode());
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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = CreateWorkflowRequest()
        listInputbody = {
            "project_id": "2xxx487fxxxxbffc1cf",
            "region_id": "cn-north-7",
            "trigger": "{\"period\": \"[\\\"0\\\", \\\"3\\\", \\\"4\\\", \\\"5\\\", \\\"6\\\"]\", \"scheduled_time
            \": \"00:04:05\", \"time_zone\": \"Asia/Riyadh\", \"policy\": \"periodic\", \"group\": \"trigger\"}",
            "notice": "{\"group\": \"notice\"}",
            "get_instances": "{\"ecs_id_list\": \"[\\\"4bxxxx-xxxx-4c92-xxxx-19469d40a51c\\\"]\", \"type
            \": \"manual\", \"group\": \"ecs_instance\"}",
            "approve": "{\"need_approve\": \"false\", \"group\": \"approve\"}",
            "rate_control": "{\"max\": \"0\", \"timeDelay\": \"0\", \"group\": \"rate_control\"}",
            "script_param": "{\"sourceId\": \"script\", \"cmd_user\": \"xxxx\", \"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\"}"
        }
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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\":\"47xxxx67-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": "2xxxxxca5xx8373xxx1bffxxcf",
            "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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = CreateWorkflowRequest()
        listInputbody = {
            "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\"}
}
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

```

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = CreateWorkflowRequest()
        listInputbody = {
            "get_instances": "{\"ecs_id_list\":[\"xxx\"],\"type\":\"manual\",\"group\":\"ecs_instance
            \",
            "clean_disk": "{\"path\":\"[\"path\":[\"/xxx/\", \"fileName\":\"xxxx.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"
        }
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = CreateWorkflowRequest()
        listInputbody = {
            "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\"
        }
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
sk = __import__('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 = CreateWorkflowRequest()
    listInputbody = {
        "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\\"}"
    }
    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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = CreateWorkflowRequest()
        listInputbody = {
            "get_instances": "{\\"cce_workload_id_list\\":\\"[\\\"xxx\\\"]\\",\\"cce_workload_cluster\\":\\"xxx
            \\",\\"type\\":\\"manual\\",\\"cce_workload_type\\":\\"deployments\\",\\"group\\":\\"cce_workload_instance\\"}",
            "cce_workload_restart_info": "{\\"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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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": "{\"period\": \"[\\\"0\\\", \\\"3\\\", \\\"4\\\", \\\"5\\\", \\\"6\\\"]\", \"scheduled_time\": \"00:04:05\", \"time_zone\": \"Asia/Riyadh\", \"policy\": \"periodic\", \"group\": \"trigger\"}\",
        "notice": \"{\\\"group\\\": \\\"notice\\\"}\",
        "get_instances": \"{\\\"ecs_id_list\\\": \\\"[\\\"4bxxxx-xxxx-4c92-xxxx-19469d40a51c\\\"]\", \"type\": \"manual\", \"group\": \"ecs_instance\"}\",
        "approve": \"{\\\"need_approve\\\": \\\"false\\\", \"group\": \"approve\"}\",
        "rate_control": \"{\\\"max\\\": \\\"0\\\", \"timeDelay\\\": \\\"0\\\", \"group\": \"rate_control\"}\",
        "script_param": \"{\\\"sourceId\\\": \\\"script\\\", \"cmd_user\\\": \\\"xxxx\\\", \"sensitive_param\": false, \"script_content\\\": \\\"cd /xxx/xxx\\\", \"name\\\": \\\"zzy\\\", \"version_number\\\": \\\"1.0\\\", \"script_id\": \\\"xxxx-7e9e-4eed-8xxf-5f1fx6ebb7d\\\", \"script_type\\\": \\\"SHELL\\\", \"script_version_id\": \\\"e005xxx4-1fcf-40xx-b1x6-8dxxcae7b021\\\", \"scriptSelected\\\": \\\"null\\\", \"time_out\\\": \\\"7200\\\", \"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: "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")

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

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

    request := &model.CreateWorkflowRequest{}
    var listInputbody = Map{
        "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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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\":\"xxxxx\",\"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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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\": \"[\n    \"xxx\n  ]\",\n  \"type\": \"manual\",\n  \"group\": \"ecs_instance\"}",
        "stop_ecs_type": "{\n  \"stop_ecs_type\": \"SOFT\",\n  \"group\": \"stop_ecs_type\"}",
        "rate_control": "{\n  \"max\": \"0\",\n  \"timeDelay\": \"0\",\n  \"group\": \"rate_control\"}",
        "approve": "{\n  \"need_approve\": \"false\",\n  \"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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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\\\": \\\"xxxx.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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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")

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

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

    request := &model.CreateWorkflowRequest{}
    var listInputbody = map[string]interface{}{
        "get_instances": "{ \"cce_workload_id_list\": \"[\\\"xxx\\\"]\", \"cce_workload_cluster\": \"xxx\", \"type\": \"manual\", \"cce_workload_type\": \"deployments\", \"group\": \"cce_workload_instance\", \"cce_workload_restart_info\": { \"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\", }",
    }
    templateNameWorkflowRequestBody := "CMS::CCE::RestartWorkloadInstance"
    var tagsWorkflowRequestBody interface{} = make(map[string]string)
    descriptionWorkflowRequestBody := ""
    request.Body = &model.WorkflowRequestBody{
        TaskType: "cloud",
        Input: listInputbody,
        TemplateId: "CMS::CCE::RestartWorkloadInstance",
        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)
    }
}

```

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	Success response: The workflow details are returned.

Status Code	Description
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](#).

4.8.2 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 4-470 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
workflow_id	Yes	String	ID of the task to be enabled or disabled. Minimum: 1 Maximum: 64

Table 4-471 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. Minimum: 1 Maximum: 10 Enumeration values: <ul style="list-style-type: none"> • enable • disable

Request Parameters

Table 4-472 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Minimum: 1 Maximum: 32

Response Parameters

Status code: 400

Table 4-473 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024

Parameter	Type	Description
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 401**Table 4-474** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 500**Table 4-475** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

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");

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

AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
UpdateWorkflowTriggerStatusRequest request = new UpdateWorkflowTriggerStatusRequest();
request.withAction(UpdateWorkflowTriggerStatusRequest.ActionEnum.fromValue("<action>"));
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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = UpdateWorkflowTriggerStatusRequest()
        request.action = "<action>"
        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")

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

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

    request := &model.UpdateWorkflowTriggerStatusRequest{}
    request.Action = model.GetUpdateWorkflowTriggerStatusRequestActionEnum().<ACTION>
    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 4-476 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
workflow_id	Yes	String	Workflow ID, which is unique and generated based on project_id and workflow_name. Minimum: 1 Maximum: 64
execution_id	Yes	String	Workflow execution ID. Minimum: 1 Maximum: 64

Table 4-477 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. Minimum: 1 Maximum: 10 Enumeration values: <ul style="list-style-type: none">• restart• skip• continue
node_id	Yes	String	ID of the current node. Minimum: 1 Maximum: 64

Request Parameters

Table 4-478 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Minimum: 1 Maximum: 32

Response Parameters

Status code: **200**

Table 4-479 Response body parameters

Parameter	Type	Description
result	Object	Response body

Status code: 401**Table 4-480** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 500**Table 4-481** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

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");  
  
        ICredential auth = new BasicCredentials()  
            .withAk(ak)  
            .withSk(sk);
```



```
AomClient client = AomClient.newBuilder()
    .withCredential(auth)
    .withRegion(AomRegion.valueOf("<YOUR REGION>"))
    .build();
StartPausingWorkflowExecutionsRequest request = new StartPausingWorkflowExecutionsRequest();
request.setAction(StartPausingWorkflowExecutionsRequest.ActionEnum.fromValue("<action>"));
request.withNodeid("<node_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.getStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = StartPausingWorkflowExecutionsRequest()
        request.action = "<action>"
        request.node_id = "<node_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")

