Config

API Reference

Issue 01

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1 Before You Start

1.1 Introduction

Config allows you to manage your resources centrally, such as viewing or querying your resources.

This document describes the Config APIs. Parameter description and examples are provided. You can use provided APIs to perform operations on Config. For details about all supported operations, see **API Overview**.

If you plan to access Config through an API, ensure that you are familiar with Config concepts. For details, see **What Is Config**.

1.2 API Calling

Config 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. The endpoint of Config is **rms.myhuaweicloud.eu**.

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

- User

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

The account name, username, and password will be required for API authentication.

- 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. You can grant users permissions by project, so that authorized users can access all resources in the project. If you need more refined access control, create subprojects under a default project and create resources in subprojects. Then you can assign users the permissions required to access only the resources in the specific subprojects.

- Enterprise project

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

  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 Config 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 Config 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.

Parameter	Type	Mandatory	Description
marker	String	No	Specifies the **marker** value returned in the last pagination query. If **marker** is invalid, error code 400 will be returned.

2 API Overview

Table 2-1 API description

API	Description
Resource Query	Query resources and listing cloud services.
Resource Relationships	APIs for querying resource relationships

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 region **Dublin** is **iam.myhuaweicloud.eu**.
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**.

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 **Dublin** region, obtain the endpoint of IAM (**iam.myhuaweicloud.eu**) for this region and the **resource-path** (**/v3/auth/tokens**) in the URI of the API used to **obtain a user token**. Then, construct the URI as follows:

```
https://iam.myhuaweicloud.eu/v3/auth/tokens
```

NOTE

To simplify the URI display in this document, each API is provided only with a **resource-path** and a request method. The **URI-scheme** 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.
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.myhuaweicloud.eu/v3/auth/tokens
```


Request Header

You can also add additional header fields to a request, such as the fields required by a specified URI or HTTP method. For example, to request 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
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

Parameter	Description	Mandatory	Example Value
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.myhuaweicloud.eu/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 (for example, JSON or XML) as specified in the **Content-Type** header field. The request body transfers content except the request header.

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

In the case of the API used to **obtain a user token**, the request parameters and parameter description can be obtained from the API request. The following provides an example request with a body included. Replace *username*, *domainname*, *$ADMIN_PASS* (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.myhuaweicloud.eu/v3/auth/tokens
Content-Type: application/json
```



```
{
    "auth": {
        "identity": {
            "methods": [
                "password"
            ],
            "password": {
                "user": {
                    "name": "username",
                    "password": "$ADMIN_PASS",     //You are advised to store it in ciphertext in the configuration file or an environment variable and decrypt it when needed to ensure security.
                    "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 authentication: Requests are authenticated using tokens.
- AK/SK authentication: Requests are encrypted using AK/SK pairs. AK/SK authentication is recommended because it is more secure than token authentication.

Token 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. You can obtain a token by calling the **Obtaining a User Token** API.

A cloud service can be deployed as either a project-level service or global service.

- For a project-level service, you need to obtain a project-level token. When you call the API, set **auth.scope** in the request body to **project**.
- For a global service, you need to obtain a global token. When you call the API, set **auth.scope** in the request body to **domain**.

Config is a global service. When you call the API, set **auth.scope** in the request body to **domain**. For details about how to obtain the user token, see **Obtaining a User Token**.

