Resource Management Service

API Reference

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1 Before You Start

1.1 Introduction

Welcome to the *Resource Management Service API Reference*. Resource Management Service (RMS) enables you to centrally manage your cloud resources. You can dump and search for them, and evaluate their security compliance.

This document describes the RMS application programming interfaces (APIs), parameters, examples. This document describes how to use APIs to perform operations on RMS, such as creating, deleting, modifying, and querying an assignment or a resource recorder. For details about all supported operations, see **API Overview**.

If you plan to access RMS through an API, ensure that you are familiar with RMS concepts. For details, see **Service Overview**.

1.2 API Calling

RMS supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For details about API calling, see **Calling APIs**.

1.3 Endpoints

An endpoint is the request address for calling an API. Endpoints vary depending on services and regions. For the RMS endpoint, see **Regions and Endpoints**.

1.4 Concepts

- Account

  An account is created upon successful registration. 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, which should not be used directly to perform routine management. To ensure

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account security, create Identity and Access Management (IAM) users and grant them permissions for routine management.

- User

  An IAM user is created by an account in IAM to use cloud services. Each IAM user has its own identity credentials (password and access keys).

  You can view the account ID and IAM user ID on the **My Credentials** page of the management console. API authentication requires information such as the account name, username, and password.

- Region

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

  For details, see **Region and AZ**.

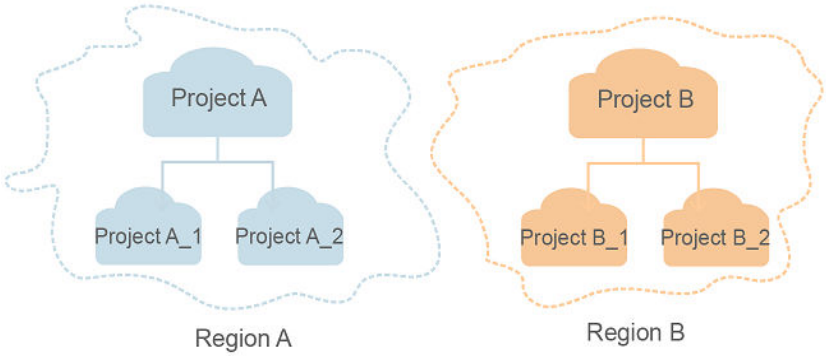
- AZ

  An AZ comprises of one or more physical data centers equipped with independent ventilation, fire, water, and electricity facilities. Computing, network, storage, and other resources in an AZ are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to allow you to build cross-AZ high-availability systems.

- Project

  A project corresponds to a region. Default projects are defined to a group and have physically isolated resources (including computing, storage, and network resources) across regions. Users can be granted permissions in a default project to access all resources in the region under their accounts. If you need more refined access control, create subprojects under a default project and create resources in subprojects. Then you can assign users the permissions required to access only the resources in the specific subprojects.

  Figure 1-1 Project isolation model

  To view a project ID, go to the **My Credentials** page.

- Enterprise project

  Enterprise projects group and manage resources across regions. Resources in different enterprise projects are logically isolated. An enterprise project can

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contain resources of multiple regions, and resources can be added to or removed from enterprise projects.

For details about enterprise projects and about how to obtain enterprise project IDs, see **Enterprise Management User Guide**.

1.5 Querying Data by Page

Some RMS APIs support pagination query if you add **limit** and **marker** to the request URL. The value of **marker** must be the same as that returned in the last pagination query.

Table 1-1 Parameter description

Parameter	Type	Mandatory	Description
limit	Integer	No	Restricts the number of records displayed on each page. If **limit** is invalid, error code 400 will be returned.
marker	String	No	Specifies the **marker** value returned in the last pagination query. If **marker** is invalid, error code 400 will be returned.

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2 API Overview

Table 2-1 RMS APIs

API	Description
Resource Query	Query resources, query resource tags, and list cloud services.
Resource Recorder	Add, delete, modify, and query a resource recorder.
Resource Relationships	Query resource relationships.
Resource Change Records	Query resource change records.
Region Management	Query regions visible to a domain.
Compliance	Add, delete, modify, and query compliance policies and assignments.

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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.

Table 3-1 URI parameter description

Parameter	Description
URI-scheme	Protocol used to transmit requests. All APIs use HTTPS.
Endpoint	Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from **Regions and Endpoints**. For example, the endpoint of IAM in the **CN North-Beijing1** region is **iam.cn-north-1.myhuaweicloud.com**.
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**.

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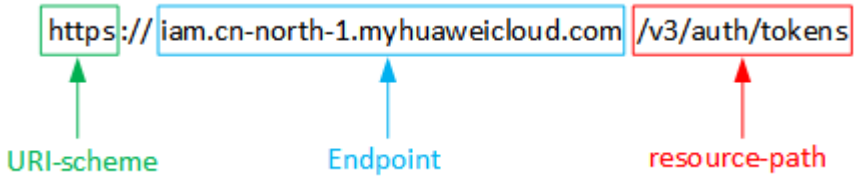
Parameter	Description
query-string	Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of "*Parameter name=Parameter value*". For example, **?limit=10** indicates that a maximum of 10 data records will be displayed.

For example, to obtain an IAM token in the **CN North-Beijing1** region, obtain the endpoint of IAM (**iam.cn-north-1.myhuaweicloud.com**) for this region and the **resource-path** (**/v3/auth/tokens**) in the URI of the API used to **obtain a user token**. Then, construct the URI as follows:

```
https://iam.cn-north-1.myhuaweicloud.com/v3/auth/tokens
```

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.

Table 3-2 HTTP methods

Method	Description
GET	Requests the server to return specified resources.
PUT	Requests the server to update specified resources.
POST	Requests the server to add resources or perform special operations.
DELETE	Requests the server to delete specified resources, for example, an object.
HEAD	Same as GET except that the server must return only the response header.

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Method	Description
PATCH	Requests the server to update partial content of a specified resource. If the resource does not exist, a new resource will be created.

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

```
POST https://iam.cn-north-1.myhuaweicloud.com/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.

Table 3-3 Common request header fields

Parameter	Description	Mandatory	Example Value
Host	Specifies the server domain name and port number of the resources being requested. The value can be obtained from the URL of the service API. The value is in the format of *Hostname:Port number*. If the port number is not specified, the default port is used. The default port number for **https** is **443**.	No This field is mandatory for AK/SK authentication.	code.test.com or code.test.com:443
Content-Type	Specifies the type (or format) of the message body. The default value **application/json** is recommended. Other values of this field will be provided for specific APIs if any.	Yes	application/json
Content-Length	Specifies the length of the request body. The unit is byte.	No	3495

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Parameter	Description	Mandatory	Example Value
X-Project-Id	Specifies the project ID. Obtain the project ID by following the instructions in **Obtaining a Project ID**.	No This field is mandatory for requests that use AK/SK authentication in the Dedicated Cloud (DeC) scenario or multi-project scenario.	e9993fc787d94b6c886cbaa340f9c0f4
X-Auth-Token	Specifies the user token. It is a response to the API for **obtaining a user token** (This is the only API that does not require authentication). After the request is processed, the value of **X-Subject-Token** in the response header is the token value.	No This field is mandatory for token authentication.	The following is part of an example token: MIIPAgYJKoZIhvcNAQcCo...ggg1BBIINPXsidG9rZ

NOTE

In addition to supporting authentication using tokens, APIs support authentication using AK/SK, which uses SDKs to sign a request. During the signature, the **Authorization** (signature authentication) and **X-Sdk-Date** (time when a request is sent) headers are automatically added in the request.

For more details, see "Authentication Using AK/SK" in **Authentication**.

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

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

(Optional) Request Body

This part is optional. 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*,

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domainname, ******** (login password), and *xxxxxxxxxxxxxxxxx* (project name) with the actual values. Obtain a project name from **Regions and Endpoints**.

NOTE

The **scope** parameter specifies where a token takes effect. You can set **scope** to an account or a project under an account. In the following example, the token takes effect only for the resources in a specified project. For more information about this API, see **Obtaining a User Token**.

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

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

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. AK/SK-based authentication is recommended because it is more secure than token-based authentication.

Token-based Authentication

NOTE

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

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

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You can obtain a token by calling the **Obtaining User Token** API. When you call the API, set **auth.scope** in the request body to **project**.

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

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

```
POST https://iam.cn-north-1.myhuaweicloud.com/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 using the signing SDK. For details about how to sign requests and use the signing SDK, see **API Request Signing Guide**.

NOTE

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

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3.3 Response

Status Code

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

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request. For more information, see **Status Codes**.

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

Response Header

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

Figure 3-2 shows the response header fields for the API used to **obtain a user token**. The **x-subject-token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

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



(Optional) 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": {
```

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```
        "expires_at": "2019-02-13T06:52:13.855000Z",
        "methods": [
            "password"
        ],
        "catalog": [
            {
                "endpoints": [
                    {
                        "region_id": "az-01",
.....
```

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

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

In the response body, **error_code** is an error code, and **error_msg** provides information about the error.

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4 API

4.1 Resource Query

4.1.1 Querying Resources of a Specific Type

Function

This API is to query all your resources of a specific type and you must have the rms:resources:list permission. For example, to query ECSs whose resource type in RMS is ecs.cloudsrevers, you must set **provider** to **ecs** and **type** to **cloudservers** in the request.

URI

GET /v1/resource-manager/domains/{domain_id}/provider/{provider}/type/{type}/resources

Table 4-1 Path parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**
provider	Yes	String	Specifies the cloud service name. Maximum length: **20**
type	Yes	String	Specifies the resource type. Maximum length: **20**

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Table 4-2 Query parameters

Parameter	Mandatory	Type	Description
region_id	No	String	Specifies the region ID. Maximum length: **36**
ep_id	No	String	Specifies the enterprise project ID. Maximum length: **36**
tag	No	Object	Specifies the resource tag.
limit	No	Integer	Specifies the maximum number of records to return. Minimum value: **1** Maximum value: **200**
marker	No	String	Specifies the pagination parameter. You can use the **marker** value returned in the previous request as the number of the first page of records to return in this request. Minimum length: **4** Maximum length: **400**

Request Parameters

None

Response Parameters

Status code: 200

Table 4-3 Response body parameters

Parameter	Type	Description
resources	Array of **ResourceEntity** objects	Specifies the resource list.
page_info	**PageInfo** object	Specifies the pagination object.

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Table 4-4 ResourceEntity

Parameter	Type	Description
id	String	Specifies the resource ID.
name	String	Specifies the resource name.
provider	String	Specifies the cloud service name.
type	String	Specifies the resource type.
region_id	String	Specifies the region ID.
project_id	String	Specifies the project ID in OpenStack.
project_name	String	Specifies the project name in OpenStack.
ep_id	String	Specifies the enterprise project ID.
ep_name	String	Specifies the enterprise project name.
checksum	String	Specifies the resource checksum.
created	String	Specifies the time when the resource was created.
updated	String	Specifies the time when the resource was updated.
provisioning_state	String	Specifies the status of the operation that causes the resource change.
tags	Map<String,String>	Specifies the resource tag.
properties	Map<String,Object>	Specifies the detailed properties of the resource.

Table 4-5 PageInfo

Parameter	Type	Description
current_count	Integer	Specifies the resource quantity on the current page. Minimum value: **0** Maximum value: **200**
next_marker	String	Specifies the **marker** value of the next page.

Status code: 400

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Table 4-6 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-7 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-8 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

- Querying all VMs under your account

  ```
  GET https://{endpoint}/v1/resource-manager/domains/{domain_id}/provider/ecs/type/cloudServers/resources
  ```

- Querying your VMs in the cn-north-4 region and setting to return the first 100 records

  ```
  GET https://{endpoint}/v1/resource-manager/domains/{domain_id}/provider/ecs/type/cloudServers/resources?limit=100&region_id=cn-north-4
  ```

Example Response

Status code: 200

Operation succeeded.

- Example 1

  ```
  {
    "current_count" : 2,
    "next_marker" : null
  }
  ```

- Example 2

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```
[ {
  "checksum" : "89ca775e88e04b2c200ccbf9e219ad0d7da42e3f446e5c953d443288134eec41",
  "created" : "2020-02-21T08:41:05Z",
  "ep_id" : "0",
  "ep_name" : "default",
  "id" : "7ffd8564-d88a-4bc9-ab51-d8b79a57d0e6",
  "name" : "vpc-489c",
  "project_id" : "059b5e0a2500d5552fa1c00adada8c06",
  "project_name" : "cn-north-7",
  "properties" : {
    "cidr" : "192.168.0.0/16",
    "status" : "OK"
  },
  "provider" : "vpc",
  "provisioning_state" : "Succeeded",
  "region_id" : "cn-north-7",
  "tags" : {
    "use" : "test"
  },
  "type" : "vpcs",
  "updated" : "2020-02-21T08:41:05Z"
}, {
  "checksum" : "db2aad42804951c03a724b7501da9b6b4c14d319dd319d76bb7c658f256a37b0",
  "created" : "2020-02-24T08:43:05Z",
  "ep_id" : "0",
  "ep_name" : "default",
  "id" : "b63b33b7-f48c-4048-995b-0445d124a445",
  "name" : "VPC_TEST3_20200224163856",
  "project_id" : "059b5e0a2500d5552fa1c00adada8c06",
  "project_name" : "cn-north-7",
  "properties" : {
    "cidr" : "192.168.0.0/16",
    "status" : "OK"
  },
  "provider" : "vpc",
  "provisioning_state" : "Succeeded",
  "region_id" : "cn-north-7",
  "tags" : {
    "use" : "test1"
  },
  "type" : "vpcs",
  "updated" : "2020-08-11T11:55:08Z"
} ]
```


Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed.
500	Internal server error.

Error Codes

See **Error Codes**.

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4.1.2 Querying Cloud Services, Resources, and Regions Supported by RMS

Function

This API is used to query cloud services, resources, and regions supported by RMS.

URI

GET /v1/resource-manager/domains/{domain_id}/providers

Table 4-9 Path parameter

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**

Table 4-10 Query parameters

Parameter	Mandatory	Type	Description
offset	No	Integer	Specifies the pagination offset. Minimum value: **1** Maximum value: **1000**
limit	No	Integer	Specifies the maximum number of records to return. Minimum value: **1** Maximum value: **200**

Request Parameters

Table 4-11 Request header parameter

Parameter	Mandatory	Type	Description
X-Language	No	String	Specifies the language of the information to return. Default value: **zh-cn** Possible values are as follows: • **zh-cn** • **en-us**

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Response Parameters

Status code: 200

Table 4-12 Response body parameters

Parameter	Type	Description
resource_providers	Array of **ResourceProviderResponse** objects	Specifies the list of cloud service details.
total_count	Integer	Specifies the total number of cloud services supported by RMS.

Table 4-13 ResourceProviderResponse

Parameter	Type	Description
provider	String	Specifies the cloud service name.
display_name	String	Specifies the display name of the cloud service. You can set the language by configuring **X-Language** in the request header.
category_display_name	String	Specifies the display name of the cloud service category. You can set the language by configuring **X-Language** in the request header.
resource_types	Array of **ResourceTypeResponse** objects	Specifies the resource type list.

Table 4-14 ResourceTypeResponse

Parameter	Type	Description
name	String	Specifies the resource type.
display_name	String	Specifies the display name of the resource type. You can set the language by configuring **X-Language** in the request header.
global	Boolean	Specifies whether the resource is a global resource.
regions	Array of strings	Specifies the list of supported regions.

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Parameter	Type	Description
console_endpoint_id	String	Specifies the endpoint ID of the console.
console_list_url	String	Specifies the URL of the resource list page.
console_detail_url	String	Specifies the URL of the resource details page.

Status code: 500

Table 4-15 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

None

Example Response

Status code: 200

Operation succeeded.

- Example 1