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

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

    request := &model.StartPausingWorkflowExecutionsRequest{}
    request.Action = model.GetStartPausingWorkflowExecutionsRequestActionEnum().<ACTION>
    request.NodeId = "<node_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 4-482 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
workflow_id	Yes	String	Workflow ID, which is unique and generated based on project_id and workflow_name. Minimum: 1 Maximum: 64
execution_id	Yes	String	Workflow execution ID. Minimum: 1 Maximum: 64

Request Parameters

Table 4-483 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Content type, which is application/json. Minimum: 1 Maximum: 32

Response Parameters

Status code: 200

Table 4-484 Response body parameters

Parameter	Type	Description
workflow_id	String	Process definition ID. Minimum: 1 Maximum: 64
execution_id	String	Flow instance ID. Minimum: 1 Maximum: 64
status	String	Flow instance execution status. Minimum: 1 Maximum: 32
begin_time	Long	Time (UTC) when a flow instance was created. Minimum: 0 Maximum: 999999999999999
end_time	Long	Time (UTC) when a flow instance was completed. Minimum: 0 Maximum: 999999999999999
last_update_time	Long	Time (UTC) when a flow instance was updated. Format: yyyy-MM-ddTHH:mm:ssZ. Minimum: 0 Maximum: 999999999999999
execution_result_list	Array of execution_result_list objects	Node execution information. Array Length: 0 - 200

Parameter	Type	Description
approve_user_name_list	Array of strings	Approver list. Minimum: 1 Maximum: 256 Array Length: 0 - 200
project_id	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
workflow_edit_time	Long	Time when the workflow was updated. Minimum: 0 Maximum: 999999999999999
last_record_id_with_snapshot	String	Execution snapshot. Minimum: 1 Maximum: 128

Table 4-485 execution_result_list

Parameter	Type	Description
node_id	String	Flow node ID. Minimum: 1 Maximum: 64
begin_time	Long	Start time of node execution. Minimum: 0 Maximum: 999999999999999
end_time	Long	End time of node execution. Minimum: 0 Maximum: 999999999999999
function_execution_id	String	FunctionGraph execution ID. Minimum: 1 Maximum: 64
output	Object	Node output.
status	String	Node status. Minimum: 1 Maximum: 32

Status code: 400**Table 4-486** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 401**Table 4-487** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 500**Table 4-488** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64

Parameter	Type	Description
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

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" : "xxxxxxx",  
    "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");

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

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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = SearchWorkflowExecutionDetailRequest()
        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")

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

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

    request := &model.SearchWorkflowExecutionDetailRequest{}
    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 4-489 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
workflow_id	Yes	String	Task ID, which is the workflow ID obtained from the workflow command list. Minimum: 1 Maximum: 64
execution_id	Yes	String	Task execution ID. Minimum: 1 Maximum: 64

Request Parameters

Table 4-490 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Content type, which is application/json. Minimum: 1 Maximum: 32

Response Parameters

Status code: 400

Table 4-491 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 401

Table 4-492 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 404**Table 4-493** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 500**Table 4-494** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

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");