```
{
    "auth": {
        "identity": {
            "methods": [
                "password"
            ],
            "password": {
                "user": {
                    "name": "username",   // IAM user name
                    "password": "********",  // IAM user password
                    "domain": {
                        "name": "domainname"  // Name of the account to which the IAM user belongs
                    }
                }
            }
        },
        "scope": {
            "domain": {
                "name": "xxxxxxxx"    // Tenant name
            }
        }
    }
}
```

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.eu-west-101.myhuaweicloud.com/v3/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

AK/SK Authentication

NOTE

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

In AK/SK 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, which is used in conjunction with an AK to sign requests cryptographically. It identifies a request sender and prevents the request from being modified.

In AK/SK authentication, you can use an AK/SK to sign requests based on the signature algorithm or 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.

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

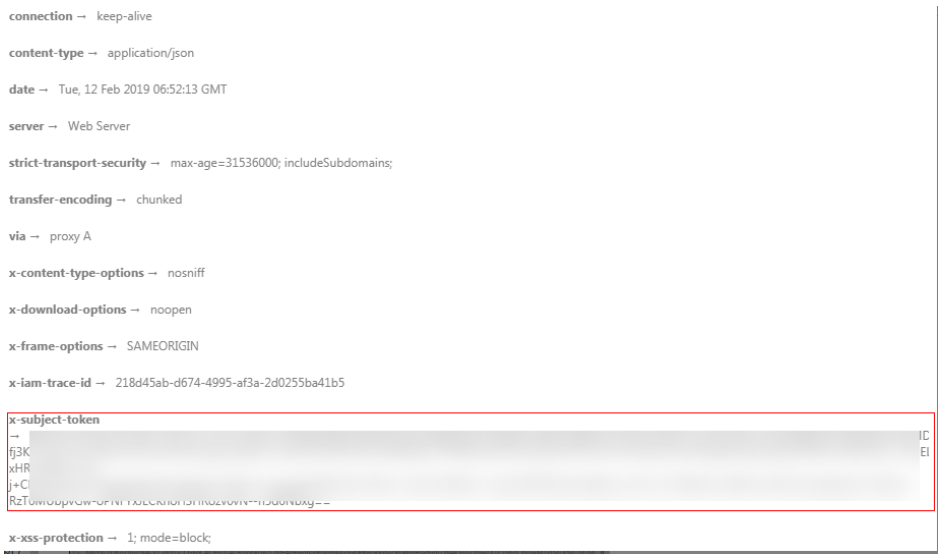
Similar to a request, a response also has a header, for example, **Content-Type**.

Figure 3-1 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.

NOTE

For security purposes, you are advised to set the token in ciphertext in configuration files or environment variables and decrypt it when using it.

Figure 3-1 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 a structured format (for example, JSON or XML) as specified in the **Content-Type** header field. The response body transfers content except the response header.

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


```
{
    "token": {
        "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 request message format is invalid.",
    "error_code": "IMG.0001"
}
```

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

4 APIs

4.1 Resource Query

4.1.1 Querying Resources of a Specific Type

Function

This API is used to query specified resources.To call this API, you must have the **rms:resources:list** permission. For example,if you need to query the ecs.cloudservers resource type, set the **provider** to **ecs**, and **type** to **cloudservers** in the API request. For details about the cloud services (provider) and resource types (type), see the Supported Services and Resource Types section in the appendix.

Calling Method

For details, see **Calling APIs**.

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 tags. Maximum: **36**
provider	Yes	String	Specifies the cloud service name. Maximum: **20**

Parameter	Mandatory	Type	Description
type	Yes	String	Specifies the resource type. Maximum: **32**

Table 4-2 Query Parameters

Parameter	Mandatory	Type	Description
region_id	No	String	Specifies the region ID. Maximum: **36**
ep_id	No	String	Specifies the enterprise project ID. Maximum: **36**
tag	No	Map<String,String>	Specifies the tag.
limit	No	Integer	Specifies the maximum number of records to return. Minimum: **1** Maximum: **200** Default: **200**
marker	No	String	Specifies the pagination parameter. Minimum: **4** Maximum: **400**

Request Parameters

Table 4-3 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	No	String	Specifies the invoker's token.
X-Security-Token	No	String	Security token (session token) for temporary security credentials. This parameter is mandatory when you make an API call using temporary security credentials.

Response Parameters

Status code: 200

Table 4-4 Response body parameters

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

Table 4-5 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 IaaS OpenStack.
project_name	String	Specifies the project name in IaaS OpenStack.
ep_id	String	Specifies the enterprise project ID.
ep_name	String	Specifies the name of an enterprise project.
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 a resource operation.
tags	Map<String,String>	Specifies the resource tag.
properties	Map<String,Object>	Specifies the detailed properties of the resource.

Table 4-6 PageInfo

Parameter	Type	Description
current_count	Integer	Specifies the resource quantity on the current page. Minimum: **0** Maximum: **200**
next_marker	String	Specifies the **marker** value of the next page. Minimum: **4** Maximum: **400**

Status code: 400

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: 403

Table 4-8 Response body parameters

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

Status code: 500

Table 4-9 Response body parameters

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

Example Requests

Querying all VMs in current account


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

Example Responses

Status code: 200

Operation succeeded.