```
2
```

- Example 2

```
[ {
  "provider" : "ecs",
    "display_name": "ECS",
    "category_display_name": "Computing",
  "resource_types" : [ {
    "name" : "cloudservers",
     "display_name": "ECS",
    "global" : false,
    "regions" : [ "cn-north-1", "cn-north-4", "cn-east-3", "cn-east-2", "cn-south-1", "cn-southwest-2",
"ap-southeast-1", "ap-southeast-2", "ap-southeast-3", "af-south-1", "la-south-2" ],
    "console_endpoint_id" : "ecm",
    "console_list_url" : "#/ecs/manager/vmList",
    "console_detail_url" : "#/ecs/manager/ecsDetail?instanceId={id}"
  } ]
}, {
  "provider" : "vpc",
    "display_name": "VPC",
    "category_display_name": "Network",
  "resource_types" : [ {
    "name" : "vpcs",
      "display_name": "VPC",
```


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```
    "global" : false,
    "regions" : [ "cn-north-1", "cn-north-4", "cn-east-3", "cn-east-2", "cn-south-1", "cn-southwest-2",
"ap-southeast-1", "ap-southeast-2", "ap-southeast-3", "af-south-1", "la-south-2" ],
    "console_endpoint_id" : "vpc",
    "console_list_url" : "#/vpcs",
    "console_detail_url" : "#/vpc/vpcmanager/vpcDetail/subnets?vpcId={id}"
  }, {
    "name" : "bandwidths",
      "display_name": "Shared bandwidth",
    "global" : false,
    "regions" : [ "cn-north-1", "cn-north-4", "cn-east-3", "cn-east-2", "cn-south-1", "cn-southwest-2",
"ap-southeast-1", "ap-southeast-2", "ap-southeast-3", "af-south-1", "la-south-2" ],
    "console_endpoint_id" : "vpc",
    "console_list_url" : "#/vpc/vpcmanager/shareBandwidth",
    "console_detail_url" : "#/vpc/vpcmanager/shareBandwidth?bandwidthId={id}"
  }, {
    "name" : "securityGroups",
     "display_name": "Security group",
    "global" : false,
    "regions" : [ "cn-north-1", "cn-north-4", "cn-east-3", "cn-east-2", "cn-south-1", "cn-southwest-2",
"ap-southeast-1", "ap-southeast-2", "ap-southeast-3", "af-south-1", "la-south-2" ],
    "console_endpoint_id" : "vpc",
    "console_list_url" : "#/secGroups",
    "console_detail_url" : "#/vpc/vpcmanager/sgDetail/sgRules?instanceId={id}"
  }, {
    "name" : "publicips",
      "display_name": "EIP",
    "global" : false,
    "regions" : [ "cn-north-1", "cn-north-4", "cn-east-3", "cn-east-2", "cn-south-1", "cn-southwest-2",
"ap-southeast-1", "ap-southeast-2", "ap-southeast-3", "af-south-1", "la-south-2" ],
    "console_endpoint_id" : "vpc",
    "console_list_url" : "#/vpc/vpcmanager/eips",
    "console_detail_url" : "#/vpc/vpcmanager/eipDetailNew?eipId={id}"
  } ]
} ]
```


Status Codes

Status Code	Description
200	Operation succeeded.
500	Internal server error.

Error Codes

See **Error Codes**.

4.1.3 Querying a Resource

Function

This API is used to query details of a resource based on its ID. You must have the rms:resources:get permission. For example, to query ECSs whose resource type in RMS is ecs.cloudsrevers, you must set **provider** to **ecs** and **type** to **cloudservers** in the request.

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URI

GET /v1/resource-manager/domains/{domain_id}/provider/{provider}/type/{type}/resources/{resource_id}

Table 4-16 Path parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**
provider	Yes	String	Specifies the cloud service name. Maximum length: **20**
type	Yes	String	Specifies the resource type. Maximum length: **20**
resource_id	Yes	String	Specifies the resource ID. Maximum length: **256**

Request Parameters

None

Response Parameters

Status code: 200

Table 4-17 Response body parameters

Parameter	Type	Description
id	String	Specifies the resource ID.
name	String	Specifies the resource name.
provider	String	Specifies the cloud service name.
type	String	Specifies the resource type.
region_id	String	Specifies the region ID.
project_id	String	Specifies the project ID in OpenStack.
project_name	String	Specifies the project name in OpenStack.
ep_id	String	Specifies the enterprise project ID.
ep_name	String	Specifies the enterprise project name.
checksum	String	Specifies the resource checksum.

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Parameter	Type	Description
created	String	Specifies the time when the resource was created.
updated	String	Specifies the time when the resource was updated.
provisioning_state	String	Specifies the status of the operation that causes the resource change.
tags	Map<String,String>	Specifies the resource tag.
properties	Map<String,Object>	Specifies the detailed properties of the resource.

Status code: 400

Table 4-18 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-19 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-20 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

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Table 4-21 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

```
GET https://{endpoint}/v1/resource-manager/domains/059b5c937100d3e40ff0c00a7675a0a0/provider/ecs/type/cloudservers/resources/00337e93-82d1-40ca-911f-07cff94587cc
```

Example Response

Status code: 200

Operation succeeded.

- Example 1

  ```
  "00337e93-82d1-40ca-911f-07cff94587cc"
  ```

- Example 2

  ```
  "dev_machine"
  ```

- Example 3

  ```
  "ecs"
  ```

- Example 4

  ```
  "cloudservers"
  ```

- Example 5

  ```
  "cn-north-1"
  ```

- Example 6

  ```
  "39c2af998c334ed6bcbb75b27318f7cc"
  ```

- Example 7

  ```
  "cn-north-1"
  ```

- Example 8

  ```
  "0"
  ```

- Example 9

  ```
  "default"
  ```

- Example 10

  ```
  "3a0075409edb156a74e041b7479f0d5993be1d62b4ccd2af3a1dd01ec80c8b39"
  ```

- Example 11

  ```
  "2019-11-20T06:24:43Z"
  ```

- Example 12

  ```
  "2020-07-17T08:30:52Z"
  ```

- Example 13

  ```
  "Succeeded"
  ```

- Example 14

  ```
  {
    "usage": "Display"
  }
  ```


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- Example 15


```
{
  "accessIpv4" : "",
  "hostName" : "dev-machine",
  "addresss" : [ {
    "OsExtIpsType" : "fixed",
    "OsExtIpsPortId" : "f2fa750a-e2ab-434f-b14a-bfe7c8cea0cc",
    "addr" : "192.168.1.212",
    "version" : 4,
    "OsExtIpsMacAddr" : "fa:16:3e:6e:cf:33"
  }, {
    "OsExtIpsType" : "floating",
    "OsExtIpsPortId" : "f2fa750a-e2ab-434f-b14a-bfe7c8cea0cc",
    "addr" : "100.85.225.33",
    "version" : 4,
    "OsExtIpsMacAddr" : "fa:16:3e:6e:cf:33"
  } ],
  "accessIpv6" : "",
  "metadata" : {
    "chargingMode" : "0",
    "meteringImageType" : "private",
    "imageName" : "resource-manager-devmachine-template",
    "meteringImageId" : "9bcaace4-b8da-4008-a352-3f72e1f25333",
    "meteringResourcesPerCode" : "si2.large.2.linux",
    "vpcId" : "cf403ef5-90df-4e7e-829d-5d21b1cb7d1e",
    "osBit" : "64"
  },
  "OsExtStsVmState" : "active",
  "configDrive" : "",
  "OsExtStsPowerState" : 1,
  "hostId" : "3c381dcfc3e628c1a504ad94ba8c4e8908130645527370133f32921",
  "securityGroup" : [ {
    "name" : "default",
    "id" : "5d55b397-ad9c-462d-af72-6599cb941c49"
  } ],
  "ExtVolumesAttached" : [ {
    "bootIndex" : "0",
    "id" : "010d940e-a73e-417b-85ae-51b76c0d2ba0",
    "device" : "/dev/vda"
  } ],
  "userId" : "e311190745e94cc09d62d5779e55912d",
  "flavor" : {
    "disk" : "0",
    "name" : "Si2.large.2",
    "id" : "Si2.large.2",
    "vcpus" : "2",
    "ram" : "4096"
  },
  "OsDcfDiskConfig" : "MANUAL",
  "hostStatus" : "UP",
  "OsSrvUsgLaunchedAt" : "2019-11-20T06:24:56.000000",
  "OsExtAz" : "cn-north-1a",
  "progress" : 0,
  "locked" : false,
  "OS-EXT-SRV-ATTR" : {
    "hostName" : "dev-machine",
    "kernelId" : "",
    "ramdiskId" : "",
    "reservationId" : "r-hhux9o7m",
    "instanceName" : "instance-0009cb50",
    "host" : "cn-north-1a-pod01.cn-north-1",
    "rootDeviceName" : "/dev/vda",
    "hypervisorHostName" : "nova001@2",
    "launchIndex" : 0
  },
  "status" : "ACTIVE"
}
```


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Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed.
404	Resource not found.
500	Internal server error.

Error Codes

See **Error Codes**.

4.1.4 Querying All Resources Under Your Account

Function

This API is to query all resources under your account and you must have the rms:resources:list permission.

URI

GET /v1/resource-manager/domains/{domain_id}/all-resources

Table 4-22 Path parameter

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**

Table 4-23 Query parameters

Parameter	Mandatory	Type	Description
region_id	No	String	Specifies the region ID. Maximum length: **36**
ep_id	No	String	Specifies the enterprise project ID. Maximum length: **36**

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Parameter	Mandatory	Type	Description
type	No	String	Specifies the resource type (**provider.type**) Maximum length: **40**
limit	No	Integer	Specifies the maximum number of records to return. Minimum value: **1** Maximum value: **200**
marker	No	String	Specifies the pagination parameter. You can use the **marker** value returned in the previous request as the number of the first page of records to return in this request. Minimum length: **4** Maximum length: **400**

Request Parameters

None

Response Parameters

Status code: 200

Table 4-24 Response body parameters

Parameter	Type	Description
resources	Array of **ResourceEntity** objects	Specifies the resource list.
page_info	**PageInfo** object	Specifies the pagination object.

Table 4-25 ResourceEntity

Parameter	Type	Description
id	String	Specifies the resource ID.
name	String	Specifies the resource name.
provider	String	Specifies the cloud service name.

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Parameter	Type	Description
type	String	Specifies the resource type.
region_id	String	Specifies the region ID.
project_id	String	Specifies the project ID in OpenStack.
project_name	String	Specifies the project name in OpenStack.
ep_id	String	Specifies the enterprise project ID.
ep_name	String	Specifies the enterprise project name.
checksum	String	Specifies the resource checksum.
created	String	Specifies the time when the resource was created.
updated	String	Specifies the time when the resource was updated.
provisioning_state	String	Specifies the status of the operation that causes the resource change.
tags	Map<String,String>	Specifies the resource tag.
properties	Map<String,Object>	Specifies the detailed properties of the resource.

Table 4-26 PageInfo

Parameter	Type	Description
current_count	Integer	Specifies the resource quantity on the current page. Minimum value: **0** Maximum value: **200**
next_marker	String	Specifies the **marker** value of the next page.

Status code: 400

Table 4-27 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

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Status code: 403

Table 4-28 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-29 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

- Querying all resources under your account

  ```
  GET https://{endpoint}/v1/resource-manager/domains/{domain_id}/all-resources
  ```

- Querying your resources in the **default** enterprise project and setting to return the first 100 records

  ```
  GET https://{endpoint}/v1/resource-manager/domains/{domain_id}/all-resources?limit=100&ep_id=0
  ```

Example Response

Status code: 200

Operation succeeded.

- Example 1

  ```
  [ {
    "id" : "3ccd9191-6a5e-4939-a971-4652db18b370",
    "name" : "elb-265a",
    "provider" : "elb",
    "type" : "loadbalancers",
    "region_id" : "cn-north-4",
    "project_id" : "05498e12458025102ff5c0061a584a9f",
    "project_name" : "cn-north-4_region_service",
    "ep_id" : "0",
    "ep_name" : "default",
    "checksum" : "6e0271b107b764b19acb235f45c0d852f72104fe1d4b32970686e7eae8e87bf4",
    "created" : "2020-02-29T09:39:19Z",
    "updated" : "2020-02-29T09:39:19Z",
    "provisioning_state" : "Succeeded",
    "tags" : { },
    "properties" : {
      "tenant_id" : "05498e12458025102ff5c0061a584a9f",
      "listeners" : [ {
        "id" : "37de3be0-1803-43e2-9bb5-243b4b30b771"
      } ],
      "provisioning_status" : "ACTIVE",
  ```