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

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

```
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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = StopExecutionRequest()
        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")

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

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

    request := &model.StopExecutionRequest{}
    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 4-495 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. Minimum: 32 Maximum: 32

Request Parameters

Table 4-496 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Minimum: 1 Maximum: 32

Table 4-497 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. Minimum: 0 Maximum: 128
is_default	No	String	Query rule. default: Script management page displayed and fuzzy query supported. no_default: Version management page displayed. Minimum: 0 Maximum: 16
create_by	No	String	Creator. By default, scripts are searched by creator. Minimum: 1 Maximum: 64
script_id	Yes	String	ID of the script to be queried during version management. Minimum: 1 Maximum: 64
page_num	No	Integer	Page number, which is a positive integer. Minimum: 1 Maximum: 100
page_size	No	Integer	Number of records displayed on each page. Default: 10. Minimum: 1 Maximum: 1000
project_id	No	String	Project ID. Minimum: 32 Maximum: 32

Parameter	Mandatory	Type	Description
order_by_column	Yes	String	Field to be sorted. Options: name, create_time, and update_time (default). Minimum: 1 Maximum: 16
sort_order	Yes	String	Sorting order (default: DESC). Options: ASC (ascending order) and DESC (descending order). Minimum: 1 Maximum: 16
enterprise_project_id	No	String	Enterprise project ID, based on which you can search for required scripts. Minimum: 1 Maximum: 64

Response Parameters

Status code: 200

Table 4-498 Response body parameters

Parameter	Type	Description
elements	Array of Script objects	Query result set. Array Length: 0 - 9999999
total_elements	Integer	Number of queried results. Minimum: 0 Maximum: 99999999

Table 4-499 Script

Parameter	Type	Description
approve_info	ApproveInfo object	Review information.
create_by	String	Creator, for example, Tom. Minimum: 1 Maximum: 64

Parameter	Type	Description
create_time	Long	Creation time. Minimum: 0 Maximum: 999999999999999
description	String	Script description, which can contain a maximum of 1000 characters. Minimum: 0 Maximum: 1000
enterprise_project_id	String	Enterprise project ID. Minimum: 1 Maximum: 64
id	String	Script ID, which is generated based on UUID.randomUUID. Minimum: 1 Maximum: 64
name	String	Script name, which can contain digits, underscores (_), and letters. Minimum: 1 Maximum: 64
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. Minimum: 1 Maximum: 64
project_id	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
rate_control	RateControl object	Execution policy.
script_language	String	Script language. Options: SHELL, BAT, PYTHON, and POWER_SHELL. Minimum: 1 Maximum: 16
update_by	String	User who makes the modification. Minimum: 1 Maximum: 64

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. Minimum: 0 Maximum: 999999999999999

Table 4-500 ApproveInfo

Parameter	Type	Description
topic_selected	String	Selected topic. Minimum: 1 Maximum: 2048
need_approve	Boolean	Whether a review is needed. Options: true and false (default).
smn_urn_list	String	Topic URN set. Minimum: 1 Maximum: 2048

Table 4-501 RateControl

Parameter	Type	Description
have_rate_control	Boolean	Whether to implement batch release. Default: false.
time_delay	Integer	Interval. Minimum: 1 Maximum: 60
max	Integer	Maximum number of instances supported for batch release. Minimum: 0 Maximum: 100

Status code: 400

Table 4-502 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 32
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	Returned HTTP code. Minimum: 1 Maximum: 999

Status code: 401**Table 4-503** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 32
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	Returned HTTP code. Minimum: 1 Maximum: 999

Status code: 500**Table 4-504** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 32

Parameter	Type	Description
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	Returned HTTP code. Minimum: 1 Maximum: 999

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" : "xxxx",
    "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");

        ICredential auth = new BasicCredentials()
            .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.getHttpStatusCode());
    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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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 4-505 Path Parameters

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

Request Parameters

Table 4-506 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Minimum: 1 Maximum: 32

Table 4-507 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. Minimum: 0 Maximum: 128
is_default	No	String	Query rule. default: Script management page displayed and fuzzy query supported. no_default: Version management page displayed. Minimum: 0 Maximum: 16
create_by	No	String	Creator. By default, scripts are searched by creator. Minimum: 1 Maximum: 64

Parameter	Mandatory	Type	Description
script_id	Yes	String	ID of the script to be queried during version management. Minimum: 1 Maximum: 64
page_num	No	Integer	Page number, which is a positive integer. Minimum: 1 Maximum: 100
page_size	No	Integer	Number of records displayed on each page. Default: 10. Minimum: 1 Maximum: 1000
project_id	No	String	Project ID. Minimum: 32 Maximum: 32
order_by_column	Yes	String	Field to be sorted. Options: name, create_time, and update_time (default). Minimum: 1 Maximum: 16
sort_order	Yes	String	Sorting order (default: DESC). Options: ASC (ascending order) and DESC (descending order). Minimum: 1 Maximum: 16
enterprise_project_id	No	String	Enterprise project ID, based on which you can search for required scripts. Minimum: 1 Maximum: 64

Response Parameters

Status code: 200

Table 4-508 Response body parameters

Parameter	Type	Description
elements	Array of ScriptVersion objects	Query result set. Array Length: 0 - 9999999
total_elements	Integer	Number of queried results. Minimum: 0 Maximum: 9999999

Table 4-509 ScriptVersion

Parameter	Type	Description
content	String	Script content, which cannot be empty. Minimum: 1 Maximum: 30000
create_by	String	Creator, for example, Tom. Minimum: 1 Maximum: 64
create_time	Long	Creation time. Minimum: 0 Maximum: 999999999999999
enterprise_project_id	String	Enterprise project ID. Minimum: 1 Maximum: 64
name	String	Script name, which can contain digits, underscores (_), and letters. Minimum: 1 Maximum: 64
project_id	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
job_reference_number	Integer	Number of times that a script version is referenced by a job. Default: 0. Do not enter a negative number. Minimum: 0 Maximum: 9999999

Parameter	Type	Description
script_id	String	Script ID, which is generated based on UUID.randomUUID. Minimum: 1 Maximum: 64
script_language	String	Script language. Options: SHELL, BAT, PYTHON, and POWER_SHELL. Minimum: 1 Maximum: 32
status_desc	Integer	Status. Options: 0 (unreleased), 1 (released); 2 (offline), and 3 (prohibited). Minimum: 0 Maximum: 4
update_by	String	User who makes the modification. Minimum: 1 Maximum: 64
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. Minimum: 0 Maximum: 9999999999999
version_id	String	Version ID, which is generated based on UUID.randomUUID. Minimum: 1 Maximum: 64
version_number	String	Script version number. Only digits, underscores (_), letters, and periods (.) are allowed. Minimum: 1 Maximum: 64
job_reference_name	Array of ReferenceInfo objects	Details of a job referenced by a script. Array Length: 0 - 9999999

Table 4-510 ReferenceInfo

Parameter	Type	Description
job_id	String	Job ID. Minimum: 1 Maximum: 64
job_name	String	Job name. Minimum: 1 Maximum: 64

Status code: 400**Table 4-511** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 32
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	Returned HTTP code. Minimum: 1 Maximum: 999

Status code: 401**Table 4-512** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 32
error_msg	String	Error message. Minimum: 1 Maximum: 1024

Parameter	Type	Description
http_code	Integer	Returned HTTP code. Minimum: 1 Maximum: 999

Status code: 500

Table 4-513 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 32
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	Returned HTTP code. Minimum: 1 Maximum: 999

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": "012b43a3xxxxx684a30b52xxx98cbe",
      "job_name": "onxx_cxxxxxxx"
    }
  ]
  }
]
```

```
    } ],  
    "job_reference_number" : 1,  
    "name" : "xxxxx",  
    "project_id" : "2axxxxcca548xxx891bxxxf",  
    "script_id" : "xxxxaef-dbxx-41x9-8xx2-8exxxx4e159d2",  
    "script_language" : "SHELL",  
    "status_desc" : 1,  
    "update_by" : "cxxxxx",  
    "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");

        ICredential auth = new BasicCredentials()
            .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("xxxxxxxxxx");
        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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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: "xxxxxxxxx",
        }
    }
    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 4-514 Path Parameters

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

Request Parameters

Table 4-515 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Minimum: 1 Maximum: 32

Table 4-516 Request body parameters

Parameter	Mandatory	Type	Description
name	No	String	Job name. Minimum: 1 Maximum: 64
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. Minimum: 1 Maximum: 1000
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. Minimum: 1 Maximum: 100

Parameter	Mandatory	Type	Description
order_by_column	Yes	String	Field to be sorted. Options: name, create_time, and update_time (default). Minimum: 1 Maximum: 32
sort_order	Yes	String	Sorting order (default: DESC). Options: ASC (ascending order) and DESC (descending order). Minimum: 1 Maximum: 32
enterprise_project_id	No	String	Enterprise project ID. Minimum: 0 Maximum: 64

Response Parameters

Status code: 200

Table 4-517 Response body parameters

Parameter	Type	Description
total_elements	Long	Total number. Minimum: 0 Maximum: 9999999
elements	Array of Job objects	Job information set. Array Length: 0 - 9999999

Table 4-518 Job

Parameter	Type	Description
id	String	Job ID. Minimum: 1 Maximum: 64
name	String	Job name. Minimum: 1 Maximum: 64

Parameter	Type	Description
create_time	Long	Time when an entity was created. Minimum: 0 Maximum: 9999999999999
create_by	String	Creator. Minimum: 1 Maximum: 64