```
{
  "page_info" : {
    "current_count" : 2,
    "next_marker" : null
  },
  "resources" : [ {
    "checksum" : "89ca775e88e04b2c200ccbf9e219ad0d7da42e3f446e5c953d443288134eec41",
    "created" : "2020-02-21T08:41:05Z",
    "ep_id" : "0",
    "ep_name" : "default",
    "id" : "7ffd8564-d88a-4bc9-ab51-d8b79a57d0e6",
    "name" : "ecs-test-1",
    "project_id" : "059b5e0a2500d5552fa1c00adada8c06",
    "project_name" : "project_name",
    "properties" : {
      "status" : "ACTIVE"
    },
    "provider" : "ecs",
    "provisioning_state" : "Succeeded",
    "region_id" : "regionid1",
    "tags" : {
      "use" : "test"
    },
    "type" : "cloudServers",
    "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" : "ecs-test-2",
    "project_id" : "059b5e0a2500d5552fa1c00adada8c06",
    "project_name" : "project_name_1",
    "properties" : {
      "status" : "ACTIVE"
    },
    "provider" : "ecs",
    "provisioning_state" : "Succeeded",
    "region_id" : "regionid1",
    "tags" : {
      "use" : "test1"
    },
    "type" : "cloudServers",
    "updated" : "2020-08-11T11:55:08Z"
  } ]
}
```


Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameters.

Status Code	Description
403	User authentication failed.
500	Sever error.

Error Codes

See **Error Codes**.

4.1.2 Listing Cloud Services

Function

Querying cloud services, resources, and regions

Calling Method

For details, see **Calling APIs**.

URI

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

Table 4-10 Path Parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies tags. Maximum: **36**

Table 4-11 Query Parameters

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

Parameter	Mandatory	Type	Description
track	No	String	Specifies whether resources are collected by default. **tracked** indicates that resources are collected by default, and **untracked** indicates that resources are not collected by default.

Request Parameters

Table 4-12 Request header parameters

Parameter	Mandatory	Type	Description
X-Language	No	String	Specifies the language of the information to return. The default name is **zh-cn**, which can be **zh-cn** and **en-us**. Default: **zh-cn**
X-Auth-Token	No	String	Specifies the invoker's token.
X-Security-Token	No	String	Security token (session token) for temporary security credentials. This parameter is mandatory when you make an API call using temporary security credentials.

Response Parameters

Status code: 200

Table 4-13 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.

Table 4-14 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 type. 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 4-15 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.
console_endpoint_id	String	Specifies the console endpoint ID.
console_list_url	String	Specifies the URL of the resource list page on the console.
console_detail_url	String	Specifies the URL of the resource details page on the console.
track	String	Specifies whether resources are collected by default. **tracked** indicates that resources are collected by default, and **untracked** indicates that resources are not collected by default.

Status code: 500

Table 4-16 Response body parameters

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

Example Requests

None

Example Responses

Status code: 200

Operation succeeded.


```
{
  "total_count" : 2,
  "resource_providers" : [ {
    "provider" : "ecs",
    "display_name" : "ECS",
    "category_display_name" : "Compute",
    "resource_types" : [ {
      "name" : "cloudservers",
      "display_name" : "Cloud servers",
      "global" : false,
      "regions" : [ "regionid1", "regionid2", "regionid3", "regionid4", "regionid5", "regionid6" ],
      "console_endpoint_id" : "ecm",
      "console_list_url" : "#/ecs/manager/vmList",
      "console_detail_url" : "#/ecs/manager/ecsDetail?instanceId={id}",
      "track" : "tracked"
    } ]
  }, {
    "provider" : "vpc",
    "display_name" : "VPC",
    "category_display_name" : "Networking",
    "resource_types" : [ {
      "name" : "vpcs",
      "display_name" : "VPC",
      "global" : false,
      "regions" : [ "regionid1", "regionid2", "regionid3", "regionid4", "regionid5", "regionid6" ],
      "console_endpoint_id" : "vpc",
      "console_list_url" : "#/vpcs",
      "console_detail_url" : "#/vpc/vpcmanager/vpcDetail/subnets?vpcId={id}",
      "track" : "tracked"
    }, {
      "name" : "bandwidths",
      "display_name" : "Shared bandwidth",
      "global" : false,
      "regions" : [ "regionid1", "regionid2", "regionid3", "regionid4", "regionid5", "regionid6" ],
      "console_endpoint_id" : "vpc",
      "console_list_url" : "#/vpc/vpcmanager/shareBandwidth",
      "console_detail_url" : "#/vpc/vpcmanager/shareBandwidth?bandwidthId={id}",
      "track" : "tracked"
    }, {
      "name" : "securityGroups",
      "display_name" : "Security groups",
      "global" : false,
      "regions" : [ "regionid1", "regionid2", "regionid5", "regionid6" ],
      "console_endpoint_id" : "vpc",
      "console_list_url" : "#/secGroups",
      "console_detail_url" : "#/vpc/vpcmanager/sgDetail/sgRules?instanceId={id}",
```