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```
    "description" : "",
    "pools" : [ {
      "id" : "a7ae4e7f-3e97-48ea-bdbc-334684aafac4"
    } ],
    "created_at" : "2020-02-29T09:39:19",
    "vip_subnet_id" : "4f91dfd8-cc4f-4c84-bbfd-8518e6b60cad",
    "tags" : [ ],
    "enterprise_project_id" : "0",
    "vip_address" : "192.168.1.127",
    "updated_at" : "2020-02-29T09:39:19",
    "project_id" : "05498e12458025102ff5c0061a584a9f",
    "provider" : "vlb",
    "operating_status" : "ONLINE",
    "admin_state_up" : true,
    "name" : "elb-265a",
    "id" : "3ccd9191-6a5e-4939-a971-4652db18b370",
    "vip_port_id" : "5968aa0e-df6a-42c8-adc3-af6acd482163"
  }
}, {
  "id" : "274698f1-6ae5-4572-b026-edd5e3186343",
  "name" : "listener-cfcc",
  "provider" : "elb",
  "type" : "listeners",
  "region_id" : "cn-north-5",
  "project_id" : "39c2af998c334ed6bcbb75b27318f7b5",
  "project_name" : "cn-north-5",
  "ep_id" : "0",
  "ep_name" : "default",
  "checksum" : "2fa729ce34155377fe895ebd70e2523632ca34a7310d8a94e00a74b0d4f8ce76",
  "created" : "2020-06-10T03:38:42Z",
  "updated" : "2020-06-10T03:38:43Z",
  "provisioning_state" : "Succeeded",
  "tags" : { },
  "properties" : {
    "tenant_id" : "39c2af998c334ed6bcbb75b27318f7b5",
    "default_pool_id" : "524996fb-423e-46df-8ba4-cc00fb810cb8",
    "protocol_port" : 80,
    "description" : "",
    "created_at" : "2020-06-10T03:38:42",
    "sni_container_refs" : [ ],
    "connection_limit" : -1,
    "tags" : [ ],
    "protocol" : "TCP",
    "updated_at" : "2020-06-10T03:38:43",
    "project_id" : "39c2af998c334ed6bcbb75b27318f7b5",
    "admin_state_up" : true,
    "name" : "listener-cfcc",
    "insert_headers" : {
      "X-Forwarded-ELB-IP" : false,
      "X-Forwarded-Host" : true
    },
    "loadbalancers" : [ {
      "id" : "eafba5b9-c67f-4f32-a820-4bc48c0474ee"
    } ],
    "http2_enable" : false,
    "id" : "274698f1-6ae5-4572-b026-edd5e3186343"
  }
}, {
  "id" : "ede7f295-056c-406a-98cf-551d250f8b44",
  "name" : "ecs-for-test",
  "provider" : "ecs",
  "type" : "cloudservers",
  "region_id" : "cn-north-5",
  "project_id" : "39c2af998c334ed6bcbb75b27318f7b5",
  "project_name" : "cn-north-5",
  "ep_id" : "ecf9bb02-bf2b-447c-bafa-bc4b35c31edf",
  "ep_name" : "test",
  "checksum" : "9e7d7a2cf3ff4fafb577fef177db606d41433bf1d9e6246e83ffb4b254ad3fd0",
  "created" : "2020-10-26T03:10Z",
```

```
"updated" : "2020-10-26T03:10:29Z",
"provisioning_state" : "Succeeded",
"tags" : { },
"properties" : {
  "accessIpv4" : "",
  "hostName" : "ecs-for-test",
  "addresses" : [ {
    "OsExtIpsType" : "fixed",
    "OsExtIpsPortId" : "a3dc68fd-bc03-4a48-9fc3-6854a7ada03d",
    "addr" : "192.168.20.27",
    "version" : 4,
    "OsExtIpsMacAddr" : "fa:16:3e:45:2e:44"
  }, {
    "OsExtIpsType" : "floating",
    "OsExtIpsPortId" : "a3dc68fd-bc03-4a48-9fc3-6854a7ada03d",
    "addr" : "4.4.4.4",
    "version" : 4,
    "OsExtIpsMacAddr" : "fa:16:3e:45:2e:44"
  } ],
  "accessIpv6" : "",
  "metadata" : {
    "chargingMode" : "0",
    "meteringImageType" : "shared",
    "imageName" : "test",
    "meteringImageId" : "74e96549-a512-44ea-a074-ff69492be31d",
    "meteringResourcesPerCode" : "si3.small.1.linux",
    "vpcId" : "1dc57489-4ad1-4905-a447-cd42d77b2525",
    "osBit" : "64"
  },
  "OsExtStsVmState" : "active",
  "configDrive" : "",
  "OsExtStsPowerState" : 1,
  "hostId" : "3c381dcfc3e628c1a504ad94ba8c4e8908130645527370133f32921",
  "securityGroup" : [ {
    "name" : "allow_all",
    "id" : "52d72165-0d36-48ed-bc51-647ab361c796"
  } ],
  "ExtVolumesAttached" : [ {
    "bootIndex" : "0",
    "id" : "7642fc7d-9f0e-4cf6-a43a-3c094d7bf596",
    "device" : "/dev/vda"
  } ],
  "userId" : "E2mdWyMJxjRLCkyvTLkRtDMldPnwidNC",
  "flavor" : {
    "disk" : "0",
    "name" : "Si3.small.1",
    "id" : "Si3.small.1",
    "vcpus" : "1",
    "ram" : "1024"
  },
  "OsDcfDiskConfig" : "MANUAL",
  "hostStatus" : "UP",
  "OsSrvUsgLaunchedAt" : "2020-10-26T03:10:14.000000",
  "OsExtAz" : "cn-north-5a",
  "progress" : 0,
  "locked" : false,
  "OS-EXT-SRV-ATTR" : {
    "hostName" : "ecs-for-test",
    "kernelId" : "",
    "ramdiskId" : "",
    "reservationId" : "r-o0t5i6lx",
    "instanceName" : "instance-00117d9e",
    "host" : "cn-north-5a-pod01.cn-north-5",
    "rootDeviceName" : "/dev/vda",
    "hypervisorHostName" : "nova001@7",
    "launchIndex" : 0
  },
  "status" : "ACTIVE",
  "schedulerHints" : { }
```


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```
  }
}, {
  "id" : "2954ab42-a61d-4545-8fb7-f3029c827f91",
  "name" : "dcs-test",
  "provider" : "dcs",
  "type" : "redis",
  "region_id" : "cn-south-1",
  "project_id" : "2dd15411042d4dd8a708ef86aafebb0c",
  "project_name" : "cn-south-1",
  "ep_id" : "0",
  "ep_name" : "default",
  "checksum" : "1408722b1da04fb609b377646aeac44d405fdf0aced097f5ec7b4e6c581b933a",
  "created" : "2019-03-09T09:27:38.340Z",
  "updated" : "2020-06-07T04:43:04.185Z",
  "provisioning_state" : "Succeeded",
  "tags" : { },
  "properties" : {
    "spec_code" : "redis.ha.au1.large.1",
    "vpc_name" : "vpc-a59a",
    "charging_mode" : 0,
    "vpc_id" : "723e6d68-7bd0-4945-ac44-d083e10df9c4",
    "user_name" : "test",
    "created_at" : "2019-03-09T09:27:38.340Z",
    "enable_ssl" : false,
    "max_memory" : 1024,
    "capacity" : 1,
    "maintain_begin" : "02:00:00",
    "domain_name" : "redis-2954ab4-dcs-test.dcs.huaweicloud.com",
    "engine" : "Redis",
    "maintain_end" : "06:00:00",
    "service_upgrade" : false,
    "no_password_access" : "false",
    "service_task_id" : "",
    "ip" : "192.168.1.53",
    "used_memory" : 2,
    "enterprise_project_id" : "0",
    "instance_id" : "2954ab42-a61d-4545-8fb7-f3029c827f91",
    "port" : 6379,
    "user_id" : "b32870f8945f443d8aeff4825acf695f",
    "enable_publicip" : false,
    "domainName" : "redis-2954ab4-dcs-test.dcs.huaweicloud.com",
    "name" : "dcs-test",
    "update_at" : "2020-06-07T04:43:04.185Z",
    "resource_spec_code" : "redis.ha.au1.large.1",
    "subnet_id" : "08b835de-6c72-493a-84e4-372f13e6c2d8",
    "engine_version" : "5.0",
    "status" : "RUNNING"
  }
}, {
  "id" : "a6e56d05501944d3b2507ba506a43744",
  "name" : "console.huaweicloud.com",
  "provider" : "cdn",
  "type" : "domains",
  "region_id" : "global",
  "project_id" : "",
  "project_name" : "",
  "ep_id" : "0",
  "ep_name" : "default",
  "checksum" : "56afa8b76428f90e9abfbe5cbf33535d8816166114d32eeb119658d6c59eceda",
  "created" : "2020-01-04T13:42:37Z",
  "updated" : "2020-01-15T04:23:01Z",
  "provisioning_state" : "Succeeded",
  "tags" : { },
  "properties" : {
    "domain_name" : "console.huaweicloud.com",
    "domain_status" : "offline",
    "business_type" : "WEB",
    "modify_time" : 1579062181463,
    "cname" : "console.huaweicloud.com.c.cdnhwc1.com"
```


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```
  }
}, {
  "id" : "1aedefa734514d78baf484358b1066f8in01",
  "name" : "ecf-cm",
  "provider" : "rds",
  "type" : "instances",
  "region_id" : "cn-north-4",
  "project_id" : "9e3425927a954ea5a86d78c3e797acec",
  "project_name" : "cn-north-4_region_service",
  "ep_id" : "0",
  "ep_name" : "default",
  "checksum" : "e18552532a73fdfef172061a398212e8ab72e7901a092b240f09a9f250b8e0d1",
  "created" : "2019-05-21T06:32:52Z",
  "updated" : "2020-12-22T13:20:56Z",
  "provisioning_state" : "Succeeded",
  "tags" : { },
  "properties" : {
    "engineVersion" : "5.7.23.5",
    "volumeType" : "ULTRAHIGH",
    "payMode" : "0",
    "flavorCode" : "rds.mysql.c6.4xlarge.4.ha",
    "userId" : "04ef9c3e450026431f35c01f946b49d7",
    "instanceStatus" : "normal",
    "opsWindow" : "10:00-14:00",
    "haMode" : "Ha",
    "enableSsl" : "1",
    "securityGroupId" : "f6e60b4b-94ca-4d30-9bb2-4ac5366a07e9",
    "createdAt" : "2019-05-21T06:32:52Z",
    "port" : "3306",
    "dataVolumeSizeInGBs" : "1000",
    "dataVip" : "9.9.9.9",
    "vpcId" : "ccbea875-6268-473e-bf90-e63159394df2",
    "networkId" : "ae261422-51c8-4a26-ba53-cfa4cc7d6690",
    "engineName" : "mysql"
  }
}, {
  "id" : "7c330b98-87ed-4098-93c7-fc1edc4b6b5a",
  "name" : "clouddeploy-2pod-env2_hyp-0002",
  "provider" : "bms",
  "type" : "servers",
  "region_id" : "cn-north-4",
  "project_id" : "9e3425927a954ea5a86d78c3e797acec",
  "project_name" : "cn-north-4_region_service",
  "ep_id" : "0",
  "ep_name" : "default",
  "checksum" : "e18552532a73fdfef172061a398212e8ab72e7901a092b240f09a9f250b8e0d1",
  "created" : "2019-05-21T06:32:52Z",
  "updated" : "2020-12-22T13:20:56Z",
  "provisioning_state" : "Succeeded",
  "tags" : {
    "__type_baremetal" : ""
  },
  "properties" : {
    "accessIpv4" : "",
    "hostName" : "clouddeploy-2pod-env2-hyp-0002",
    "addresses" : [ {
      "OsExtIpsType" : "fixed",
      "OsExtIpsPortId" : "2db3738d-cbbd-4698-906f-c972845cba3a",
      "addr" : "192.168.1.49",
      "version" : 4,
      "OsExtIpsMacAddr" : "fa:16:3e:29:23:33"
    } ],
    "accessIpv6" : "",
    "metadata" : {
      "chargingMode" : "1",
      "meteringImageType" : "private",
      "imageName" : "Ubuntu 17.10 aarch64 server 64bit for BareMetal",
      "meteringOderId" : "CS20122903366ZKVX",
      "meteringProductId" : "00301-215006-0--0",
```


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```
    "meteringImageId" : "e5065d43-4964-4071-b1ab-b17c70f903cc",
    "meteringResourcesPerCode" : "physical.r1.xlarge.linux",
    "vpcId" : "d7d8f09b-8bfe-4cc5-87a1-99012253ef44",
    "osBit" : "64"
   },
   "OsExtStsVmState" : "stopped",
   "configDrive" : "",
   "OsExtStsPowerState" : 4,
   "hostId" : "c3499877cccf68446308b59a0efddb6754029a3b6ddbd14dcca07c46",
   "securityGroup" : [ {
    "name" : "default",
    "id" : "d7872289-f428-4690-9292-583c12fc8449"
   } ],
   "ExtVolumesAttached" : [ ],
   "userId" : "183c03ab1281490e8be2e93038a9079c",
   "flavor" : {
    "disk" : "2000",
    "name" : "physical.r1.xlarge",
    "id" : "physical.r1.xlarge",
    "vcpus" : "64",
    "ram" : "262144"
   },
   "OsDcfDiskConfig" : "MANUAL",
   "hostStatus" : "UP",
   "OsSrvUsgLaunchedAt" : "2019-09-05T11:07:15.000000",
   "OsExtAz" : "cn-north-6b",
   "locked" : false,
   "OS-EXT-SRV-ATTR" : {
    "hostName" : "clouddeploy-2pod-env2-hyp-0002",
    "kernelId" : "",
    "ramdiskId" : "",
    "reservationId" : "r-703tla9e",
    "instanceName" : "instance-00034cd1",
    "host" : "cn-north-4b-pod02.cn-north-4",
    "rootDeviceName" : "/dev/vda",
    "hypervisorHostName" : "nova004@2",
    "launchIndex" : 0
   },
   "status" : "SHUTOFF",
   "schedulerHints" : { }
  }
} ]
```


- Example 2


```
{
  "current_count" : 7,
  "next_marker" :
"CAESJhIkNGEzNWYxMmYtZjM0NC00YTNkLWE1NDEtZWFjMDBiNDIzMjg1GgTGWJss"
}
```


Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed.
500	Internal server error.

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Error Codes

See **Error Codes**.

4.2 Resource Recorder

4.2.1 Querying the Resource Recorder

Function

This API is used to query details about the resource recorder.

URI

GET /v1/resource-manager/domains/{domain_id}/tracker-config

Table 4-30 Path parameter

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**

Request Parameters

None

Response Parameters

Status code: 200

Table 4-31 Response body parameters

Parameter	Type	Description
channel	**ChannelConfigBody** object	Specifies configurations for the tracker channel.
selector	**SelectorConfigBody** object	Specifies the selector.
agency_name	String	Specifies the IAM agency name.

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Table 4-32 ChannelConfigBody

Parameter	Type	Description
smn	**TrackerSMNChannelConfigBody** object	Specifies configurations for the SMN channel.
obs	**TrackerOBSChannelConfigBody** object	Specifies configurations for the OBS bucket.

Table 4-33 TrackerSMNChannelConfigBody

Parameter	Type	Description
region_id	String	Specifies the region ID.
project_id	String	Specifies the project ID.
topic_urn	String	Specifies the SMN topic URN.

Table 4-34 TrackerOBSChannelConfigBody

Parameter	Type	Description
bucket_name	String	Specifies the OBS bucket name.
region_id	String	Specifies the region ID.

Table 4-35 SelectorConfigBody

Parameter	Type	Description
all_supported	Boolean	Specifies whether to select all supported resources.
resource_types	Array of strings	Specifies the resource type list.

Status code: 400

Table 4-36 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.

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Parameter	Type	Description
error_msg	String	Specifies the error message.

Status code: 403

Table 4-37 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-38 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-39 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

None

Example Response

Status code: 200

Operation succeeded.

- Example 1

```
"rms_tracker_agency"
```

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- Example 2

```
{
  "obs" : {
    "bucket_name" : "rmtest",
    "region_id" : "cn-north-7"
  },
  "smn" : {
    "project_id" : "059b5e0a2500d5552fa1c00adada8c06",
    "region_id" : "cn-north-7",
    "topic_urn" : "urn:smn:cn-north-7:059b5e0a2500d5552fa1c00adada8c06:agencytest"
  }
}
```

- Example 3

```
{
  "all_supported" : true,
  "resource_types" : [ ]
}
```

Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	No resource recorder found.
500	Internal server error.