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. Minimum: 0 Maximum: 9999999999999
update_by	String	User who makes the modification. Minimum: 1 Maximum: 64
description	String	Job description, which can contain up to 1000 characters. Minimum: 1 Maximum: 1000
enterprise_project_id	String	Enterprise project ID. Minimum: 1 Maximum: 64
project_id	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
steps	Array of Step objects	Job step. Array Length: 1 - 10
parameters	Array of Parameter objects	Global parameter. Array Length: 0 - 20
rate_control	RateControl object	Execution policy.
approve_info	ApproveInfo object	Approval details.
is_latest_version	Boolean	Whether the job is of the latest version.

Parameter	Type	Description
version_number	Integer	Version. Minimum: 1 Maximum: 100

Table 4-519 Step

Parameter	Type	Description
id	String	Step ID. Minimum: 1 Maximum: 64
name	String	Step name. Minimum: 1 Maximum: 32
type	String	Step type. Minimum: 1 Maximum: 16
input	Map<String,String>	Step parameter.
ignore_error	Boolean	Whether to automatically ignore errors.
description	String	Step description. Minimum: 1 Maximum: 1000

Table 4-520 Parameter

Parameter	Type	Description
param_name	String	Parameter name.
param_type	String	Parameter type. Minimum: 1 Maximum: 16
param_group	String	Parameter group. Minimum: 1 Maximum: 32

Parameter	Type	Description
default_value	String	Initial value of a parameter. Minimum: 1 Maximum: 40960
id	String	Parameter ID. Minimum: 1 Maximum: 64
encryption	Boolean	Whether to encrypt the data.
hint	String	Parameter prompt. Minimum: 1 Maximum: 1000
quote_param	Boolean	Whether to select a parameter from the parameter library.
required	Boolean	Whether a parameter is mandatory.
description	String	Parameter description. Minimum: 1 Maximum: 1000

Table 4-521 RateControl

Parameter	Type	Description
have_rate_control	Boolean	Whether to implement batch release. Default: false.
time_delay	Integer	Interval. Minimum: 1 Maximum: 60
max	Integer	Maximum number of instances supported for batch release. Minimum: 0 Maximum: 100

Table 4-522 ApproveInfo

Parameter	Type	Description
topic_selected	String	Selected topic. Minimum: 1 Maximum: 2048
need_approve	Boolean	Whether a review is needed. Options: true and false (default).
smn_urn_list	String	Topic URN set. Minimum: 1 Maximum: 2048

Status code: 400**Table 4-523** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 32
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	Returned HTTP code. Minimum: 1 Maximum: 999

Status code: 401**Table 4-524** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 32
error_msg	String	Error message. Minimum: 1 Maximum: 1024

Parameter	Type	Description
http_code	Integer	Returned HTTP code. Minimum: 1 Maximum: 999

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" : "xxxxxxxx",
"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" : "xxxxxxxx",
  "ignore_error" : false,
  "input" : {
    "script_param" : "{xxxx}",
    "get_instances" : "{xxxx}"
  },
  "name" : "xxx",
  "type" : "script"
}, {
  "description" : "",
  "id" : "xxxxxxxx",
  "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");

        ICredential auth = new BasicCredentials()
            .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

from huaweicloudsdkcore.auth.credentials import BasicCredentials
```

```
from huaweicloudsdk_aom.v1.region.aom_region import AomRegion
from huaweicloudsdk_core.exceptions import exceptions
from huaweicloudsdk_aom.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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 4-525 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
job_id	Yes	String	Job ID. Minimum: 1 Maximum: 64

Request Parameters

Table 4-526 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Minimum: 1 Maximum: 32

Table 4-527 Request body parameters

Parameter	Mandatory	Type	Description
name	No	String	Solution name. Minimum: 1 Maximum: 64
page_num	No	Integer	Page number, which is a positive integer. Minimum: 1 Maximum: 9999999

Parameter	Mandatory	Type	Description
page_size	No	Integer	Number of records displayed per page. Minimum: 1 Maximum: 100
order_by_column	Yes	String	Field to be sorted. Options: name, create_time, and update_time (default). Minimum: 1 Maximum: 16
sort_order	No	String	Sorting order (default: DESC). Options: ASC (ascending order) and DESC (descending order). Minimum: 1 Maximum: 16

Response Parameters

Status code: 200

Table 4-528 Response body parameters

Parameter	Type	Description
total_elements	Long	Total number. Minimum: 0 Maximum: 9999999
elements	Array of Template objects	Job information set. Array Length: 0 - 9999999

Table 4-529 Template

Parameter	Type	Description
approve_info	ApproveInfo object	Review information.

Parameter	Type	Description
create_by	String	User who created the template. This parameter is obtained from the token transferred during API calling. Minimum: 1 Maximum: 64
create_time	Long	Time (UTC, in millisecond) when the template was created. Minimum: 0 Maximum: 999999999999999
enterprise_project_id	String	Enterprise project ID. Minimum: 1 Maximum: 64
id	String	Template ID, which is unique and generated based on project_id and template_name. Minimum: 1 Maximum: 64
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. Minimum: 1 Maximum: 64
job_version	Integer	Job version. Minimum: 1 Maximum: 999
name	String	Template name. Minimum: 1 Maximum: 64
need_synchronize	Boolean	Whether synchronization is required.
nodes	Array of Node objects	List of parameters required for executing a task. Array Length: 1 - 20
parameters	Array of Parameter objects	List of parameters required for executing a task. Array Length: 0 - 20

Parameter	Type	Description
project_id	String	Project ID. Minimum: 32 Maximum: 32
quote	Array of strings	Referenced parameter. Minimum: 1 Maximum: 256 Array Length: 0 - 999
rate_control	RateControl object	Execution policy.
share_type	String	Template type. Options: public (default templates) and private (custom templates). Minimum: 1 Maximum: 16
steps	Array of Step objects	Job step. Array Length: 1 - 20
update_by	String	User who updated the template. This parameter is obtained from the token transferred during API calling. Minimum: 1 Maximum: 64
update_time	Long	Template update time (UTC, in milliseconds). Minimum: 0 Maximum: 999999999999999
version	String	Template version. Minimum: 1 Maximum: 32

Table 4-530 ApproveInfo

Parameter	Type	Description
topic_selected	String	Selected topic. Minimum: 1 Maximum: 2048
need_approve	Boolean	Whether a review is needed. Options: true and false (default).

Parameter	Type	Description
smn_urn_list	String	Topic URN set. Minimum: 1 Maximum: 2048

Table 4-531 Node

Parameter	Type	Description
parent_node	String	Name of the parent node. Minimum: 1 Maximum: 64
category	String	Node type. Minimum: 1 Maximum: 32
description	String	Node description. Minimum: 1 Maximum: 1024
id	String	Node ID. Minimum: 1 Maximum: 64
ignore_error	Boolean	Whether to ignore the error.
metadata	Metadata object	Metadata.
name	String	Node name, for example, Node. Minimum: 1 Maximum: 64
task_name	String	Task name. Minimum: 1 Maximum: 64

Table 4-532 Metadata

Parameter	Type	Description
type	String	Node type. Minimum: 1 Maximum: 32

Parameter	Type	Description
configuration	Map<String, Object>	Configuration information.

Table 4-533 Parameter

Parameter	Type	Description
param_name	String	Parameter name.
param_type	String	Parameter type. Minimum: 1 Maximum: 16
param_group	String	Parameter group. Minimum: 1 Maximum: 32
default_value	String	Initial value of a parameter. Minimum: 1 Maximum: 40960
id	String	Parameter ID. Minimum: 1 Maximum: 64
encryption	Boolean	Whether to encrypt the data.
hint	String	Parameter prompt. Minimum: 1 Maximum: 1000
quote_param	Boolean	Whether to select a parameter from the parameter library.
required	Boolean	Whether a parameter is mandatory.
description	String	Parameter description. Minimum: 1 Maximum: 1000

Table 4-534 RateControl

Parameter	Type	Description
have_rate_control	Boolean	Whether to implement batch release. Default: false.

Parameter	Type	Description
time_delay	Integer	Interval. Minimum: 1 Maximum: 60
max	Integer	Maximum number of instances supported for batch release. Minimum: 0 Maximum: 100

Table 4-535 Step

Parameter	Type	Description
id	String	Step ID. Minimum: 1 Maximum: 64
name	String	Step name. Minimum: 1 Maximum: 32
type	String	Step type. Minimum: 1 Maximum: 16
input	Map<String,String>	Step parameter.
ignore_error	Boolean	Whether to automatically ignore errors.
description	String	Step description. Minimum: 1 Maximum: 1000

Status code: 400**Table 4-536** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64

Parameter	Type	Description
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 401

Table 4-537 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

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" : {
```



```
"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");

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

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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListTemplateByJobIdRequest()
        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")

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

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

    request := &model.ListTemplateByJobIdRequest{}
    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 4-538 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
template_id	Yes	String	Plan ID. Minimum: 1 Maximum: 64

Table 4-539 Query Parameters

Parameter	Mandatory	Type	Description
share_type	Yes	String	Template type. Default: private. Options: public and private. Minimum: 1 Maximum: 10

Request Parameters

Table 4-540 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Minimum: 1 Maximum: 32

Response Parameters

Status code: 200

Table 4-541 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. Minimum: 1 Maximum: 64
create_time	Long	Time (UTC, in millisecond) when the template was created. Minimum: 0 Maximum: 9999999999999

Parameter	Type	Description
enterprise_project_id	String	Enterprise project ID. Minimum: 1 Maximum: 64
id	String	Template ID, which is unique and generated based on project_id and template_name. Minimum: 1 Maximum: 64
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. Minimum: 1 Maximum: 64
job_version	Integer	Job version. Minimum: 1 Maximum: 999
name	String	Template name. Minimum: 1 Maximum: 64
need_synchronize	Boolean	Whether synchronization is required.
nodes	Array of Node objects	List of parameters required for executing a task. Array Length: 1 - 20
parameters	Array of Parameter objects	List of parameters required for executing a task. Array Length: 0 - 20
project_id	String	Project ID. Minimum: 32 Maximum: 32
quote	Array of strings	Referenced parameter. Minimum: 1 Maximum: 256 Array Length: 0 - 999

Parameter	Type	Description