```
    "track" : "tracked"
   }, {
    "name" : "publicips",
    "display_name" : "EIPs",
    "global" : false,
    "regions" : [ "regionid1", "regionid2", "regionid3", "regionid4", "regionid6" ],
    "console_endpoint_id" : "vpc",
    "console_list_url" : "#/vpc/vpcmanager/eips",
    "console_detail_url" : "#/vpc/vpcmanager/eipDetailNew?eipId={id}",
    "track" : "tracked"
   } ]
  } ]
}
```


Status Codes

Status Code	Description
200	Operation succeeded.
500	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 is **ecs.cloudservers**, you must set **provider** to **ecs** and **type** to **cloudservers** in the request. For details about the cloud services (**provider**) and resource types (**type**), see "Appendix-Supported Services and Resource Types".

Calling Method

For details, see **Calling APIs**.

URI

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

Table 4-17 Path Parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies tags. Maximum: **36**

Parameter	Mandatory	Type	Description
provider	Yes	String	Specifies the cloud service name. Maximum: **20**
type	Yes	String	Specifies the resource type. Maximum: **32**
resource_id	Yes	String	Specifies the resource ID. Maximum: **512**

Request Parameters

Table 4-18 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	No	String	Specifies the invoker's token.
X-Security-Token	No	String	Security token (session token) for temporary security credentials. This parameter is mandatory when you make an API call using temporary security credentials.

Response Parameters

Status code: 200

Table 4-19 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 IaaS OpenStack.
project_name	String	Specifies the project name in IaaS OpenStack.
ep_id	String	Specifies the enterprise project ID.

Parameter	Type	Description
ep_name	String	Specifies the name of an enterprise project.
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 a resource operation.
tags	Map<String,String>	Specifies the resource tag.
properties	Map<String,Object>	Specifies the detailed properties of the resource.

Status code: 400

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: 403

Table 4-21 Response body parameters

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

Status code: 404

Table 4-22 Response body parameters

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

Status code: 500

Table 4-23 Response body parameters

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

Example Requests

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

Example Responses

Status code: 200

Operation succeeded.