Error Codes

See **Error Codes**.

4.2.2 Deleting the Resource Record

Function

This API is used to delete the resource recorder.

URI

DELETE /v1/resource-manager/domains/{domain_id}/tracker-config

Table 4-40 Path parameter

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**

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Request Parameters

None

Response Parameters

Status code: 400

Table 4-41 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-42 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-43 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-44 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

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Example Request

None

Example Response

None

Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	No resource recorder found.
500	Internal server error.

Error Codes

See **Error Codes**.

4.2.3 Creating or Modifying the Resource Recorder

Function

This API is used to create or modify the resource recorder. Only one resource recorder can exist.

URI

PUT /v1/resource-manager/domains/{domain_id}/tracker-config

Table 4-45 Path parameter

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**

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Request Parameters

Table 4-46 Request body parameters

Parameter	Mandatory	Type	Description
channel	Yes	**ChannelConfigBody** object	Specifies configurations for the tracker channel.
selector	Yes	**SelectorConfigBody** object	Specifies the selector.
agency_name	Yes	String	Specifies the IAM agency name.

Table 4-47 ChannelConfigBody

Parameter	Mandatory	Type	Description
smn	No	**TrackerSMNChannelConfigBody** object	Specifies configurations for the SMN channel.
obs	No	**TrackerOBSChannelConfigBody** object	Specifies configurations for the OBS bucket.

Table 4-48 TrackerSMNChannelConfigBody

Parameter	Mandatory	Type	Description
region_id	Yes	String	Specifies the region ID.
project_id	Yes	String	Specifies the project ID.
topic_urn	Yes	String	Specifies the SMN topic URN.

Table 4-49 TrackerOBSChannelConfigBody

Parameter	Mandatory	Type	Description
bucket_name	Yes	String	Specifies the OBS bucket name.
region_id	Yes	String	Specifies the region ID.

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Table 4-50 SelectorConfigBody

Parameter	Mandatory	Type	Description
all_supported	Yes	Boolean	Specifies whether to select all supported resources.
resource_types	Yes	Array of strings	Specifies the resource type list.

Response Parameters

Status code: 400

Table 4-51 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-52 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-53 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

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Table 4-54 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

Creating a resource recorder and enabling message pushing and dumping

```
PUT /v1/resource-manager/domains/{domain_id}/tracker-config

{
  "channel" : {
    "smn" : {
      "region_id" : "cn-north-4",
      "project_id" : "39c2af998c334ed6bcbb75b27318f7b5",
      "topic_urn" : "urn:smn:cn-north-4:39c2af998c334ed6bcbb75b27318f7b5:resource-manager-test"
    },
    "obs" : {
      "bucket_name" : "rms-snapshot",
      "region_id" : "cn-north-4"
    }
  },
  "selector" : {
    "all_supported" : true
  },
  "agency_name" : "rms_tracker_agency"
}
```

Example Response

None

Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	Resource not found.
500	Internal server error.

Error Codes

See **Error Codes**.

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4.3 Resource Relationships

4.3.1 Querying Resource Relationships

Function

This API is used to query the relationship between the resource with a specific ID and other resources. You can set **Direction** to **in** or **out**.

URI

GET /v1/resource-manager/domains/{domain_id}/resources/{resource_id}/relations

Table 4-55 Path parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**
resource_id	Yes	String	Specifies the resource ID. Maximum length: **256**

Table 4-56 Query parameters

Parameter	Mandatory	Type	Description
direction	Yes	String	Specifies the resource relationship direction. Possible values are as follows: • **in** • **out**
limit	No	Integer	Specifies the maximum number of records to return. Minimum value: **1** Maximum value: **1000**

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Parameter	Mandatory	Type	Description
marker	No	String	Specifies the pagination parameter. You can use the **marker** value returned in the previous request as the number of the first page of records to return in this request. Minimum length: **4** Maximum length: **400**

Request Parameters

None

Response Parameters

Status code: 200

Table 4-57 Response body parameters

Parameter	Type	Description
relations	Array of **ResourceRelation** objects	Specifies the list of the resource relationships.
page_info	**PageInfo** object	Specifies the pagination object.

Table 4-58 ResourceRelation

Parameter	Type	Description
relation_type	String	Specifies the relationship type.
from_resource_type	String	Specifies the type of the source resource.
to_resource_type	String	Specifies the type of the associated resource.
from_resource_id	String	Specifies the source resource ID.
to_resource_id	String	Specifies the ID of the associated resource.

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Table 4-59 PageInfo

Parameter	Type	Description
current_count	Integer	Specifies the resource quantity on the current page. Minimum value: **0** Maximum value: **200**
next_marker	String	Specifies the **marker** value of the next page.

Status code: 400

Table 4-60 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-61 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-62 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

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Table 4-63 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

```
GET https://{endpoint}/v1/resource-manager/domains/{domain_id}/resources/{resource_id}/relations?direction=out&limit=1000
```

Example Response

Status code: 200

Operation succeeded.

- Example 1

```
[ {
  "relation_type" : "isAttachedTo",
  "from_resource_type" : "ecs.cloudservers",
  "to_resource_type" : "evs.volumes",
  "from_resource_id" : "6af96128-d58d-426c-91e0-b38144c0f112",
  "to_resource_id" : "0075ed19-59dd-49be-961d-117bb6fbfd3e"
}, {
  "relation_type" : "contains",
  "from_resource_type" : "ecs.cloudservers",
  "to_resource_type" : "vpc.publicips",
  "from_resource_id" : "6af96128-d58d-426c-91e0-b38144c0f112",
  "to_resource_id" : "3813d6d3-ef88-47b1-b343-cdf6390c6dcb"
}, {
  "relation_type" : "isAssociatedWith",
  "from_resource_type" : "ecs.cloudservers",
  "to_resource_type" : "vpc.securityGroups",
  "from_resource_id" : "6af96128-d58d-426c-91e0-b38144c0f112",
  "to_resource_id" : "8cca3002-00af-4812-a853-b7a6fbee06a4"
}, {
  "relation_type" : "isAttachedTo",
  "from_resource_type" : "ecs.cloudservers",
  "to_resource_type" : "evs.volumes",
  "from_resource_id" : "6af96128-d58d-426c-91e0-b38144c0f112",
  "to_resource_id" : "f4a107eb-4c6d-4dc8-88d8-de337923956f"
}, {
  "relation_type" : "isContainedIn",
  "from_resource_type" : "ecs.cloudservers",
  "to_resource_type" : "vpc.vpcs",
  "from_resource_id" : "6af96128-d58d-426c-91e0-b38144c0f112",
  "to_resource_id" : "ff13d70d-17e5-4ec8-945a-c874e0db99d3"
} ]
```

- Example 2

```
{
  "current_count" : 5,
  "next_marker" : null
}
```

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Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed.
404	Resource not found.
500	Internal server error.

Error Codes

See **Error Codes**.

4.4 Resource Change Records

4.4.1 Querying Change Records of a Resource

Function

This API is used to query change records of a resource and its relationships with other resources.

URI

GET /v1/resource-manager/domains/{domain_id}/resources/{resource_id}/history

Table 4-64 Path parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**
resource_id	Yes	String	Specifies the resource ID. Maximum length: **256**

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Table 4-65 Query parameters

Parameter	Mandatory	Type	Description
marker	No	String	Specifies the pagination parameter. You can use the **marker** value returned in the previous request as the number of the first page of records to return in this request. Minimum length: **4** Maximum length: **400**
limit	No	Integer	Specifies the maximum number of records to return. Minimum value: **1** Maximum value: **200**
earlier_time	No	Long	Specifies the start time of the query. If you do not set this parameter, the action returns paginated results starting from the earliest history item.
later_time	No	Long	Specifies the end time of the query. If you do not set this parameter, the current time is used by default.
chronological_order	No	String	Specifies the time sequence of the data to return. The default value is **Reverse**. Possible values are as follows: • **Forward** • **Reverse**

Request Parameters

None

Response Parameters

Status code: 200

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Table 4-66 Response body parameters

Parameter	Type	Description
items	Array of **HistoryItem** objects	Specifies the list of resource change records.
page_info	**PageInfo** object	Specifies the pagination object.

Table 4-67 HistoryItem

Parameter	Type	Description
domain_id	String	Specifies the user ID.
resource_id	String	Specifies the resource ID.
resource_type	String	Specifies the resource type.
capture_time	String	Specifies the time when the resource was captured in RMS.
status	String	Specifies the resource status.
relations	Array of **ResourceRelation** objects	Specifies the list of the resource relationships.
resource	**ResourceEntity** object	Specifies the resource object.

Table 4-68 ResourceRelation

Parameter	Type	Description
relation_type	String	Specifies the relationship type.
from_resource_type	String	Specifies the type of the source resource.
to_resource_type	String	Specifies the type of the associated resource.
from_resource_id	String	Specifies the source resource ID.
to_resource_id	String	Specifies the ID of the associated resource.

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Table 4-69 ResourceEntity

Parameter	Type	Description
id	String	Specifies the resource ID.
name	String	Specifies the resource name.
provider	String	Specifies the cloud service name.
type	String	Specifies the resource type.
region_id	String	Specifies the region ID.
project_id	String	Specifies the project ID in OpenStack.
project_name	String	Specifies the project name in OpenStack.
ep_id	String	Specifies the enterprise project ID.
ep_name	String	Specifies the enterprise project name.
checksum	String	Specifies the resource checksum.
created	String	Specifies the time when the resource was created.
updated	String	Specifies the time when the resource was updated.
provisioning_state	String	Specifies the status of the operation that causes the resource change.
tags	Map<String,String>	Specifies the resource tag.
properties	Map<String,Object>	Specifies the detailed properties of the resource.

Table 4-70 PageInfo

Parameter	Type	Description
current_count	Integer	Specifies the resource quantity on the current page. Minimum value: **0** Maximum value: **200**
next_marker	String	Specifies the **marker** value of the next page.

Status code: 400

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Table 4-71 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-72 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-73 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

```
GET /v1/resource-manager/domains/{domain_id}/resources/{resource_id}/history?
earlier_time=1595865600000&later_time=1603875761000&limit=10
```

Example Response

Status code: 200

Operation succeeded.

- Example 1

```
[ {
  "domain_id" : "9548dff51b6849fab3d7353d631158ee",
  "resource_id" : "6af96128-d58d-426c-91e0-b38144c0f112",
  "resource_type" : "ecs.cloudservers",
  "capture_time" : "2020-10-12T07:44:40.167Z",
  "status" : "ResourceChanged.UPDATE",
  "relations" : [ {
    "relation_type" : "contains",
    "from_resource_type" : "ecs.cloudservers",
    "to_resource_type" : "vpc.publicips",
    "from_resource_id" : "6af96128-d58d-426c-91e0-b38144c0f112",
    "to_resource_id" : "3813d6d3-ef88-47b1-b343-cdf6390c6dcb"
  }, {
    "relation_type" : "isAttachedTo",
```


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```
  "from_resource_type" : "ecs.cloudservers",
  "to_resource_type" : "evs.volumes",
  "from_resource_id" : "6af96128-d58d-426c-91e0-b38144c0f112",
  "to_resource_id" : "0075ed19-59dd-49be-961d-117bb6fbfd3e"
 }, {
  "relation_type" : "isAssociatedWith",
  "from_resource_type" : "ecs.cloudservers",
  "to_resource_type" : "vpc.securityGroups",
  "from_resource_id" : "6af96128-d58d-426c-91e0-b38144c0f112",
  "to_resource_id" : "8cca3002-00af-4812-a853-b7a6fbee06a4"
 }, {
  "relation_type" : "isAttachedTo",
  "from_resource_type" : "ecs.cloudservers",
  "to_resource_type" : "evs.volumes",
  "from_resource_id" : "6af96128-d58d-426c-91e0-b38144c0f112",
  "to_resource_id" : "f4a107eb-4c6d-4dc8-88d8-de337923956f"
 }, {
  "relation_type" : "isContainedIn",
  "from_resource_type" : "ecs.cloudservers",
  "to_resource_type" : "vpc.vpcs",
  "from_resource_id" : "6af96128-d58d-426c-91e0-b38144c0f112",
  "to_resource_id" : "ff13d70d-17e5-4ec8-945a-c874e0db99d3"
 } ],
 "resource" : {
  "id" : "6af96128-d58d-426c-91e0-b38144c0f112",
  "name" : "david-test-cce-49831-bh9ax",
  "provider" : "ecs",
  "type" : "cloudservers",
  "region_id" : "cn-north-6",
  "project_id" : "15caceb7599f4ee3a770dbb70ad69b2b",
  "project_name" : "cn-north-6",
  "ep_id" : "0",
  "ep_name" : "default",
  "checksum" : "30482e7e4f2fc6e9842689c5d498cd13862def3c7369e9216af87c2198557b28",
  "created" : "2020-10-12T07:44:10Z",
  "updated" : "2020-10-12T07:44:38Z",
  "provisioning_state" : "Succeeded",
  "tags" : {
   "CCE-Dynamic-Provisioning-Node" : "80fbd7d5-0c5e-11eb-bc0e-0255ac101e85"
  },
  "properties" : {
   "accessIpv4" : "",
   "hostName" : "david-test-cce-49831-bh9ax",
   "addresses" : [ {
    "OsExtIpsType" : "fixed",
    "OsExtIpsPortId" : "a7bfdd6f-3a56-4bbb-b37e-1b9ccac1ac96",
    "addr" : "192.168.238.230",
    "version" : 4,
    "OsExtIpsMacAddr" : "fa:16:3e:99:ec:b1"
   } ]
  },
  "accessIpv6" : "",
  "metadata" : {
   "chargingMode" : "0",
   "meteringImageType" : "gold",
   "imageName" : "CCE_images_EulerOS-Node-CCE20.7.1.B003-v1.17.9-r0-amd64-
f8389e5c3d65dc7b5bf8f10924d2fc16e35588fc-20200808144721",
   "meteringImageId" : "e8b32b27-a103-4a1f-b955-5d6be46ae9da",
   "meteringResourcesPerCode" : "si3.large.2.linux",
   "vpcId" : "ff13d70d-17e5-4ec8-945a-c874e0db99d3",
   "osBit" : "64"
  },
  "OsExtStsVmState" : "active",
  "configDrive" : "",
  "OsExtStsPowerState" : 1,
  "hostId" : "7f007da24f79bc37782d3440e3d4faa374c0eb555c1dfc98b687c996",
  "securityGroup" : [ {
   "name" : "david-test-cce-cce-node-8x31o",
   "id" : "8cca3002-00af-4812-a853-b7a6fbee06a4"
```


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```
  } ],
  "ExtVolumesAttached" : [ {
    "bootIndex" : "0",
    "id" : "f4a107eb-4c6d-4dc8-88d8-de337923956f",
    "device" : "/dev/vda"
  }, {
    "bootIndex" : "-1",
    "id" : "0075ed19-59dd-49be-961d-117bb6fbfd3e",
    "device" : "/dev/vdb"
  } ],
  "userId" : "07729a673f8026624f3ec006f3b3cda9",
  "flavor" : {
    "disk" : "0",
    "name" : "Si3.large.2",
    "id" : "Si3.large.2",
    "vcpus" : "2",
    "ram" : "4096"
  },
  "OsDcfDiskConfig" : "MANUAL",
  "hostStatus" : "UP",
  "OsSrvUsgLaunchedAt" : "2020-10-12T07:44:23.000000",
  "OsExtAz" : "cn-north-6a",
  "progress" : 0,
  "locked" : false,
  "OS-EXT-SRV-ATTR" : {
    "hostName" : "david-test-cce-49831-bh9ax",
    "kernelId" : "",
    "ramdiskId" : "",
    "reservationId" : "r-l8y8evjo",
    "instanceName" : "instance-000b2c2d",
    "host" : "cn-north-6a-pod01.cn-north-6",
    "rootDeviceName" : "/dev/vda",
    "hypervisorHostName" : "nova001@83",
    "launchIndex" : 0
  },
  "status" : "ACTIVE"
 }
} ]
```


- Example 2


```
{
  "current_count" : 1,
  "next_marker" :
"CAESJjE2MDI0ODg2Nzc1NDYtNWY4NDA5NjU4YmI5MDUxZDBhMWEzMmJjGgQCXWaw"
}
```


Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed.
500	Internal server error.