rate_control	RateControl object	Execution policy.
share_type	String	Template type. Options: public (default templates) and private (custom templates). Minimum: 1 Maximum: 16
steps	Array of Step objects	Job step. Array Length: 1 - 20
update_by	String	User who updated the template. This parameter is obtained from the token transferred during API calling. Minimum: 1 Maximum: 64
update_time	Long	Template update time (UTC, in milliseconds). Minimum: 0 Maximum: 999999999999999
version	String	Template version. Minimum: 1 Maximum: 32

Table 4-542 ApproveInfo

Parameter	Type	Description
topic_selected	String	Selected topic. Minimum: 1 Maximum: 2048
need_approve	Boolean	Whether a review is needed. Options: true and false (default).
smn_urn_list	String	Topic URN set. Minimum: 1 Maximum: 2048

Table 4-543 Node

Parameter	Type	Description
parent_node	String	Name of the parent node. Minimum: 1 Maximum: 64
category	String	Node type. Minimum: 1 Maximum: 32
description	String	Node description. Minimum: 1 Maximum: 1024
id	String	Node ID. Minimum: 1 Maximum: 64
ignore_error	Boolean	Whether to ignore the error.
metadata	Metadata object	Metadata.
name	String	Node name, for example, Node. Minimum: 1 Maximum: 64
task_name	String	Task name. Minimum: 1 Maximum: 64

Table 4-544 Metadata

Parameter	Type	Description
type	String	Node type. Minimum: 1 Maximum: 32
configuration	Map<String, Object>	Configuration information.

Table 4-545 Parameter

Parameter	Type	Description
param_name	String	Parameter name.
param_type	String	Parameter type. Minimum: 1 Maximum: 16
param_group	String	Parameter group. Minimum: 1 Maximum: 32
default_value	String	Initial value of a parameter. Minimum: 1 Maximum: 40960
id	String	Parameter ID. Minimum: 1 Maximum: 64
encryption	Boolean	Whether to encrypt the data.
hint	String	Parameter prompt. Minimum: 1 Maximum: 1000
quote_param	Boolean	Whether to select a parameter from the parameter library.
required	Boolean	Whether a parameter is mandatory.
description	String	Parameter description. Minimum: 1 Maximum: 1000

Table 4-546 RateControl

Parameter	Type	Description
have_rate_control	Boolean	Whether to implement batch release. Default: false.
time_delay	Integer	Interval. Minimum: 1 Maximum: 60

Parameter	Type	Description
max	Integer	Maximum number of instances supported for batch release. Minimum: 0 Maximum: 100

Table 4-547 Step

Parameter	Type	Description
id	String	Step ID. Minimum: 1 Maximum: 64
name	String	Step name. Minimum: 1 Maximum: 32
type	String	Step type. Minimum: 1 Maximum: 16
input	Map<String,String>	Step parameter.
ignore_error	Boolean	Whether to automatically ignore errors.
description	String	Step description. Minimum: 1 Maximum: 1000

Status code: 400**Table 4-548** Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024

Parameter	Type	Description
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 401

Table 4-549 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
            .withRegion(AomRegion.valueOf("<YOUR REGION>"))
            .build();
        SearchTemplateByIdRequest request = new SearchTemplateByIdRequest();
        request.withShareType("<share_type>");
        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

from huaweicloudsdkcore.auth.credentials import BasicCredentials
```

```
from huaweicloudsdk_aom.v1.region.aom_region import AomRegion
from huaweicloudsdk_core.exceptions import exceptions
from huaweicloudsdk_aom.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")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = SearchTemplateByIdRequest()
        request.share_type = "<share_type>"
        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")

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

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

    request := &model.SearchTemplateByIdRequest{}
    request.ShareType = "<share_type>"
    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 4-550 Path Parameters

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

Request Parameters

Table 4-551 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Minimum: 1 Maximum: 32

Table 4-552 Request body parameters

Parameter	Mandatory	Type	Description
search	No	String	Search content. You can enter a workflow name or description to search. Minimum: 1 Maximum: 64
type	No	String	Workflow type. Options: cron, event, and manual. Minimum: 1 Maximum: 16
tags	No	Map<String,String>	Workflow tags. Maximum: 10.
page	No	Integer	Number of the current page to be queried. Default: 0. Minimum: 1 Maximum: 9999999
size	No	Integer	Number of records that can be queried on the current page. Default: 10. Minimum: 1 Maximum: 100
enterprise_project_id	No	String	Enterprise project ID. Minimum: 1 Maximum: 64

Parameter	Mandatory	Type	Description
create_by	No	String	Workflow creator. Minimum: 1 Maximum: 64
sort_field	Yes	String	Sorting field. Options: create_time, last_execution_start_time, or update_time. Minimum: 1 Maximum: 64
sort_type	Yes	String	Sorting order. Options: ASC and DESC. Minimum: 1 Maximum: 16
search_time_start	No	Long	Start time specified for search. Minimum: 0 Maximum: 999999999999999
search_time_end	No	Long	End time specified for search. Minimum: 0 Maximum: 999999999999999
status	No	String	Task status. Options: success, fail, executing, cancel, waitExecute, waitApproval, approvalFailed, pausing, and canceling. Minimum: 1 Maximum: 16

Response Parameters

Status code: 200

Table 4-553 Response body parameters

Parameter	Type	Description
elements	Array of Workflow objects	Workflow details set. Array Length: 0 - 9999999

Parameter	Type	Description
total_elements	Long	Total number. Minimum: 0 Maximum: 99999999

Table 4-554 Workflow

Parameter	Type	Description
id	String	Workflow ID, which is unique and generated based on project_id and workflow_name. Minimum: 1 Maximum: 64
name	String	Workflow name. Minimum: 1 Maximum: 64
type	String	Workflow type. Options: cron and manual. Minimum: 1 Maximum: 16
description	String	Workflow description. Minimum: 1 Maximum: 128
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. Minimum: 0 Maximum: 999999999999999
create_by	String	User who created the workflow. This parameter is obtained from the token transferred during API calling. Minimum: 1 Maximum: 64
update_time	Long	Time (UTC, in milliseconds) when a workflow was updated. Minimum: 0 Maximum: 999999999999999

Parameter	Type	Description
update_by	String	User who updated the workflow. This parameter is obtained from the token transferred during API calling. Minimum: 1 Maximum: 64
template_name	String	Template name. Minimum: 1 Maximum: 64
template_id	String	Template ID. Minimum: 1 Maximum: 64
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. Minimum: 1 Maximum: 64
status	String	Task status. Options: success, fail, and executing. Minimum: 1 Maximum: 16
citation_urns	Array of strings	Reference of a workflow. Minimum: 1 Maximum: 256 Array Length: 0 - 200
last_execution_end_time	Long	End time (UTC, in milliseconds) of the last execution. Minimum: 0 Maximum: 9999999999999
last_execution_start_time	Long	Start time (UTC, in milliseconds) of the last execution. Minimum: 0 Maximum: 9999999999999
quote	Array of strings	Parameters that are referenced. Minimum: 1 Maximum: 256 Array Length: 1 - 999

Parameter	Type	Description
job_name	String	Job name. Minimum: 1 Maximum: 64
job_id	String	Job ID. Minimum: 1 Maximum: 64
service_scenario	String	Service scenario. Minimum: 1 Maximum: 64
service_name	String	Service name. Minimum: 1 Maximum: 64
task_type	String	Task type. Minimum: 1 Maximum: 16
project_id	String	Project ID returned by FunctionGraph. Minimum: 1 Maximum: 32
workflow_id	String	Workflow ID returned by FunctionGraph. Minimum: 1 Maximum: 64
task_status	String	Task status. Minimum: 1 Maximum: 32
nodes	Array of Node objects	Task node. Array Length: 1 - 20
edit_time	Long	Edit time. Minimum: 0 Maximum: 999999999999999
execution_action_rules	Array of strings	Fine-grained permissions for executing actions. Minimum: 1 Maximum: 128 Array Length: 0 - 200

Parameter	Type	Description
execution_permission	Array of strings	Cloud service permissions. Minimum: 1 Maximum: 128 Array Length: 1 - 32
global_parameters	Array of Parameter objects	Global parameters. Array Length: 0 - 20
is_delete	Boolean	Whether the object has been logically deleted.
steps	Array of Step objects	Step. Array Length: 1 - 10
output	String	Task output. Minimum: 1 Maximum: 40960
trigger_id	String	Trigger ID. Minimum: 1 Maximum: 64
trigger_status	String	Trigger status. Minimum: 1 Maximum: 64
approve_id	String	Approval ID. Minimum: 1 Maximum: 64
template_i18n	WorkFlowModel object	Task internationalization field, including English description.
enterprise_project_id	String	Enterprise project to which the task belongs. Minimum: 1 Maximum: 64
last_execute_by	String	Last task executor. Minimum: 1 Maximum: 64

Table 4-555 Node

Parameter	Type	Description
parent_node	String	Name of the parent node. Minimum: 1 Maximum: 64
category	String	Node type. Minimum: 1 Maximum: 32
description	String	Node description. Minimum: 1 Maximum: 1024
id	String	Node ID. Minimum: 1 Maximum: 64
ignore_error	Boolean	Whether to ignore the error.
metadata	Metadata object	Metadata.
name	String	Node name, for example, Node. Minimum: 1 Maximum: 64
task_name	String	Task name. Minimum: 1 Maximum: 64

Table 4-556 Metadata

Parameter	Type	Description
type	String	Node type. Minimum: 1 Maximum: 32
configuration	Map<String, Object>	Configuration information.

Table 4-557 Parameter

Parameter	Type	Description
param_name	String	Parameter name.
param_type	String	Parameter type. Minimum: 1 Maximum: 16
param_group	String	Parameter group. Minimum: 1 Maximum: 32
default_value	String	Initial value of a parameter. Minimum: 1 Maximum: 40960
id	String	Parameter ID. Minimum: 1 Maximum: 64
encryption	Boolean	Whether to encrypt the data.
hint	String	Parameter prompt. Minimum: 1 Maximum: 1000
quote_param	Boolean	Whether to select a parameter from the parameter library.
required	Boolean	Whether a parameter is mandatory.
description	String	Parameter description. Minimum: 1 Maximum: 1000

Table 4-558 Step

Parameter	Type	Description
id	String	Step ID. Minimum: 1 Maximum: 64
name	String	Step name. Minimum: 1 Maximum: 32

Parameter	Type	Description
type	String	Step type. Minimum: 1 Maximum: 16
input	Map<String,String>	Step parameter.
ignore_error	Boolean	Whether to automatically ignore errors.
description	String	Step description. Minimum: 1 Maximum: 1000

Table 4-559 WorkFlowModel

Parameter	Type	Description
en-us	Map<String,String>	Description
zh-cn	Map<String,String>	Description

Status code: 400

Table 4-560 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 401

Table 4-561 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 500

Table 4-562 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

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,
"search_time_end" : 160000000000
}
```