```
{
  "id" : "00337e93-82d1-40ca-911f-07cff94587cc",
  "name" : "dev_machine",
  "provider" : "ecs",
  "type" : "cloudservers",
  "region_id" : "regionid4",
  "project_id" : "39c2af998c334ed6bcbb75b27318f7cc",
  "project_name" : "project_name",
  "ep_id" : "0",
  "ep_name" : "default",
  "checksum" : "3a0075409edb156a74e041b7479f0d5993be1d62b4ccd2af3a1dd01ec80c8b39",
  "created" : "2019-11-20T06:24:43Z",
  "updated" : "2020-07-17T08:30:52Z",
  "provisioning_state" : "Succeeded",
  "tags" : {
    "usage" : "Display"
  },
  "properties" : {
    "accessIpv4" : "",
    "hostName" : "dev-machine",
    "addresses" : [ {
      "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" : "regionid4a",
  "progress" : 0,
  "locked" : false,
  "OS-EXT-SRV-ATTR" : {
    "hostName" : "dev-machine",
    "kernelId" : "",
    "ramdiskId" : "",
    "reservationId" : "r-hhux9o7m",
    "instanceName" : "instance-0009cb50",
    "host" : "regionid4a-pod01.regionid4",
    "rootDeviceName" : "/dev/vda",
    "hypervisorHostName" : "nova001@2",
    "launchIndex" : 0
  },
  "status" : "ACTIVE"
 }
}
```


Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameters.
403	User authentication failed.
404	Resources not found.
500	Server error.

Error Codes

See **Error Codes**.

4.1.4 Querying All Resources Under Your Account

Function

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

Calling Method

For details, see **Calling APIs**.

URI

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

Table 4-24 Path Parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies tags. Maximum: **36**

Table 4-25 Query Parameters

Parameter	Mandatory	Type	Description
region_id	No	String	Specifies the region ID. Maximum: **36**
ep_id	No	String	Specifies the enterprise project ID. Maximum: **36**
type	No	String	Specifies the resource type in the format of **provider.type**. Maximum: **40**
limit	No	Integer	Specifies the maximum number of resources to return. Minimum: **1** Maximum: **200** Default: **100**
marker	No	String	Specifies the pagination parameter. Minimum: **4** Maximum: **400**

Parameter	Mandatory	Type	Description
id	No	String	Specifies the resource ID. Maximum: **512**
name	No	String	Specifies the resource name. Maximum: **256**
tags	No	Array	Specifies tags. The format is **key** or **key=value**. Array Length: **1 - 5**

Request Parameters

Table 4-26 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	No	String	Specifies the invoker's token.
X-Security-Token	No	String	Security token (session token) for temporary security credentials. This parameter is mandatory when you make an API call using temporary security credentials.

Response Parameters

Status code: 200

Table 4-27 Response body parameters

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

Table 4-28 ResourceEntity

Parameter	Type	Description
id	String	Specifies the resource ID.

Parameter	Type	Description
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 IaaS OpenStack.
project_name	String	Specifies the project name in IaaS OpenStack.
ep_id	String	Specifies the enterprise project ID.
ep_name	String	Specifies the name of an enterprise project.
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 a resource operation.
tags	Map<String,String>	Specifies the resource tag.
properties	Map<String,Object>	Specifies the detailed properties of the resource.

Table 4-29 PageInfo

Parameter	Type	Description
current_count	Integer	Specifies the resource quantity on the current page. Minimum: **0** Maximum: **200**
next_marker	String	Specifies the **marker** value of the next page. Minimum: **4** Maximum: **400**

Status code: 400

Table 4-30 Response body parameters

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

Status code: 403

Table 4-31 Response body parameters

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

Status code: 500

Table 4-32 Response body parameters

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

Example Requests

- 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 Responses

Status code: 200

Operation succeeded.

```
{
  "resources" : [ {
    "id" : "3ccd9191-6a5e-4939-a971-4652db18b370",
    "name" : "elb-265a",
    "provider" : "elb",
    "type" : "loadbalancers",
    "region_id" : "regionid1",
    "project_id" : "05498e12458025102ff5c0061a584a9f",
    "project_name" : "regionid1_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",
      "description" : ""
    }
  }, {
    "id" : "a6e56d05501944d3b2507ba506a43744",
    "name" : "console",
    "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",
      "domain_status" : "offline",
      "business_type" : "WEB",
      "modify_time" : 1579062181463,
      "cname" : "console"
    }
  } ],
  "page_info" : {
    "current_count" : 2,
    "next_marker" : null
  }
}
```


Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameters.
403	User Authentication failed.
500	Server error.

Error Codes

See **Error Codes**.

4.2 Resource Relationships

4.2.1 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**.

Calling Method

For details, see **Calling APIs**.

URI

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

Table 4-33 Path Parameters

Parameter	Mandatory	Type	Description
domain_id	Yes	String	Specifies tags. Maximum: **36**
resource_id	Yes	String	Specifies the resource ID. Maximum: **512**

Table 4-34 Query Parameters

Parameter	Mandatory	Type	Description
direction	Yes	String	Specifies the resource relationship direction.
limit	No	Integer	Specifies the maximum number of records to return. Minimum: **1** Maximum: **1000**
marker	No	String	Specifies the pagination parameter. Minimum: **4** Maximum: **400**

Request Parameters

Table 4-35 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	No	String	Specifies the invoker's token.
X-Security-Token	No	String	Security token (session token) for temporary security credentials. This parameter is mandatory when you make an API call using temporary security credentials.

Response Parameters

Status code: 200

Table 4-36 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 4-37 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 destination resource.
from_resource_id	String	Specifies the ID of the source resource.
to_resource_id	String	Specifies the ID of the destination resource.

Table 4-38 PageInfo

Parameter	Type	Description
current_count	Integer	Specifies the resource quantity on the current page. Minimum: **0** Maximum: **200**
next_marker	String	Specifies the **marker** value of the next page. Minimum: **4** Maximum: **400**

Status code: 400

Table 4-39 Response body parameters

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

Status code: 403

Table 4-40 Response body parameters

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

Status code: 404

Table 4-41 Response body parameters

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

Status code: 500

Table 4-42 Response body parameters

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

Example Requests

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

Example Responses

Status code: 200

Operation succeeded.