Error Codes

See **Error Codes**.

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4.5 Region Management

4.5.1 Querying Regions Visible to a User

Function

This API is used to query regions visible to a user

URI

GET /v1/resource-manager/domains/{domain_id}/regions

Table 4-74 Path parameter

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**

Request Parameters

Table 4-75 Request header parameter

Parameter	Mandatory	Type	Description
X-Language	No	String	Specifies the language of the information to return. Default value: **zh-cn** Possible values are as follows: • **zh-cn** • **en-us**

Response Parameters

Status code: 200

Table 4-76 Response body parameter

Parameter	Type	Description
value	Array of **Region** objects	Specifies the region list.

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Table 4-77 Region

Parameter	Type	Description
region_id	String	Specifies the region ID.
display_name	String	Specifies the display name of the region.

Status code: 400

Table 4-78 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-79 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-80 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-81 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

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Example Request

None

Example Response

Status code: 200

Operation succeeded.

```
[ {
  "region_id" : "cn-north-1",
    "display_name": "CN North-Beijng1",
}, {
  "region_id" : "cn-east-3",
    "display_name": "CN East-Shanghai1"
} ]
```

Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed.
404	User not found.
500	Internal server error.

Error Codes

See **Error Codes**.

4.6 Compliance

4.6.1 Querying All Built-in Policies

Function

This API is used to query all built-in policies.

URI

GET /v1/resource-manager/policy-definitions

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Request Parameters

Table 4-82 Request header parameter

Parameter	Mandatory	Type	Description
X-Language	No	String	Specifies the language of the information to return. Default value: **zh-cn**

Response Parameters

Status code: 200

Table 4-83 Response body parameters

Parameter	Type	Description
value	Array of **PolicyDefinition** objects	Specifies the policy list.
page_info	**PageInfo** object	Specifies the pagination object.

Table 4-84 PolicyDefinition

Parameter	Type	Description
id	String	Specifies the policy ID.
name	String	Specifies the policy name.
policy_type	String	Specifies the policy type.
description	String	Provides supplementary information about the policy.
policy_rule_type	String	Specifies the syntax type of the policy.
policy_rule	Object	Specifies how the policy is executed.
keywords	Array of strings	Specifies the list of key words.
parameters	Map<String,**PolicyParameterDefinition**>	Specifies the policy parameters.

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Table 4-85 PolicyParameterDefinition

Parameter	Type	Description
name	String	Specifies the policy parameter name.
description	String	Provides supplementary information about the policy parameter.
allowed_values	Array of objects	Specifies the allowed values of the policy parameter.
default_value	String	Specifies the default value of the policy parameter.
type	String	Specifies the type of the policy parameter. Possible values are as follows: • **Array** • **Boolean** • **Integer** • **Float** • **String** • **DateTime**

Table 4-86 PageInfo

Parameter	Type	Description
current_count	Integer	Specifies the resource quantity on the current page. Minimum value: **0** Maximum value: **200**
next_marker	String	Specifies the **marker** value of the next page.

Status code: 400

Table 4-87 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

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Table 4-88 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-89 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-90 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

None

Example Response

Status code: 200

Operation succeeded.

- Example 1

```
[ {
  "id" : "5fa365476eed194ccb2c04d1",
  "name" : "volumes-encrypted-check",
  "policy_type" : "builtin",
    "description": "The mounted EVS disk is non-compliant if it is not encrypted.",
  "policy_rule_type" : "dsl",
  "policy_rule" : {
    "allOf" : [ {
      "value" : "${resource().provider}",
      "comparator" : "equals",
      "pattern" : "evs"
    }, {
      "value" : "${resource().type}",
      "comparator" : "equals",
```


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```
      "pattern" : "volumes"
    }, {
      "value" : "${resource().properties.status}",
      "comparator" : "equals",
      "pattern" : "in-use"
    }, {
      "anyOf" : [ {
        "value" : "${resource().properties.metadata}",
        "comparator" : "notContainsKey",
        "pattern" : "systemEncrypted"
      }, {
        "value" : "${resource().properties.metadata.systemEncrypted}",
        "comparator" : "equals",
        "pattern" : "0"
      } ]
    } ]
  },
  "keywords" : [ "evs", "ecs" ],
  "parameters" : { }
}, {
  "id" : "5fa9f89b6eed194ccb2c04db",
  "name" : "required-tag-check",
  "policy_type" : "builtin",
   "description": "The resource is non-compliant if it does not contain a specific tag.",
  "policy_rule_type" : "dsl",
  "policy_rule" : {
    "anyOf" : [ {
      "value" : "${contains(resource().tags, parameters('specifiedTagKey'))}",
      "comparator" : "equals",
      "pattern" : false
    }, {
      "allOf" : [ {
        "value" : "${length(parameters('specifiedTagValue'))}",
        "comparator" : "greater",
        "pattern" : 0
      }, {
        "value" : "${getValue(resource().tags, parameters('specifiedTagKey'))}",
        "comparator" : "notIn",
        "pattern" : "${parameters('specifiedTagValue')}"
      } ]
    } ]
  },
  "keywords" : [ "tag" ],
  "parameters" : {
    "specifiedTagKey" : {
      "name" : null,
      "description" : "the specified tag key",
      "allowed_values" : null,
      "default_value" : null,
      "type" : "String"
    },
    "specifiedTagValue" : {
      "name" : null,
      "description" : "The list of allowed tag value, permit all if empty",
      "allowed_values" : null,
      "default_value" : null,
      "type" : "Array"
    }
  }
}, {
  "id" : "5fa265c0aa1e6afc05a0ff07",
  "name" : "allowed-images-by-id",
  "policy_type" : "builtin",
   "description": "The ECS resource is non-compliant if the image it used is not in the allowed list.",
  "policy_rule_type" : "dsl",
  "policy_rule" : {
    "allOf" : [ {
      "value" : "${resource().provider}",
      "comparator" : "equals",
```

```
      "pattern" : "ecs"
    }, {
      "value" : "${resource().type}",
      "comparator" : "equals",
      "pattern" : "cloudservers"
    }, {
      "value" : "${resource().properties.metadata.meteringImageId}",
      "comparator" : "notIn",
      "pattern" : "${parameters('listOfAllowedImages')}"
    } ]
  },
  "keywords" : [ "ecs", "ims" ],
  "parameters" : {
    "listOfAllowedImages" : {
      "name" : null,
      "description" : "The list of allowed image IDs",
      "allowed_values" : null,
      "default_value" : null,
      "type" : "Array"
    }
  }
}, {
  "id" : "5fa36558aa1e6afc05a3d0a7",
  "name" : "volume-inuse-check",
  "policy_type" : "builtin",
    "description": "The EVS disk is non-compliant if it is unmounted.",
  "policy_rule_type" : "dsl",
  "policy_rule" : {
    "allOf" : [ {
      "value" : "${resource().provider}",
      "comparator" : "equals",
      "pattern" : "evs"
    }, {
      "value" : "${resource().type}",
      "comparator" : "equals",
      "pattern" : "volumes"
    }, {
      "value" : "${resource().properties.status}",
      "comparator" : "equals",
      "pattern" : "available"
    } ]
  },
  "keywords" : [ "evs" ],
  "parameters" : { }
}, {
  "id" : "5fa3a1196eed194ccb2c04d7",
  "name" : "allowed_volume_specs",
  "policy_type" : "builtin",
    "description": "The EVS disk is non-compliant if its specification is not in the allowed list.",
  "policy_rule_type" : "dsl",
  "policy_rule" : {
    "allOf" : [ {
      "value" : "${resource().provider}",
      "comparator" : "equals",
      "pattern" : "evs"
    }, {
      "value" : "${resource().type}",
      "comparator" : "equals",
      "pattern" : "volumes"
    }, {
      "value" : "${resource().properties.volumeType}",
      "comparator" : "notIn",
      "pattern" : "${parameters('listOfAllowedSpecs')}"
    } ]
  },
  "keywords" : [ "evs" ],
  "parameters" : {
    "listOfAllowedSpecs" : {
      "name" : null,
```

```
      "description" : "The list of allowed disk specifications",
      "allowed_values" : null,
      "default_value" : null,
      "type" : "Array"
    }
  }
}, {
  "id" : "5f8d549bffeecc14f1fb522a",
  "name" : "allowed_ecs_flavors",
  "policy_type" : "builtin",
     "description": "The ECS resource is non-compliant if its flavor type is not in the allowed list.",
  "policy_rule_type" : "dsl",
  "policy_rule" : {
    "allOf" : [ {
      "value" : "${resource().provider}",
      "comparator" : "equals",
      "pattern" : "ecs"
    }, {
      "value" : "${resource().type}",
      "comparator" : "equals",
      "pattern" : "cloudservers"
    }, {
      "value" : "${resource().properties.flavor.name}",
      "comparator" : "notIn",
      "pattern" : "${parameters('listOfAllowedFlavors')}"
    } ]
  },
  "keywords" : [ "ecs" ],
  "parameters" : {
    "listOfAllowedFlavors" : {
      "name" : null,
      "description" : "The list of allowed flavor types",
      "allowed_values" : null,
      "default_value" : null,
      "type" : "Array"
    }
  }
}, {
  "id" : "5fa3a1196eed194ccb2c04d5",
  "name" : "eip-unbound-check",
  "policy_type" : "builtin",
    "description": "The EIP resource is non-compliant if it is not bound to any other resources.",
  "policy_rule_type" : "dsl",
  "policy_rule" : {
    "allOf" : [ {
      "value" : "${resource().provider}",
      "comparator" : "equals",
      "pattern" : "vpc"
    }, {
      "value" : "${resource().type}",
      "comparator" : "equals",
      "pattern" : "publicips"
    }, {
      "value" : "${resource().properties.status}",
      "comparator" : "equals",
      "pattern" : "DOWN"
    } ]
  },
  "keywords" : [ "vpc" ],
  "parameters" : { }
}, {
  "id" : "5f8d5428ffeecc14f1fb5205",
  "name" : "ecs-instance-no-public-ip",
  "policy_type" : "builtin",
    "description": "The ECS resource is non-compliant if it binds a public IP.",
  "policy_rule_type" : "dsl",
  "policy_rule" : {
    "allOf" : [ {
      "value" : "${resource().provider}",
```


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```
      "comparator" : "equals",
      "pattern" : "ecs"
    }, {
      "value" : "${resource().type}",
      "comparator" : "equals",
      "pattern" : "cloudservers"
    }, {
      "value" : "${length(filter(resource().properties.addresses, lambda x: equals(x.OsExtIpsType,
'floating')))}",
      "comparator" : "greater",
      "pattern" : 0
    } ]
  },
  "keywords" : [ "ecs" ],
  "parameters" : { }
}, {
  "id" : "5fa265c0aa1e6afc05a0ff10",
  "name" : "ecs-instance-in-vpc",
  "policy_type" : "builtin",
    "description": "The ECS resource is non-compliant if it is not in a specific VPC.",
  "policy_rule_type" : "dsl",
  "policy_rule" : {
    "allOf" : [ {
      "value" : "${resource().provider}",
      "comparator" : "equals",
      "pattern" : "ecs"
    }, {
      "value" : "${resource().type}",
      "comparator" : "equals",
      "pattern" : "cloudservers"
    }, {
      "value" : "${resource().properties.metadata.vpcId}",
      "comparator" : "notEquals",
      "pattern" : "${parameters('vpcId')}"
    } ]
  },
  "keywords" : [ "ecs", "vpc" ],
  "parameters" : {
    "vpcId" : {
      "name" : null,
      "description" : "VPC ID that contains the ECS instance",
      "allowed_values" : null,
      "default_value" : null,
      "type" : "String"
    }
  }
} ]
```


- Example 2


```
{
  "current_count" : 9,
  "next_marker" : null
}
```


Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	Resource not found.

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Status Code	Description
500	Internal server error.

Error Codes

See **Error Codes**.

4.6.2 Querying a Built-in Policy

Function

This API is used to query a built-in policy based on its ID.

URI

GET /v1/resource-manager/policy-definitions/{policy_definition_id}

Table 4-91 Path parameter

Parameter	Mandatory	Type	Description
policy_definition_id	Yes	String	Specifies the policy ID. Maximum length: **36**

Request Parameters

Table 4-92 Request header parameter

Parameter	Mandatory	Type	Description
X-Language	No	String	Specifies the language of the information to return. Default value: **zh-cn**

Response Parameters

Status code: 200

Table 4-93 Response body parameters

Parameter	Type	Description
id	String	Specifies the policy ID.

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Parameter	Type	Description
name	String	Specifies the policy name.
policy_type	String	Specifies the policy type.
description	String	Provides supplementary information about the policy.
policy_rule_type	String	Specifies the syntax type of the policy.
policy_rule	Object	Specifies how the policy is executed.
keywords	Array of strings	Specifies the list of key words.
parameters	Map<String,**PolicyParameterDefinition**>	Specifies the policy parameters.