Example Responses

Status code: 200

OK: The task list is returned.

```
{
  "elements": [ {
    "citation_urns": [ ],
    "create_by": "xxxx",
    "create_time": 160000000000,
    "description": "",
    "edit_time": 0,
    "enterprise_project_id": "0",
    "execution_action_rules": [ "xxxxxxx", "xxxxxxx" ],
    "execution_permission": [ "xxxxxxx", "xxxxxxx" ],
    "id": "xxxxxx",
    "input": {
      "package": {
        "cmd_user": "xxxx",
        "software_list": "[xxxxxxx]",
        "pre_install_script": "",
        "operate_type": "install",
        "un_install_script": "",
        "version_number": "1",
        "time_out": "7200",
        "install_script": "xxxx",
        "package_version_id": "xxxxxx",
        "package_basic_id": "xxxxxx",
        "package_name": "xxxx",
        "install_file_dir": "xxxxx",
        "plat_form": "Linux",
        "group": "package"
      },
      "project_id": "xxxxxxx",
      "approve": {
        "need_approve": "false",
        "group": "approve"
      },
      "region_id": "cn-north-7",
      "get_instances": {
        "frontend_info": "{xxxxxx}",
        "ecs_id_list": "[xxxxxxx]",
        "type": "cmdb_manual",
        "group": "ecs_instance"
      },
      "rate_control": {
        "max": "0",
        "timeDelay": "0",
        "group": "rate_control"
      }
    },
    "is_delete": false,
    "last_execute_by": "xxxxxx",
    "last_execution_end_time": 1600000000,
    "last_execution_id": "xxxxxx",
    "last_execution_start_time": 1600000000,
    "name": "xxxxxx",
    "nodes": [ {
      "category": "service",
      "description": "download obs plug and install plug",
      "id": "xxxxxx",
      "ignore_error": true,
      "metadata": {
```

```
"configuration" : {
  "func_urn" : "xxxxxxx",
  "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" : "xxxxxx",
  "isEditor" : false,
  "key" : "properties.package_basic_id"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "xxxxx",
  "isEditor" : false,
  "key" : "properties.package_name"
}, {
  "default" : "",
  "showFormat" : false,
  "format" : "",
  "value" : "xxxx",
  "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" : "xxxxxxx",
  "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_i18n" : {
  "en-us" : {
    "name" : "Package",
    "description" : "download install plug or uninstall plug"
  },
  "zh-cn" : {
    "name" : "File management",
    "description" : " "
  }
},
"template_id" : "CMS::ECS::Package",
"template_name" : "CMS::ECS::Package",
"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");

        ICredential auth = new BasicCredentials()
            .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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = 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")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        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 4-563 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
workflow_id	Yes	String	Task ID, which is the workflow ID obtained from the workflow command list. Minimum: 1 Maximum: 64

Table 4-564 Query Parameters

Parameter	Mandatory	Type	Description
x_enterprise_project_id	No	String	ID of the enterprise project. Default: 0 Minimum: 1 Maximum: 64

Request Parameters

Table 4-565 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960
Content-Type	Yes	String	Content type, which is application/json. Minimum: 1 Maximum: 32

Response Parameters

Status code: 200

Table 4-566 Response body parameters

Parameter	Type	Description
[items]	Array of WorkflowExecutionBrief objects	OK: The execution history of the specified task is returned.

Table 4-567 WorkflowExecutionBrief

Parameter	Type	Description
workflow_id	String	Flow instance ID. Minimum: 1 Maximum: 64

Parameter	Type	Description
execution_id	String	Flow instance ID. Minimum: 1 Maximum: 64
status	String	Flow instance execution status. Minimum: 1 Maximum: 32
begin_time	Long	Time (UTC) when a flow instance was created. Minimum: 0 Maximum: 9999999999999
end_time	Long	Time (UTC) when a flow instance was completed. Minimum: 0 Maximum: 9999999999999
last_update_time	Long	Time (UTC) when a flow instance was modified. Minimum: 0 Maximum: 9999999999999
created_by	String	Flow instance creator. Minimum: 1 Maximum: 32
approve_user_name_list	Array of strings	Approver list. Minimum: 1 Maximum: 128 Array Length: 0 - 200
execution_result_list	Array of execution_result_list objects	Execution record. Array Length: 1 - 200
project_id	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
workflow_edit_time	Long	Time (UTC) when the workflow was modified. Minimum: 0 Maximum: 9999999999999

Parameter	Type	Description
last_record_id_with_snapshot	String	Execution snapshot. Minimum: 1 Maximum: 64

Table 4-568 execution_result_list

Parameter	Type	Description
node_id	String	Flow node ID. Minimum: 1 Maximum: 64
begin_time	Long	Start time of node execution. Minimum: 0 Maximum: 999999999999999
end_time	Long	End time of node execution. Minimum: 0 Maximum: 999999999999999
function_execution_id	String	FunctionGraph execution ID. Minimum: 1 Maximum: 64
output	Object	Node output.
status	String	Node status. Minimum: 1 Maximum: 32

Status code: 401

Table 4-569 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024

Parameter	Type	Description
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 500

Table 4-570 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

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" : "xxx",
  "execution_result_list" : [ {
    "begin_time" : 16000000,
    "end_time" : 160000000,
    "function_execution_id" : "xxxx",
    "node_id" : "delete-workload-pod",
    "output" : {
      "fail" : [ ],
      "in_execution" : [ ],
      "success" : [ {
        "app" : "xxxxxx",
        "code" : "0",
```

```
"matchLabels" : "{\"app\":\"xxxx\", \"version\":\"xxxx\"}",
"current_project" : true,
"log" : "Restart Success.",
"replicas" : 1,
"cmdb_work_load_id" : "xxxxxxx",
"type" : "manual",
"availableReplicas" : 0,
"execute_time" : "35505",
"creationTimestamp" : " ",
"name" : "xxxxxx",
"namespace" : "default",
"cceWorkloadCluster" : "xxxxxx",
"id" : "xxxx",
"cceWorkloadType" : "deployments"
}],
"not_performed" : [ ]
},
"status" : "success"
}],
"project_id" : "xxxxxxx",
"status" : "success",
"workflowEditTime" : 0,
"workflow_id" : "xxxxxxx"
}]
```