```
{
  "relations" : [ {
    "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"
  } ],
  "page_info" : {
    "current_count" : 5,
    "next_marker" : null
  }
}
```


Status Codes

Status Code	Description
200	Operation succeeded.
400	Invalid parameters.
403	User authentication failed.
404	Resources not found.
500	Server error.

Error Codes

See **Error Codes**.

5 Permissions Policies and Supported Actions

5.1 Permissions Policies and Supported Actions

This chapter describes how to use IAM to implement fine-grained permissions control for your Config resources. If your account does not need individual IAM users, skip 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 authorization granularity, 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.

Supported Actions

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

- Permissions: Statements in a policy that allow or deny certain operations.
- APIs: REST APIs that can be called by a user who has been granted specific permissions.
- Actions: Specific operations that are allowed or denied.
- 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.

  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
Querying resource relationships	GET /v1/resource-manager/domains/{domain_id}/all-resources/{resource_id}/relations	rms:resources:getRelation	√	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
Querying a resource	GET /v1/resource-manager/domains/{domain_id}/provider/{provider}/type/{type}/resources/{resource_id}	rms:resources:get	√	N/A
Querying all resources	GET /v1/resource-manager/domains/{domain_id}/all-resources	rms:resources:list	√	N/A

Permission	API	Action	IAM Project	Enterprise Project
Querying supported cloud services, resources, and regions	GET /v1/resource-manager/domains/{domain_id}/providers	Not required	N/A	N/A

6 Appendixes

6.1 Error Codes

Status Code	Error Codes	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.	DomainId cannot be more than 36 characters.	Enter 1 to 36 characters for domainId.
400	RMS.00010008	domainId is illegal.	Invalid value for domainId.	Specify a valid value for domainId.
400	RMS.00010009	The max length of id must be less than or equal to 512.	Id cannot be more than 512 characters.	Enter 1 to 512 characters for id.

Status Code	Error Codes	Error Message	Description	Solution
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 256.	Name cannot be more than 256 characters.	Enter 1 to 256 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.	Resource type cannot be more than 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.	The number of region IDs must be 1 to 10.	Enter 1 to 10 region IDs.
400	RMS.00010017	The max length of region id must be less than or equal to 36.	Region id cannot be more than 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.

Status Code	Error Codes	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.	The number of project IDs must be 1 to 10.	Enter 1 to 10 project IDs.
400	RMS.00010022	The max length of project id must be less than or equal to 36.	Project id cannot be more than 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.	Limit cannot be smaller than 1.	Specify a valid value for limit.
400	RMS.00010025	The maximum value of limit must be less than or equal to 200.	Limit cannot be more than 200.	Specify a valid value for limit.
400	RMS.00010026	The minimum value of offset must be greater than or equal to 1.	Offset cannot be smaller than 1.	Specify a valid value for offset.

Status Code	Error Codes	Error Message	Description	Solution
400	RMS.00010027	The maximum value of offset must be less than or equal to 1000.	Offset cannot be more 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 128.	Tag key cannot be more than 128 characters.	Enter 1 to 128 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 cannot be more 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 255.	Tag value cannot be more than 255 characters.	Enter 1 to 255 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.

Status Code	Error Codes	Error Message	Description	Solution
400	RMS.00010036	The minimum value of limit must be greater than or equal to 1.	Limit cannot be smaller than 1.	Specify a valid value for limit.
400	RMS.00010037	The maximum value of limit must be less than or equal to 200.	Limit cannot be more than 200.	Specify a valid value for limit.