Table 4-94 PolicyParameterDefinition

Parameter	Type	Description
name	String	Specifies the policy parameter name.
description	String	Provides supplementary information about the policy parameter.
allowed_values	Array of objects	Specifies the allowed values of the policy parameter.
default_value	String	Specifies the default value of the policy parameter.
type	String	Specifies the type of the policy parameter. Possible values are as follows: • **Array** • **Boolean** • **Integer** • **Float** • **String** • **DateTime**

Status code: 400

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Table 4-95 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-96 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-97 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-98 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

```
GET https://{endpoint}/v1/resource-manager/policy-definitions/5f8d5428ffeecc14f1fb5205
```

Example Response

Status code: 200

Built-in policy

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- Example 1

  ```
  "5f8d5428ffeecc14f1fb5205"
  ```

- Example 2

  ```
  "ecs-instance-no-public-ip"
  ```

- Example 3

  ```
  "builtin"
  ```

- Example 4

  ```
  "An ECS is non-compliant if it has a public IP address."
  ```

- Example 5

  ```
  "dsl"
  ```

- Example 6

  ```
  {
    "allOf" : [ {
      "value" : "${resource().provider}",
      "comparator" : "equals",
      "pattern" : "ecs"
    }, {
      "value" : "${resource().type}",
      "comparator" : "equals",
      "pattern" : "cloudservers"
    }, {
      "value" : "${length(filter(resource().properties.addresses, lambda x: equals(x.OsExtIpsType,
  'floating')))}",
      "comparator" : "greater",
      "pattern" : 0
    } ]
  }
  ```

- Example 7

  ```
  [ "ecs" ]
  ```

- Example 8

  ```
  { }
  ```

Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	Policy not found.
500	Internal server error.

Error Codes

See **Error Codes**.

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4.6.3 Adding an Assignment

Function

This API is used to add an assignment.

URI

PUT /v1/resource-manager/domains/{domain_id}/policy-assignments

Table 4-99 Path parameter

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**

Request Parameters

Table 4-100 Request body parameters

Parameter	Mandatory	Type	Description
name	No	String	Specifies the assignment name. Maximum length: **64**
description	No	String	Provides supplementary information about the assignment. Maximum length: **512**
policy_filter	No	**PolicyFilterDefinition** object	Specifies the assignment filter.
policy_definition_id	No	String	Specifies the policy ID. Maximum length: **36**
parameters	No	Map<String,**PolicyParameterValue**>	Specifies the assignment parameters.

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Table 4-101 PolicyFilterDefinition

Parameter	Mandatory	Type	Description
region_id	No	String	Specifies the region ID. Maximum: **128**
resource_provider	No	String	Specifies the cloud service name. Maximum length: **128**
resource_type	No	String	Specifies the resource type. Maximum: **128**
resource_id	No	String	Specifies the resource ID. Maximum length: **256**
tag_key	No	String	Specifies the tag key. Maximum length: **128**
tag_value	No	String	Specifies the tag value. Maximum length: **256**

Table 4-102 PolicyParameterValue

Parameter	Mandatory	Type	Description
value	No	Object	Specifies the value of the assignment parameter.

Response Parameters

Status code: 200

Table 4-103 Response body parameters

Parameter	Type	Description
id	String	Specifies the assignment ID.
name	String	Specifies the assignment name.
description	String	Provides supplementary information about the assignment.
policy_filter	**PolicyFilterDefinition** object	Specifies the assignment filter.
state	String	Specifies the assignment status.

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Parameter	Type	Description
created	String	Specifies the time when the assignment was added.
updated	String	Specifies the time when the assignment was modified.
policy_definition_id	String	Specifies the ID of the policy used by the assignment.
parameters	Map<String,**PolicyParameterValue**>	Specifies the assignment parameters.

Table 4-104 PolicyFilterDefinition

Parameter	Type	Description
region_id	String	Specifies the region ID. Maximum: **128**
resource_provider	String	Specifies the cloud service name. Maximum length: **128**
resource_type	String	Specifies the resource type. Maximum: **128**
resource_id	String	Specifies the resource ID. Maximum length: **256**
tag_key	String	Specifies the tag key. Maximum length: **128**
tag_value	String	Specifies the tag value. Maximum length: **256**

Table 4-105 PolicyParameterValue

Parameter	Type	Description
value	Object	Specifies the value of the assignment parameter.

Status code: 400

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Table 4-106 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-107 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-108 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

```
PUT https://{endpoint}/v1/resource-manager/domains/{domain_id}/policy-assignments

{
  "name" : "allowed-images-by-id",
  "description" : "The ECS resource is non-compliant if the image it used is not in the allowed list",
  "parameters" : {
    "listOfAllowedImages" : {
      "value" : [ "ea0d6e0e-99c3-406d-a873-3bb45462b624" ]
    }
  },
  "policy_filter" : {
    "resource_provider" : "ecs",
    "resource_type" : "cloudservers"
  },
  "policy_definition_id" : "5f3c8b9a9811a13739a32ed9"
}
```

Example Response

Status code: 200

Operation succeeded.

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- Example 1

```
"5fb76a240f2daf0b9662a04d"
```

- Example 2

```
"volume-inuse-check"
```

- Example 3

```
"The EVS disk is non-compliant if it is unmounted"
```

- Example 4

```
{
  "region_id" : null,
  "resource_provider" : "evs",
  "resource_type" : "volumes",
  "resource_id" : null,
  "tag_key" : null,
  "tag_value" : null
}
```

- Example 5

```
"Enabled"
```

- Example 6

```
"2020-11-20T07:03:00"
```

- Example 7

```
"2020-11-20T07:03:00"
```

- Example 8

```
"5fa36558aa1e6afc05a3d0a7"
```

- Example 9

```
{ }
```

Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
500	Internal server error.

Error Codes

See **Error Codes**.

4.6.4 Querying All Assignments

Function

This API is used to query all assignments.

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URI

GET /v1/resource-manager/domains/{domain_id}/policy-assignments

Table 4-109 Path parameter

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**

Request Parameters

None

Response Parameters

Status code: 200

Table 4-110 Response body parameters

Parameter	Type	Description
value	Array of **PolicyAssignment** objects	Specifies the assignment list.
page_info	**PageInfo** object	Specifies the pagination object.

Table 4-111 PolicyAssignment

Parameter	Type	Description
id	String	Specifies the assignment ID.
name	String	Specifies the assignment name.
description	String	Provides supplementary information about the assignment.
policy_filter	**PolicyFilterDefinition** object	Specifies the assignment filter.
state	String	Specifies the assignment status.
created	String	Specifies the time when the assignment was added.

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Parameter	Type	Description
updated	String	Specifies the time when the assignment was modified.
policy_definition_id	String	Specifies the ID of the policy used by the assignment.
parameters	Map<String,**PolicyParameterValue**>	Specifies the assignment parameters.

Table 4-112 PolicyFilterDefinition

Parameter	Type	Description
region_id	String	Specifies the region ID. Maximum length: **128**
resource_provider	String	Specifies the cloud service name. Maximum length: **128**
resource_type	String	Specifies the resource type. Maximum length: **128**
resource_id	String	Specifies the resource ID. Maximum length: **256**
tag_key	String	Specifies the tag key. Maximum length: **128**
tag_value	String	Specifies the tag value. Maximum length: **256**

Table 4-113 PolicyParameterValue

Parameter	Type	Description
value	Object	Specifies the value of the assignment parameter.

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Table 4-114 PageInfo

Parameter	Type	Description
current_count	Integer	Specifies the resource quantity on the current page. Minimum value: **0** Maximum value: **200**
next_marker	String	Specifies the **marker** value of the next page.

Status code: 400

Table 4-115 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-116 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-117 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

None

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Example Response

Status code: 200

Operation succeeded.

- Example 1

```
[ {
  "id" : "5fb76a240f2daf0b9662a04d",
  "name" : "volume-inuse-check",
    "description": "The EVS disk is non-compliant if it is unmounted.",
  "policy_filter" : {
    "region_id" : null,
    "resource_provider" : "evs",
    "resource_type" : "volumes",
    "resource_id" : null,
    "tag_key" : null,
    "tag_value" : null
  },
  "state" : "Enabled",
  "created" : "2020-11-20T07:03:00",
  "updated" : "2020-11-20T07:03:00",
  "policy_definition_id" : "5fa36558aa1e6afc05a3d0a7",
  "parameters" : { }
} ]
```

- Example 2

```
{
  "current_count" : 1,
  "next_marker" : null
}
```

Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
500	Internal server error.

Error Codes

See **Error Codes**.

4.6.5 Modifying an Assignment

Function

This API is used to modify an assignment.

URI

PUT /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}

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Table 4-118 Path parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**
policy_assignment_id	Yes	String	Specifies the assignment ID. Maximum length: **36**

Request Parameters

Table 4-119 Request body parameters

Parameter	Mandatory	Type	Description
name	No	String	Specifies the assignment name. Maximum length: **64**
description	No	String	Provides supplementary information about the assignment. Maximum length: **512**
policy_filter	No	**PolicyFilterDefinition** object	Specifies the assignment filter.
policy_definition_id	No	String	Specifies the policy ID. Maximum length: **36**
parameters	No	Map<String,**PolicyParameterValue**>	Specifies the assignment parameters.

Table 4-120 PolicyFilterDefinition

Parameter	Mandatory	Type	Description
region_id	No	String	Specifies the region ID. Maximum length: **128**
resource_provider	No	String	Specifies the cloud service name. Maximum length: **128**
resource_type	No	String	Specifies the resource type. Maximum length: **128**

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Parameter	Mandatory	Type	Description
resource_id	No	String	Specifies the resource ID. Maximum length: **256**
tag_key	No	String	Specifies the tag key. Maximum length: **128**
tag_value	No	String	Specifies the tag value. Maximum length: **256**

Table 4-121 PolicyParameterValue

Parameter	Mandatory	Type	Description
value	No	Object	Specifies the value of the assignment parameter.

Response Parameters

Status code: 200

Table 4-122 Response body parameters

Parameter	Type	Description
id	String	Specifies the assignment ID.
name	String	Specifies the assignment name.
description	String	Provides supplementary information about the assignment.
policy_filter	**PolicyFilterDefinition** object	Specifies the assignment filter.
state	String	Specifies the assignment status.
created	String	Specifies the time when the assignment was added.
updated	String	Specifies the time when the assignment was modified.
policy_definition_id	String	Specifies the ID of the policy used by the assignment.
parameters	Map<String,**PolicyParameterValue**>	Specifies the assignment parameters.

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Table 4-123 PolicyFilterDefinition

Parameter	Type	Description
region_id	String	Specifies the region ID. Maximum length: **128**
resource_provider	String	Specifies the cloud service name. Maximum length: **128**
resource_type	String	Specifies the resource type. Maximum length: **128**
resource_id	String	Specifies the resource ID. Maximum length: **256**
tag_key	String	Specifies the tag key. Maximum length: **128**
tag_value	String	Specifies the tag value. Maximum length: **256**

Table 4-124 PolicyParameterValue

Parameter	Type	Description
value	Object	Specifies the value of the assignment parameter.

Status code: 400

Table 4-125 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-126 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

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Status code: 404

Table 4-127 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-128 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

```
PUT https://{endpoint}/v1/resource-manager/domains/{domain_id}/policy-assignments/
{policy_assignment_id}

{
  "name" : "allowed-images-by-id",
  "description" : "The ECS resource is non-compliant if the image it used is not in the allowed list",
  "parameters" : {
    "listOfAllowedImages" : {
      "value" : [ "ea0d6e0e-99c3-406d-a873-3bb45462b624" ]
    }
  },
  "policy_filter" : {
    "resource_provider" : "ecs",
    "resource_type" : "cloudservers"
  },
  "policy_definition_id" : "5f3c8b9a9811a13739a32ed9"
}
```

Example Response

Status code: 200

Operation succeeded.

- Example 1

  ```
  "5fb76a240f2daf0b9662a04d"
  ```

- Example 2

  ```
  "volume-inuse-check"
  ```

- Example 3

  ```
  "The EVS disk is non-compliant if it is unmounted"
  ```

- Example 4

  ```
  {
    "region_id" : null,
  ```

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```
  "resource_provider" : "evs",
  "resource_type" : "volumes",
  "resource_id" : null,
  "tag_key" : null,
  "tag_value" : null
}
```

- Example 5

```
"Enabled"
```

- Example 6

```
"2020-11-20T07:03:00"
```

- Example 7

```
"2020-11-20T07:03:00"
```

- Example 8

```
"5fa36558aa1e6afc05a3d0a7"
```

- Example 9

```
{ }
```

Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	No assignments found.
500	Internal server error.

Error Codes

See **Error Codes**.

4.6.6 Querying an Assignment

Function

This API is used to query an assignment based on its ID.

URI

GET /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}

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Table 4-129 Path parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**
policy_assignment_id	Yes	String	Specifies the assignment ID. Maximum length: **36**

Request Parameters

None

Response Parameters

Status code: 200

Table 4-130 Response body parameters

Parameter	Type	Description
id	String	Specifies the assignment ID.
name	String	Specifies the assignment name.
description	String	Provides supplementary information about the assignment.
policy_filter	**PolicyFilterDefinition** object	Specifies the assignment filter.
state	String	Specifies the assignment status.
created	String	Specifies the time when the assignment was added.
updated	String	Specifies the time when the assignment was modified.
policy_definition_id	String	Specifies the ID of the policy used by the assignment.
parameters	Map<String,**PolicyParameterValue**>	Specifies the assignment parameters.

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Table 4-131 PolicyFilterDefinition

Parameter	Type	Description
region_id	String	Specifies the region ID. Maximum length: **128**
resource_provider	String	Specifies the cloud service name. Maximum length: **128**
resource_type	String	Specifies the resource type. Maximum length: **128**
resource_id	String	Specifies the resource ID. Maximum length: **256**
tag_key	String	Specifies the tag key. Maximum length: **128**
tag_value	String	Specifies the tag value. Maximum length: **256**

Table 4-132 PolicyParameterValue

Parameter	Type	Description
value	Object	Specifies the value of the assignment parameter.

Status code: 400

Table 4-133 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-134 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

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Status code: 404

Table 4-135 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-136 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

None

Example Response

Status code: 200

Operation succeeded.

- Example 1

  ```
  "5fb76a240f2daf0b9662a04d"
  ```

- Example 2

  ```
  "volume-inuse-check"
  ```

- Example 3

  ```
  "The EVS disk is non-compliant if it is unmounted"
  ```

- Example 4

  ```
  {
    "region_id" : null,
    "resource_provider" : "evs",
    "resource_type" : "volumes",
    "resource_id" : null,
    "tag_key" : null,
    "tag_value" : null
  }
  ```

- Example 5

  ```
  "Enabled"
  ```

- Example 6

  ```
  "2020-11-20T07:03:00"
  ```

- Example 7

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```
"2020-11-20T07:03:00"
```

- Example 8

```
"5fa36558aa1e6afc05a3d0a7"
```

- Example 9

```
{ }
```

Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	No assignments found.
500	Internal server error.

Error Codes

See **Error Codes**.

4.6.7 Deleting an Assignment

Function

This API is used to delete an assignment based on its ID.

URI

DELETE /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}

Table 4-137 Path parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**
policy_assignment_id	Yes	String	Specifies the assignment ID. Maximum length: **36**

Request Parameters

None

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Response Parameters

Status code: 400

Table 4-138 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-139 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-140 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-141 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

None

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Example Response

None

Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	No assignments found.
500	Internal server error.

Error Codes

See **Error Codes**.