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");

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

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

ListWorkflowExecutionsRequest request = new ListWorkflowExecutionsRequest();
request.setXEnterpriseProjectId("<x_enterprise_project_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.getStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

Python

```
# coding: utf-8

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ListWorkflowExecutionsRequest()
        request.x_enterprise_project_id = "<x_enterprise_project_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")

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

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

    request := &model.ListWorkflowExecutionsRequest{}
    xEnterpriseProjectIdRequest := "<x_enterprise_project_id>"
    request.XEnterpriseProjectId = &xEnterpriseProjectIdRequest
    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 4-571 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID obtained from IAM. Generally, a project ID contains 32 characters. Minimum: 32 Maximum: 32
workflow_id	Yes	String	Task ID, which is the workflow ID obtained from the workflow command list. Minimum: 1 Maximum: 64

Request Parameters

Table 4-572 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token obtained from IAM. Minimum: 1 Maximum: 40960

Parameter	Mandatory	Type	Description
Content-Type	Yes	String	Content type, which is application/json. Minimum: 1 Maximum: 32

Response Parameters

Status code: 200

Table 4-573 Response body parameters

Parameter	Type	Description
execution_id	String	Execution ID. Minimum: 1 Maximum: 64

Status code: 401

Table 4-574 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 404

Table 4-575 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

Status code: 500

Table 4-576 Response body parameters

Parameter	Type	Description
error_code	String	Response code. Minimum: 1 Maximum: 64
error_msg	String	Error message. Minimum: 1 Maximum: 1024
http_code	Integer	HTTP response code. Minimum: 0 Maximum: 999

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");

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

        AomClient client = AomClient.newBuilder()
            .withCredential(auth)
```

```
        .withRegion(AomRegion.valueOf("<YOUR REGION>"))
        .build();
ExecuteWorkflowRequest request = new ExecuteWorkflowRequest();
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

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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('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 = ExecuteWorkflowRequest()
        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")

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

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

request := &model.ExecuteWorkflowRequest{}
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>N</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_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.

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 ry_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	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. 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	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.
period	Yes	Integer	-	Statistical period.
alarmLevel	Yes	Integer	-	Alarm severity.
evaluationPeriods	Yes	Integer	-	Number of consecutive periods.
comparisonOperator	Yes	String	-	Threshold criterion expression.

Parameter	Mandatory	Type	Value Range	Description
threshold	Yes	String	-	Threshold.
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 4-157](#).

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 [1.3 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 4-157](#).

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.

By default, new IAM users do not have any permissions assigned. You need to add a user to one or more groups, and assign permissions policies or roles to these groups. The user then inherits permissions from the groups it is a member of. This process is called authorization. After authorization, the user can perform specified operations on AOM.

You can grant users permissions by using **roles** and **policies**. Roles are provided by IAM to define service-based permissions that match users' job responsibilities. Policies define API-based permissions for operations on specific resources under certain conditions, allowing for more fine-grained, secure access control of cloud resources.

NOTE

If you want to allow or deny the access to an API, use policy-based authorization.

Your account has all the permissions required to call all APIs, but IAM users under your account must be assigned the required permissions. The required permissions are determined by the actions supported by the API. Only users with the policies allowing for those actions can call the API successfully. For example, if an IAM user wants to query metrics using an API, the user must have been granted permissions that allow the **aom:metric:get** action.

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: actions defined in custom policies.

- 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.
- 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 [Differences Between IAM and Enterprise Management](#).

AOM supports the following actions that can be defined in custom policies:

- [7.2.1 Alarm APIs](#): includes the actions supported by alarm APIs, such as the API for querying alarms.
- [7.2.2 Monitoring APIs](#): includes the actions supported by monitoring APIs, such as the API for querying metrics.
- [7.2.3 Prometheus Monitoring APIs](#): includes the actions supported by Prometheus monitoring APIs, such as the API for querying the expression calculation result in a specified period.
- [7.2.4 Log APIs](#): includes the actions supported by log APIs, such as the API for querying logs.
- [7.2.5 CMDDB APIs](#): includes the actions supported by application resource-related APIs, such as the API for adding an application.
- [7.2.6 Automation APIs](#): includes the actions supported by automation APIs, such as the API for creating a task.

7.2 Actions Supported by Policy-based Authorization

7.2.1 Alarm APIs

 NOTE

√: supported; x: not supported

Table 7-1 Alarm APIs

Permissi on	API	Action	IAM Project	Enterprise Project
Adding an event alarm rule	POST /v2/{project_id}/event2alarm-rule	aom:event2 AlarmRule:create	√	×

Permission	API	Action	IAM Project	Enterprise Project
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	√	√
Adding an alarm action rule	POST /v2/{project_id}/alert/action-rules	aom:actionRule:create	√	√

Permission	API	Action	IAM Project	Enterprise Project
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	√	×

7.2.2 Monitoring APIs

 NOTE

√: supported; x: not supported

Table 7-2 Monitoring APIs

Permission	API	Action	IAM Project	Enterprise Project
Querying time series objects	POST /v2/{project_id}/series	aom:metric:list	√	×

Permission	API	Action	IAM Project	Enterprise Project
Querying time series data	POST /v2/{project_id}/samples	aom:metric:list	√	×
Querying metrics	POST /v1/{project_id}/ams/metrics	aom:metric:get	√	×
Querying monitoring data	POST /v1/{project_id}/ams/metricdata	aom:metric:get	√	×
Adding or modifying a service discovery rule	PUT /v1/{project_id}/inv/servicediscoveryrules	aom:discoveryRule:set	√	×
Deleting a service discovery rule	DELETE /v1/{project_id}/inv/servicediscoveryrules	aom:discoveryRule:delete	√	×
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	√	×

Permission	API	Action	IAM Project	Enterprise Project
Querying a threshold rule	GET /v2/{project_id}/alarm-rules/{alarm_rule_id}	aom:alarm Rule:get	√	×
Deleting threshold rules in batches	POST /v2/{project_id}/alarm-rules/delete	aom:alarm Rule:delete	√	×

7.2.3 Prometheus Monitoring APIs

 NOTE

√: supported; x: not supported

Table 7-3 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	√	√

Permission	API	Action	IAM Project	Enterprise Project
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	√	√
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 Log APIs

NOTE

√: supported; x: not supported

Table 7-4 Log APIs

Perm ission	API	Action	IAM Project	Enterprise Project
Quer ying logs	POST /v1/{project_id}/als/ action	aom:log:l ist	√	×

7.2.5 CMDB APIs

 NOTE

√: supported; x: not supported

Table 7-5 CMDB APIs

Perm ission	API	Action	IAM Project	Enterprise Project
Addin g an applic ation	POST /v1/applications	aom:cmdbAppli cation:create	√	×
Deleti ng an applic ation	DELETE /v1/applications/ {application_id}	aom:cmdbAppli cation:delete	√	×
Quer ying the detail s about an applic ation	GET /v1/applications/ {application_id}	aom:cmdbAppli cation:get	√	×
Modif ying an applic ation	PUT /v1/applications/ {application_id}	aom:cmdbAppli cation:update	√	×
Addin g a comp onent	POST /v1/components	aom:cmdbComp onent:create	√	×

Permission	API	Action	IAM Project	Enterprise Project
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	√	×
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	√	×

Permission	API	Action	IAM Project	Enterprise Project
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	√	×
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	√	×

7.2.6 Automation APIs

 NOTE

√: supported; x: not supported

Table 7-6 Automation APIs

Perm ission	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	√	×
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	√	×

Permission	API	Action	IAM Project	Enterprise Project
Performing fuzzy search on the job management page	POST /v1/{project_id}/cms/job/list	cms:job:list	√	×
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
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.
400	AOM.02001108	Invalid time range.	Invalid time range.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
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.
400	AOM.02001400	Bad request.	Bad request.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.0200210 1	Invalid rule.	Invalid rule.	Check whether the parameter meets requirements.
400	AOM.0200210 2	The rule name already exists.	The rule name already exists.	Check whether the parameter meets requirements.
400	AOM.0200210 3	Invalid description.	Invalid description.	Check whether the parameter meets requirements.
400	AOM.0200210 4	Invalid threshold.	Invalid threshold.	Check whether the parameter meets requirements.
400	AOM.0200210 5	Invalid period.	Invalid period.	Check whether the parameter meets requirements.
400	AOM.0200210 6	Invalid email.	Invalid email.	Check whether the parameter meets requirements.
400	AOM.0200210 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.0200210 8	Invalid time range.	Invalid time range.	Check whether the parameter meets requirements.
400	AOM.0200210 9	Invalid project ID.	Invalid project ID.	Check whether the parameter meets requirements.
400	AOM.0200211 0	Invalid limit.	Invalid limit.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.0200211 1	Invalid offset.	Invalid offset.	Check whether the parameter meets requirements.
400	AOM.0200211 2	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.0200211 5	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.
400	AOM.0200211 8	Invalid number of consecutive periods.	Invalid number of consecutive periods.	Check whether the parameter meets requirements.
400	AOM.0200211 9	Invalid statistic.	Invalid statistic.	Check whether the parameter meets requirements.
400	AOM.0200212 0	Invalid comparison operator.	Invalid comparison operator.	Check whether the parameter meets requirements.
400	AOM.0200212 1	The rule does not exist.	The rule does not exist.	Check whether the parameter meets requirements.
400	AOM.0200240 0	Bad request.	Bad request.	Check whether the parameter meets requirements.
400	AOM.0200310 1	Invalid rule.	Invalid rule.	Check whether the parameter meets requirements.
400	AOM.0200310 2	The rule name already exists.	The rule name already exists.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.02003103	Invalid description.	Invalid description.	Check whether the parameter meets requirements.
400	AOM.02003104	Invalid threshold.	Invalid threshold.	Check whether the parameter meets requirements.
400	AOM.02003105	Invalid period.	Invalid period.	Check whether the parameter meets requirements.
400	AOM.02003106	Invalid email.	Invalid email.	Check whether the parameter meets requirements.
400	AOM.02003107	The maximum number of rules has been reached.	The maximum number of rules has been reached.	Check whether the parameter meets requirements.
400	AOM.02003108	Invalid time range.	Invalid time range.	Check whether the parameter meets requirements.
400	AOM.02003109	Invalid project ID.	Invalid project ID.	Check whether the parameter meets requirements.
400	AOM.02003110	Invalid limit.	Invalid limit.	Check whether the parameter meets requirements.
400	AOM.02003111	Invalid offset.	Invalid offset.	Check whether the parameter meets requirements.
400	AOM.02003112	Invalid request parameter.	Invalid request parameter.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
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.
400	AOM.02004104	Invalid threshold.	Invalid threshold.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
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.
400	AOM.02004118	Invalid number of consecutive periods.	Invalid number of consecutive periods.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
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.
400	AOM.02005106	Invalid email.	Invalid email.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
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.
400	AOM.02005120	Invalid comparison operator.	Invalid comparison operator.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
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.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.
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.

Status Code	Error Code	Message	Description	Solution
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.
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.

Status Code	Error Code	Message	Description	Solution
400	AOM.0400810 2	Invalid inventory ID.	Invalid inventory ID.	Check whether the parameter meets requirements.
400	AOM.0400810 3	The project ID cannot be left blank.	The project ID cannot be left blank.	Check whether the parameter meets requirements.
400	AOM.0400810 4	Invalid type.	Invalid type.	Check whether the parameter meets requirements.
400	AOM.0400810 5	Invalid limit.	Invalid limit.	Check whether the parameter meets requirements.
400	AOM.0400810 6	Invalid offset.	Invalid offset.	Check whether the parameter meets requirements.
400	AOM.0400810 7	Invalid parent inventory ID.	Invalid parent inventory ID.	Check whether the parameter meets requirements.
400	AOM.0400810 8	Invalid type and relation.	Invalid type and relation.	Check whether the parameter meets requirements.
400	AOM.0400810 9	Invalid metric name.	Invalid metric name.	Check whether the parameter meets requirements.
400	AOM.0400811 0	Invalid relation.	Invalid relation.	Check whether the parameter meets requirements.
400	AOM.0400811 1	The type and relation cannot be left blank.	The type and relation cannot be left blank.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
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.
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.

Status Code	Error Code	Message	Description	Solution
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.
400	AOM.4001021	Group name repeats.	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	Record filed must be set.	The recording field cannot be empty.	Check whether the parameter meets requirements.

Status Code	Error Code	Message	Description	Solution
400	AOM.4001025	Expr filed must be set.	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	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.
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.

Status Code	Error Code	Message	Description	Solution
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.
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.

Status Code	Error Code	Message	Description	Solution
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.
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.

Status Code	Error Code	Message	Description	Solution
400	SVCSTG_AMS_4000121	The rule does not exist.	The rule does not exist.	Check whether the threshold rule exists.
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.
400	AOM.02003001	Incorrect request parameter.	Incorrect request parameter.	Check whether the parameter meets requirements.
400	AOM.02001AOM.02001SVCSTG_AMS_4000115	Invalid request parameter.	Incorrect request parameter.	Check whether the parameter meets requirements.
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.
401	AOM.02004401	Unauthorized.	Unauthorized.	Contact technical support.

Status Code	Error Code	Message	Description	Solution
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.
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.
403	AOM.07001403	Insufficient permissions.	Insufficient permissions.	Obtain required permissions.
403	SVCSTG.INV.4030000	Insufficient permissions.	Insufficient permissions.	Use an authorized account.
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.

Status Code	Error Code	Message	Description	Solution
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.
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.

Status Code	Error Code	Message	Description	Solution
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.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.
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.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	SVCSTG.INV.500001	The Elasticsearch session is null.	The Elasticsearch session is null.	Contact technical support.

Status Code	Error Code	Message	Description	Solution
500	SVCSTG.INV.5000002	The Elasticsearch execution is abnormal.	The Elasticsearch execution is abnormal.	Contact technical support.
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.
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.
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.

Status Code	Error Code	Message	Description	Solution
503	SVCSTG_AMS_5030002	The Cassandra execution is abnormal.	The Cassandra execution is abnormal.	Contact technical support.

8.3 Obtaining an Account ID and Project ID

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"
  }
}
```