400	RMS.00010038	The minimum value of offset must be greater than or equal to 1.	Offset cannot be smaller than 1.	Specify a valid value for offset.
400	RMS.00010039	The maximum value of offset must be less than or equal to 1000.	Offset cannot be more 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.	Auth action cannot be more than 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.	Policy assignment id cannot be more than 36 characters.	Enter 1 to 36 characters for policy definition id.

Status Code	Error Codes	Error Message	Description	Solution
400	RMS.00010044	The max length of policy definition id must be less than or equal to 36.	Policy definition id cannot be more than 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.	Name cannot be more than 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.	keyword cannot be more than 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.	Compliance state cannot be more than 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.	Policy assignment state cannot be more than 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.

Status Code	Error Codes	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.
400	RMS.00010054	The max length of queryId must be less than or equal to 36.	QueryId cannot be more than 36 characters.	Enter 1 to 36 characters for QueryId.
400	RMS.00010055	QueryId is illegal.	Invalid value for QueryId.	Specify a valid value for QueryId.
400	RMS.00010056	The minimum value of limit must be greater than or equal to 1.	Limit cannot be smaller than 1.	Specify a valid value for limit.
400	RMS.00010057	The maximum value of limit must be less than or equal to 200.	Limit cannot be more than 200.	Specify a valid value for limit.
400	RMS.00010058	marker is illegal.	Invalid value for marker.	Specify a valid value for marker.
400	RMS.00010059	The length of marker must be between 4 and 400.	Marker must contain 4 to 400 characters.	Enter 4 to 400 characters for marker.
400	RMS.00010060	Incorrect resource query language.	Incorrect advanced query statement.	Check whether the advanced query statement is correct.
400	RMS.00010061	Stored query name is illegal.	Invalid advanced query name.	Check the request parameter.
400	RMS.00010062	The length of stored query name must be between 1 and 64.	The advanced query name must contain 1 to 64 characters.	Enter 1 to 64 characters for the advanced query name.

Status Code	Error Codes	Error Message	Description	Solution
400	RMS.00010064	Organization_id is illegal.	Invalid value for organization_id.	Specify a valid value for organization_id.
400	RMS.00010065	Organization_id length must be between 1 and 34.	Invalid organization_id length. Value range: 1–34 characters	Enter 1 to 34 characters for organization_id.
400	RMS.00010066	Organization_policy_assignment_id is illegal.	Invalid value for organization_policy_assignment_id.	Specify a valid value for organization_policy_assignment_id.
400	RMS.00010067	Organization_policy_assignment_id length must be between 1 and 32.	Invalid organization_policy_assignment_id length. Value range: 1–32 characters	Enter 1 to 32 characters for organization_policy_assignment_id.
400	RMS.00010068	Organization_policy_assignment_name is illegal.	Invalid value for organization_policy_assignment_name.	Specify a valid value for organization_policy_assignment_name.
400	RMS.00010069	Organization_policy_assignment_name must be between 1 and 64.	Invalid organization_policy_assignment_name length. Value range: 1–64 characters	Enter 1 to 64 characters for organization_policy_assignment_name.
400	RMS.00010070	The aggregator is not found.	Aggregator not found.	Ensure that the aggregator exists.
400	RMS.00010071	Aggregator_id is illegal.	Invalid value for aggregator_id.	Specify a valid value for aggregator_id.

Status Code	Error Codes	Error Message	Description	Solution
400	RMS.00010072	Aggregator_id length must be between 1 and 32.	Invalid aggregator_id length. Value range: 1–32 characters	Enter 1 to 36 characters for aggregator_id.
400	RMS.00010073	Authorized_account_id is illegal.	Invalid value for authorized_account_id.	Specify a valid value for authorized_account_id.
400	RMS.00010074	Authorized_account_id length must be between 1 and 36.	Invalid authorized_account_id length. Value range: 1–36 characters	Enter 1 to 36 characters for authorized_account_id.