4.6.8 Enabling an Assignment

Function

This API is used to enable an assignment based on its ID.

URI

POST /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}/enable

Table 4-142 Path parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**
policy_assignment_id	Yes	String	Specifies the assignment ID. Maximum length: **36**

Request Parameters

None

Response Parameters

Status code: 400

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Table 4-143 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-144 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-145 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-146 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

None

Example Response

None

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Status Codes

Status Code	Description
202	Operation accepted.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	Resource not found.
500	Internal server error.

Error Codes

See **Error Codes**.

4.6.9 Disabling an Assignment

Function

This API is used to disable an assignment based on its ID.

URI

POST /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}/disable

Table 4-147 Path parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**
policy_assignment_id	Yes	String	Specifies the assignment ID. Maximum length: **36**

Request Parameters

None

Response Parameters

Status code: 400

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Table 4-148 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-149 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-150 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-151 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

None

Example Response

None

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Status Codes

Status Code	Description
202	Operation accepted.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	No assignments found.
500	Internal server error.

Error Codes

See **Error Codes**.

4.6.10 Running a Resource Compliance Evaluation

Function

This API is used to run a resource compliance evaluation based on the assignment ID.

URI

POST /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}/policy-states/run-evaluation

Table 4-152 Path parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**
policy_assignment_id	Yes	String	Specifies the assignment ID. Maximum length: **36**

Request Parameters

None

Response Parameters

Status code: 400

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Table 4-153 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-154 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-155 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-156 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

None

Example Response

None

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Status Codes

Status Code	Description
202	Operation accepted.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	No assignments found.
500	Internal server error.

Error Codes

See **Error Codes**.

4.6.11 Querying the Evaluation Status of an Assignment

Function

This API is used to query the evaluation status of an assignment based on the assignment ID.

URI

GET /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}/policy-states/evaluation-state

Table 4-157 Path parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**
policy_assignment_id	Yes	String	Specifies the assignment ID. Maximum length: **36**

Request Parameters

None

Response Parameters

Status code: 200

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Table 4-158 Response body parameters

Parameter	Type	Description
policy_assignment_id	String	Specifies the assignment ID.
state	String	Specifies the evaluation status.
start_time	String	Specifies the evaluation start time.
end_time	String	Specifies the evaluation end time.
error_message	String	Specifies the error message for the evaluation failure.

Status code: 400

Table 4-159 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-160 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-161 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

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Table 4-162 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

None

Example Response

Status code: 200

Operation succeeded.

- Example 1

```
"Succeeded"
```

- Example 2

```
"5fb6292765ee7f5e92a7ca4b"
```

- Example 3

```
"2020-11-19T08:13:27.441Z"
```

- Example 4

```
"2020-11-19T08:13:27.485Z"
```

- Example 5

```
null
```

Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Failed to authenticate the user or the user does not have the operation permission.
404	No assignments found.
500	Internal server error.

Error Codes

See **Error Codes**.

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4.6.12 Querying the Compliance Result of a Resource

Function

This API is used to query the compliance result of a resource based on the resource ID.

URI

GET /v1/resource-manager/domains/{domain_id}/resources/{resource_id}/policy-states

Table 4-163 Path parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**
resource_id	Yes	String	Specifies the resource ID. Maximum length: **256**

Table 4-164 Query parameters

Parameter	Mandatory	Type	Description
compliance_state	No	String	Specifies the compliance state. Maximum length: **16**
limit	No	Integer	Specifies the maximum number of records to return. Minimum value: **1** Maximum value: **200**
marker	No	String	Specifies the pagination parameter. You can use the **marker** value returned in the previous request as the number of the first page of records to return in this request. Minimum length: **4** Maximum length: **400**

Request Parameters

None

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Response Parameters

Status code: 200

Table 4-165 Response body parameters

Parameter	Type	Description
value	Array of **PolicyState** objects	Specifies the returned compliance result.
page_info	**PageInfo** object	Specifies the pagination object.

Table 4-166 PolicyState

Parameter	Type	Description
domain_id	String	Specifies the user ID.
region_id	String	Specifies the ID of the region the resource belongs to.
resource_id	String	Specifies the resource ID.
resource_name	String	Specifies the resource name.
resource_provider	String	Specifies the cloud service name.
resource_type	String	Specifies the resource type.
compliance_state	String	Specifies the compliance state.
policy_assignment_id	String	Specifies the assignment ID.
policy_assignment_name	String	Specifies the assignment name.
policy_definition_id	String	Specifies the policy ID.
evaluation_time	String	Specifies the compliance state evaluation time.

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Table 4-167 PageInfo

Parameter	Type	Description
current_count	Integer	Specifies the resource quantity on the current page. Minimum value: **0** Maximum value: **200**
next_marker	String	Specifies the **marker** value of the next page.

Status code: 400

Table 4-168 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-169 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-170 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

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Table 4-171 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

None

Example Response

Status code: 200

Operation succeeded.

- Example 1

```
[ {
  "id" : "5fb63462251974211b3e55ac",
  "domain_id" : "059b5c937100d3e40ff0c00a7675a0a0",
  "region_id" : "cn-north-4",
  "resource_id" : "010d95bd-87cd-4f22-ac00-db7fba7d927e",
  "resource_name" : "ecs-cc-image-test1",
  "resource_provider" : "ecs",
  "resource_type" : "cloudservers",
  "compliance_state" : "NonCompliant",
  "policy_assignment_id" : "5fb618a726a24c53767fa049",
  "policy_assignment_name" : "policy-assignemnt-test1",
  "policy_definition_id" : "5fa265c0aa1e6afc05a0ff07",
  "evaluation_time" : 1605776482523
} ]
```

- Example 2

```
{
  "current_count" : 1,
  "next_marker" : null
}
```

Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	Resource not found.
500	Internal server error.

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Error Codes

See **Error Codes**.

4.6.13 Querying the Compliance Result of an Assignment

Function

This API is used to query all resource compliance results based on an assignment ID.

URI

GET /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}/policy-states

Table 4-172 Path parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**
policy_assignment_id	Yes	String	Specifies the assignment ID. Maximum length: **36**

Table 4-173 Query parameters

Parameter	Mandatory	Type	Description
compliance_state	No	String	Specifies the compliance state. Maximum length: **16**
resource_id	No	String	Specifies the resource ID. Maximum length: **256**
resource_name	No	String	Specifies the resource name. Maximum length: **256**
limit	No	Integer	Specifies the maximum number of records to return. Minimum value: **1** Maximum value: **200**

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Parameter	Mandatory	Type	Description
marker	No	String	Specifies the pagination parameter. You can use the **marker** value returned in the previous request as the number of the first page of records to return in this request. Minimum length: **4** Maximum length: **400**

Request Parameters

None

Response Parameters

Status code: 200

Table 4-174 Response body parameters

Parameter	Type	Description
value	Array of **PolicyState** objects	Specifies the returned compliance result.
page_info	**PageInfo** object	Specifies the pagination object.

Table 4-175 PolicyState

Parameter	Type	Description
domain_id	String	Specifies the user ID.
region_id	String	Specifies the ID of the region the resource belongs to.
resource_id	String	Specifies the resource ID.
resource_name	String	Specifies the resource name.
resource_provider	String	Specifies the cloud service name.
resource_type	String	Specifies the resource type.

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Parameter	Type	Description
compliance_state	String	Specifies the compliance state.
policy_assignment_id	String	Specifies the assignment ID.
policy_assignment_name	String	Specifies the assignment name.
policy_definition_id	String	Specifies the policy ID.
evaluation_time	String	Specifies the compliance state evaluation time.

Table 4-176 PageInfo

Parameter	Type	Description
current_count	Integer	Specifies the resource quantity on the current page. Minimum value: **0** Maximum value: **200**
next_marker	String	Specifies the **marker** value of the next page.

Status code: 400

Table 4-177 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

Table 4-178 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

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Status code: 404

Table 4-179 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-180 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

None

Example Response

Status code: 200

Operation succeeded.

- Example 1

```
[ {
  "id" : "5fb63462251974211b3e55ac",
  "domain_id" : "059b5c937100d3e40ff0c00a7675a0a0",
  "region_id" : "cn-north-4",
  "resource_id" : "010d95bd-87cd-4f22-ac00-db7fba7d927e",
  "resource_name" : "ecs-cc-image-test1",
  "resource_provider" : "ecs",
  "resource_type" : "cloudservers",
  "compliance_state" : "NonCompliant",
  "policy_assignment_id" : "5fb618a726a24c53767fa049",
  "policy_assignment_name" : "policy-assignemnt-test1",
  "policy_definition_id" : "5fa265c0aa1e6afc05a0ff07",
  "evaluation_time" : 1605776482523
} ]
```

- Example 2

```
{
  "current_count" : 1,
  "next_marker" : null
}
```


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Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	No assignments found.
500	Internal server error.

Error Codes

See **Error Codes**.

4.6.14 Querying All Compliance Results of Resources Under a User

Function

This API is used to query all compliance results of resources under a user.

URI

GET /v1/resource-manager/domains/{domain_id}/policy-states

Table 4-181 Path parameter

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies the account ID. Maximum length: **36**

Table 4-182 Query parameters

Parameter	Mandatory	Type	Description
compliance_state	No	String	Specifies the compliance state. Maximum length: **16**
resource_id	No	String	Specifies the resource ID. Maximum length: **256**
resource_name	No	String	Specifies the resource name. Maximum length: **256**

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Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the maximum number of records to return. Minimum value: **1** Maximum value: **200**
marker	No	String	Specifies the pagination parameter. You can use the **marker** value returned in the previous request as the number of the first page of records to return in this request. Minimum length: **4** Maximum length: **400**

Request Parameters

None

Response Parameters

Status code: 200

Table 4-183 Response body parameters

Parameter	Type	Description
value	Array of **PolicyState** objects	Specifies the returned compliance result.
page_info	**PageInfo** object	Specifies the pagination object.

Table 4-184 PolicyState

Parameter	Type	Description
domain_id	String	Specifies the user ID.
region_id	String	Specifies the ID of the region the resource belongs to.
resource_id	String	Specifies the resource ID.
resource_name	String	Specifies the resource name.

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Parameter	Type	Description
resource_provider	String	Specifies the cloud service name.
resource_type	String	Specifies the resource type.
compliance_state	String	Specifies the compliance state.
policy_assignment_id	String	Specifies the assignment ID.
policy_assignment_name	String	Specifies the assignment name.
policy_definition_id	String	Specifies the policy ID.
evaluation_time	String	Specifies the compliance state evaluation time.

Table 4-185 PageInfo

Parameter	Type	Description
current_count	Integer	Specifies the resource quantity on the current page. Minimum value: **0** Maximum value: **200**
next_marker	String	Specifies the **marker** value of the next page.

Status code: 400

Table 4-186 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 403

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Table 4-187 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 404

Table 4-188 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 500

Table 4-189 Response body parameters

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Example Request

None

Example Response

Status code: 200

Operation succeeded.

- Example 1

```
[ {
  "id" : "5fb63462251974211b3e55ac",
  "domain_id" : "059b5c937100d3e40ff0c00a7675a0a0",
  "region_id" : "cn-north-4",
  "resource_id" : "010d95bd-87cd-4f22-ac00-db7fba7d927e",
  "resource_name" : "ecs-cc-image-test1",
  "resource_provider" : "ecs",
  "resource_type" : "cloudservers",
  "compliance_state" : "NonCompliant",
  "policy_assignment_id" : "5fb618a726a24c53767fa049",
  "policy_assignment_name" : "policy-assignemnt-test1",
  "policy_definition_id" : "5fa265c0aa1e6afc05a0ff07",
  "evaluation_time" : 1605776482523
} ]
```


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- Example 2

```
{
  "current_count" : 1,
  "next_marker" : null
}
```

Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameter.
403	Authentication failed or you do not have the operation permission.
404	Resource not found.
500	Internal server error.

Error Codes

See **Error Codes**.

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5 Permissions Policies and Supported Actions

5.1 Permissions Policies and Supported Actions

This chapter describes fine-grained permissions management for your RMS. If your HUAWEI CLOUD account does not need individual IAM users, then you may skip over this chapter.

A policy is a set of permissions defined in JSON format. By default, new IAM users do not have permissions assigned. You need to add a user to one or more groups, and attach permissions policies or roles to these groups. Users inherit permissions from the groups to which they are added and can perform specified operations on cloud services based on the permissions.

Based on the granularity of authorization, permissions are classified into **roles** and **policies**.

- Roles are a type of service-based, coarse-grained authorization mechanism that defines permissions related to user 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

Policy-based authorization is useful if you want to allow or deny the access to an API.

An account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. The permissions required for calling an API are determined by the actions supported by the API. Only users who have been granted permissions allowing the actions can call the API successfully. For example, if an IAM user wants to query a resource recorder using an API, the user must have the permissions that allow the **eps:trackerConfig:get** action.

Supported Actions

Operations supported by policies are specific to APIs. The following are common concepts related to policies:

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- Permissions: Statements in a policy that allow or deny certain operations.
- APIs: REST APIs that can be called by a user who has been granted specific permissions.
- Actions: Specific operations that are allowed or denied.
- Related actions: Actions on which a specific action depends to take effect. When assigning permissions for the action to a user, you also need to assign permissions for the related actions.
- IAM projects or enterprise projects: Type of projects in which policies can be used to grant permissions. A policy can be applied to IAM projects, enterprise projects, or both. Policies that contain actions for both IAM and enterprise projects can be used and take effect for both IAM and Enterprise Management. Policies that only contain actions for IAM projects can be used and only take effect for IAM. For details about the differences between IAM and enterprise projects, see **Differences Between IAM Projects and Enterprise Projects**.

  RMS supports the following actions that can be defined in custom policies:

  My Resources includes actions supported by all resource APIs, such as the APIs for viewing resource history and listing resources of a specific type.

  Resource Recorder includes actions supported by resource recorder APIs, such as the APIs for querying, creating, and deleting the resource recorder.

  Resource Compliance includes actions supported by all resource compliance APIs, such as the APIs for adding, modifying, and deleting assignments.

  NOTE

  The check mark (√) indicates that an action takes effect. The cross mark (x) indicates that an action does not take effect.