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
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
Content-Type	(Standard HTTP header) Media type of the response body sent to the recipient.	application/json

9 Change History

Table 9-1 Change History

Released On	Description
2023-11-30	Added the following APIs: <ul style="list-style-type: none">• Prometheus Instance APIs• Configuration Management APIs
2023-05-30	Added the following APIs: <ul style="list-style-type: none">• Alarm APIs• CMDB APIs• Automation APIs
2023-02-20	Optimized the description of error codes .
2021-06-04	Added the following APIs: <ul style="list-style-type: none">• 4.1.15 Querying Events and Alarms• 4.1.16 Counting Events and Alarms• 4.1.17 Reporting Events and Alarms
2020-08-11	Removed APM APIs. For details about APM APIs, see <i>APM API Reference</i> .
2019-09-26	<ul style="list-style-type: none">• Enabled the API for querying logs to support pagination queries.• Added Obtaining a Project ID by Calling an API.
2018-12-4	Added the APIs for 4.2.6 Adding or Modifying One or More Service Discovery Rules , 4.2.8 Querying Existing Service Discovery Rules , and 4.2.7 Deleting a Service Discovery Rule .
2018-09-13	Added 7 Permissions Policies and Supported Actions and supported fine-grained authorization.
2018-06-28	This issue is the first official release.