5.2 My Resources

Permission	API	Action	IAM Project	Enterprise Project
Viewing change records of a resource	GET /v1/resource-manager/domains/{domain_id}/resources/{resource_id}/history	rms:resources:getHistory	N/A	N/A
Querying resources of a specific type	GET /v1/resource-manager/domains/{domain_id}/provider/{provider}/type/{type}/resources	rms:resources:list	N/A	N/A

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Permission	API	Action	IAM Project	Enterprise Project
Querying a resource	GET /v1/resource-manager/domains/{domain_id}/provider/{provider}/type/{type}/resources/{resource_id}	rms:resources:get	N/A	N/A

5.3 Resource Recorder

Permission	API	Action	IAM Project	Enterprise Project
Querying the resource recorder	GET /v1/resource-manager/domains/{domain_id}/tracker-config	rms:trackerConfig:get	N/A	N/A
Creating or modifying the resource recorder	PUT /v1/resource-manager/domains/{domain_id}/tracker-config	rms:trackerConfig:put	N/A	N/A
Deleting the resource recorder	DELETE /v1/resource-manager/domains/{domain_id}/tracker-config	rms:trackerConfig:delete	N/A	N/A

5.4 Resource Compliance

Permission	API	Action	IAM Project	Enterprise Project
Querying all built-in policies	GET /v1/resource-manager/policyDefinitions	rms:policyDefinitions:get	N/A	N/A
Querying a built-in policy	GET /v1/resource-manager/policy-definitions/{policy_definition_id}	rms:policyDefinitions:get	N/A	N/A

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Permission	API	Action	IAM Project	Enterprise Project
Modifying an assignment	PUT /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}	rms:policyAssignments:update	N/A	N/A
Enabling an assignment	POST /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}/enable	rms:policyAssignments:update	N/A	N/A
Disabling an assignment	POST /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}/disable	rms:policyAssignments:update	N/A	N/A
Adding an assignment	PUT /v1/resource-manager/domains/{domain_id}/policy-assignments	rms:policyAssignments:create	N/A	N/A
Querying all assignments	GET /v1/resource-manager/domains/{domain_id}/policy-assignments	rms:policyAssignments:get	N/A	N/A
Querying an assignment	GET /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}	rms:policyAssignments:get	N/A	N/A
Deleting an assignment	DELETE /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}	rms:policyAssignments:delete	N/A	N/A
Querying the evaluation status of an assignment	GET /v1/resource-manager/domains/{domain_id}/policy-states/evaluation-state	rms:policyStates:get	N/A	N/A

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Permission	API	Action	IAM Project	Enterprise Project
Querying the compliance result of a resource	GET /v1/resource-manager/domains/{domain_id}/resources/{resource_id}/policy-states	rms:policyStates:get	N/A	N/A
Querying all compliance results of resources under a user	GET /v1/resource-manager/domains/{domain_id}/policy-states	rms:policyStates:get	N/A	N/A
Querying the compliance result of an assignment	GET /v1/resource-manager/domains/{domain_id}/policy-assignments/{policy_assignment_id}/policy-states	rms:policyStates:get	N/A	N/A
Running a resource compliance evaluation	POST /v1/resource-manager/domains/{domain_id}/policy-states/run-evaluation	rms:policyStates:triggerEvaluation	N/A	N/A

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6 Appendixes

6.1 Error Codes

If an error code starting with **APIGW** is returned after you call an API, rectify the fault by referring to the instructions provided in **Error Codes**.

Status Code	Error Code	Error Message	Description	Solution
400	RMS.00010001	some region is restricted to access	Invalid region.	Specify a valid region.
400	RMS.00010002	resource type invalid	Invalid value for **resource type**.	Specify a valid value for **resource type**.
400	RMS.00010003	service invalid	Invalid value for **service**.	Specify a valid value for **service**.
400	RMS.00010004	invalid parameter	Invalid value for **parameter**.	Specify a valid value for **parameter**.
400	RMS.00010007	The max length of domainId must be less than or equal to 36	Invalid **domainId** length. Max length: 36 characters	Specify a valid value for **domainId**.
400	RMS.00010008	domainId is illegal	Invalid value for **domainId**.	Specify a valid value for **domainId**.

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Status Code	Error Code	Error Message	Description	Solution
400	RMS.00010009	The max length of id must be less than or equal to 256	Invalid **id** length. Max length: 256 characters	Enter 1 to 256 characters for **id**.
400	RMS.00010010	id is illegal	Invalid value for **id**.	Specify a valid value for **id**.
400	RMS.00010011	The max length of name must be less than or equal to 64	Invalid **name** length. Max length: 64 characters	Enter 1 to 64 characters for **name**.
400	RMS.00010012	name is illegal	Invalid value for **name**.	Specify a valid value for **name**.
400	RMS.00010013	The size of resource type array must be between 1 and 100	Invalid number of resource types. Value range: 1–100	Enter 1 to 100 resource types.
400	RMS.00010014	The max length of resource type must be less than or equal to 40	Invalid **resource type** length. Max length: 40 characters	Enter 1 to 40 characters for **resource type**.
400	RMS.00010015	resource type is illegal	Invalid value for **resource type**.	Specify a valid value for **resource type**.
400	RMS.00010016	The size of region id array must be between 1 and 10	Invalid number of region IDs. Value range: 1–10	Enter 1 to 10 region IDs.
400	RMS.00010017	The max length of region id must be less than or equal to 36	Invalid **region id** length. Max length: 36 characters	Enter 1 to 36 characters for **region id**.
400	RMS.00010018	region id is illegal	Invalid value for **region id**.	Specify a valid value for **region id**.

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Status Code	Error Code	Error Message	Description	Solution
400	RMS.00010019	The size of enterprise project array must be between 1 and 10	Invalid number of enterprise projects. Value range: 1–10	Enter 1 to 10 enterprise projects.
400	RMS.00010020	enterprise project is invalid	Invalid value for **enterprise project**.	Specify a valid value for **enterprise project**.
400	RMS.00010021	The max length of project id array must be between 1 and 10	Invalid number of project IDs. Value range: 1–10	Enter 1 to 10 project IDs.
400	RMS.00010022	The max length of project id must be less than or equal to 36	Invalid **project id** length. Max length: 36 characters	Enter 1 to 36 characters for **project id**.
400	RMS.00010023	project id is illegal	Invalid value for **project id**.	Specify a valid value for **project id**.
400	RMS.00010024	The minimum value of limit must be greater than or equal to 1	The minimum value of **limit** must be equal to or greater than 1.	Specify a valid value for **limit**.
400	RMS.00010025	The maximum value of limit must be less than or equal to 200	The maximum value of **limit** must be equal to or smaller than 200.	Specify a valid value for **limit**.
400	RMS.00010026	The minimum value of offset must be greater than or equal to 1	The minimum value of **offset** must be equal to or greater than 1.	Specify a valid value for **offset**.

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Status Code	Error Code	Error Message	Description	Solution
400	RMS.00010027	The maximum value of offset must be less than or equal to 1000	The maximum value of **offset** must be equal to or smaller than 1000.	Specify a valid value for **offset**.
400	RMS.00010028	The number of tag keys must be between 1 and 5	Invalid number of tag keys.	Enter 1 to 5 tag keys.
400	RMS.00010029	The length of a tag key must be less than or equal to 36	Invalid **tag key** length. Max length: 36 characters	Enter 1 to 36 characters for **tag key**.
400	RMS.00010030	The number of values in a tag key must be less than or equal to 5	The number of values for a tag key must be equal to or smaller than 5.	Specify a valid number of tag key values.
400	RMS.00010031	The length of a tag value must be less than or equal to 43	Invalid **tag value** length. Max length: 43 characters	Enter 1 to 43 characters for **tag value**.
400	RMS.00010032	Tag value is illegal	Invalid value for **Tag value**.	Specify a valid value for **Tag value**.
400	RMS.00010033	Tag key is illegal	Invalid value for **Tag key**.	Specify a valid value for **Tag key**.
400	RMS.00010034	marker is illegal	Invalid value for **marker**.	Specify a valid value for **marker**.
400	RMS.00010035	The length of marker must be between 4 and 400	Invalid **marker** length. Value range: 4–400 characters	Enter 4 to 400 characters for **marker**.

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Status Code	Error Code	Error Message	Description	Solution
400	RMS.00010036	The minimum value of limit must be greater than or equal to 1	The minimum value of **limit** must be equal to or greater than 1.	Specify a valid **limit** value.
400	RMS.00010037	The maximum value of limit must be less than or equal to 200	The maximum value of **limit** must be equal to or smaller than 200.	Specify a valid **limit** value.
400	RMS.00010038	The minimum value of offset must be greater than or equal to 1	The minimum value of **offset** must be equal to or greater than 1.	Specify a valid value for **offset**.
400	RMS.00010039	The maximum value of offset must be less than or equal to 1000	The maximum value of **offset** must be equal to or smaller than 1000.	Specify a valid value for **offset**.
400	RMS.00010040	The max length of auth action must be less than or equal to 64	Invalid **auth action** length. Max length: 64 characters	Enter 1 to 64 characters for **auth action**.
400	RMS.00010041	policy assignment id is illegal	Invalid value for **policy assignment id**.	Specify a valid value for **policy assignment id**.
400	RMS.00010042	policy definition id is illegal	Invalid value for **policy definition id**.	Specify a valid value for **policy definition id**.
400	RMS.00010043	The max length of policy assignment id must be less than or equal to 36	Invalid **policy assignment id** length. Max length: 36 characters	Enter 1 to 36 characters for **policy assignment id**.

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Status Code	Error Code	Error Message	Description	Solution
400	RMS.00010044	The max length of policy definition id must be less than or equal to 36	Invalid **policy definition id** length. Max length: 36 characters	Enter 1 to 36 characters for **policy definition id**.
400	RMS.00010045	The max length of name must be less than or equal to 64	Invalid **name** length. Max length: 64 characters	Enter 1 to 64 characters for **name**.
400	RMS.00010046	name is illegal	Invalid value for **name**.	Specify a valid value for **name**.
400	RMS.00010047	The max length of keyword must be less than or equal to 64	Invalid **keyword** length. Max length: 64 characters	Enter 1 to 64 characters for **keyword**.
400	RMS.00010048	keyword is illegal	Invalid value for **keyword** .	Specify a valid value for **keyword**.
400	RMS.00010049	The max length of compliance state must be less than or equal to 16	Invalid **compliance state** length. Max length: 16 characters	Enter 1 to 16 characters for **compliance state**.
400	RMS.00010050	compliance state is illegal	Invalid value for **compliance state**.	Specify a valid value for **compliance state**.
400	RMS.00010051	The max length of policy assignment state must be less than or equal to 16	Invalid **policy assignment state** length. Max length: 16 characters	Enter 1 to 16 characters for **policy assignment state**.
400	RMS.00010052	policy assignment state is illegal	Invalid value for **policy assignment state**.	Specify a valid value for **policy assignment state**.

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Status Code	Error Code	Error Message	Description	Solution
400	RMS.00010053	X-Language header is invalid	Invalid value for **X-Language header**.	Specify a valid value for **X-Language header**.
403	RMS.00010006	access denied	Access denied.	Check whether you have the required permissions.
404	RMS.00010005	resource not found	Resource not found.	Check whether the resource exists.
500	RMS.INTERNAL.ERROR	Internal server error occurred	Internal service error.	Try again later or contact customer service.

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7 Common Parameters

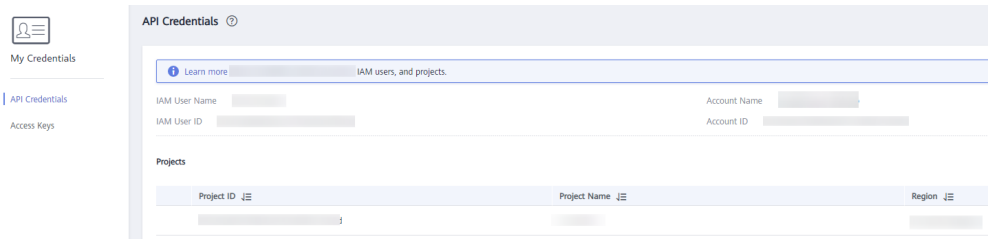
7.1 Obtaining an Account ID

An account ID is required for some URLs when an API is called. To obtain an account ID, perform the following operations:

1. Sign up and log in to the management console.
2. Hover the mouse over the username and select **My Credentials** from the drop-down list.

   On the **API Credentials** page, view **Account ID**.

Figure 7-1 Obtaining an account ID



7.2 Status Codes

- Normal

Returned Value	Description
200 OK	The results of GET and PUT operations are returned as expected.
201 Created	The results of the POST operation are returned as expected.
202 Accepted	The request has been accepted for processing.

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Returned Value	Description
204 No Content	The results of the DELETE operation are returned as expected.

- Abnormal

Returned Value	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter a username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server cannot find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server cannot be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication so that the request can be processed.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of a service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request. The service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

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7.3 Obtaining a Project ID

Scenarios

A project ID is required for some URLs when an API is called. Therefore, you need to obtain a project ID in advance. Two methods are available:

- **Obtain the Project ID by Calling an API**
- **Obtain the Project ID from the Console**

Obtain the Project ID by Calling an API

You can obtain the project ID by calling the API used to **query for projects based on specified criteria**.

The API used to obtain a project ID is GET https://{Endpoint}/v3/projects. {Endpoint} is the IAM endpoint and can be obtained from **Regions and Endpoints**. For details about API authentication, see **Authentication**.

The following is an example response. The value of **id** is the project ID.

```
{
    "projects": [
        {
            "domain_id": "65382450e8f64ac0870cd180d14e684b",
            "is_domain": false,
            "parent_id": "65382450e8f64ac0870cd180d14e684b",
            "name": "project_name",
            "description": "",
            "links": {
                "next": null,
                "previous": null,
                "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
            },
            "id": "a4a5d4098fb4474fa22cd05f897d6b99",
            "enabled": true
        }
    ],
    "links": {
        "next": null,
        "previous": null,
        "self": "https://www.example.com/v3/projects"
    }
}
```

Obtain a Project ID from the Console

To obtain a project ID from the console, perform the following operations:

1. Log in to the management console.
2. Click the username and select **My Credentials** from the drop-down list.
   On the **API Credentials** page, view the project ID in the project list.

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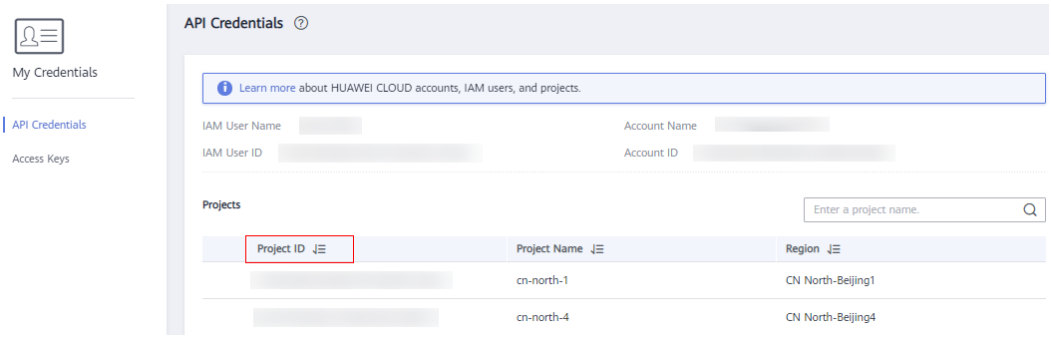
Figure 7-2 Viewing the project ID



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8 Change History

Released On	Description
2020-12-25	This issue is the second official release, which incorporates the following changes: • Added error code RMS.00010053. • Added **Querying All Resources Under Your Account** . • Added **Querying Regions Visible to a User** in **Region Management**.
2020-11-30	This issue is the first official release.

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