400	RMS.00010075	Requester_account_id is illegal.	Invalid value for requester_account_id.	Specify a valid value for requester_account_id.
400	RMS.00010076	Requester_account_id length must be between 1 and 36.	Invalid requester_account_id length. Value range: 1–36 characters	Enter 1 to 36 characters for requester_account_id.
400	RMS.00010077	Aggregator_name is illegal.	Invalid value for aggregator_name.	Specify a valid value for aggregator_name.
400	RMS.00010078	Aggregator_name length must be between 1 and 64.	Invalid aggregator_name length. Value range: 1–64 characters	Enter 1 to 64 characters for aggregator_name.
400	RMS.00010080	Aggregator_update_status length must be between 1 and 16.	Invalid aggregator_update_status length. Value range: 1–16 characters	Enter 1 to 36 characters for aggregator_update_status.

Status Code	Error Codes	Error Message	Description	Solution
400	RMS.00010081	The maximum value of limit is 2000.	Limit cannot be more than 2000.	Specify a valid value for limit.
400	RMS.00010082	The number of aggregators exceed quota.	The number of aggregators exceed quota. The quota of organization aggregator is 1, account aggregator is 30.	Delete useless aggregators.
400	RMS.00010083	Conformance_pack_name is illegal.	Invalid value for conformance_pack_name.	Specify a valid value for conformance_pack_name.
400	RMS.00010084	Conformance_pack_name length must be between 1 and 64.	Invalid conformance_pack_name length. Value range: 1–64 characters	Enter 1 to 64 characters for conformance_pack_name.
400	RMS.00010085	Conformance_pack_id is illegal.	Invalid value for conformance_pack_id.	Specify a valid value for conformance_pack_id.
400	RMS.00010086	Conformance_pack_id length must be between 1 and 36.	Invalid conformance_pack_id length. Value range: 1–36 characters	Enter 1 to 36 characters for conformance_pack_id.
400	RMS.00010087	Template_key is illegal.	Invalid value for template_key.	Specify a valid value for template_key.
400	RMS.00010088	Template_key length must be between 1 and 128.	Invalid template_key length. Value range: 1–128 characters	Enter 1 to 128 characters for template_key.

Status Code	Error Codes	Error Message	Description	Solution
400	RMS.00010089	Template_id is illegal.	Invalid value for template_id.	Specify a valid value for template_id.
400	RMS.00010090	Template_id length must be between 1 and 36.	Invalid template_id length. Value range: 1–36 characters	Enter 1 to 36 characters for template_id.
400	RMS.00010091	The tracker-config is not enabled.	The tracker-config is not enabled.	Enable the tracker-config.
400	RMS.00010092	The number of accounts operated by the aggregator exceeds the limit.	The aggregator operation has exceeded the limit. The maximum number of accounts that can be added or removed from the account aggregator within seven days is 1000	Please check if the maximum number of accounts added or removed within seven days exceeds 1000.
400	RMS.00010093	Exceeded limit on organization aggregator operations.	The aggregator operation has exceeded the limit. the maximum number of new additions to the organization aggregator within one day is 1.	Please check the number of organization aggregators created within a day.
401	RMS.00010079	Incorrect IAM authentication information: Authorization header is missing.	Incorrect IAM authentication information: Authorization header is missing.	Add authentication header.

Status Code	Error Codes	Error Message	Description	Solution
403	RMS.00010006	access denied.	Access denied.	Check whether you have the required permissions.
404	RMS.00010005	resource not found.	Resource not found.	Ensure that the resource exists.
429	RMS.00010063	ResourceQL is busy.	Advanced queries are busy.	Try again later.
500	RMS.INTERNAL.ERROR	Internal server error occurred.	Service internal error occurred.	Try again later or contact customer service.

6.2 Supported Services and Resource Types

You can obtain the cloud services (**provider**) and resource types (**type**) supported by Config in either of the following ways:

- Calling APIs

  You can call the API for **listing cloud services** to query cloud services, resources, and regions supported by Config. The **provider** field indicates the cloud service name, and the **name** field in **resource_types** indicates the resource type name.

- Management console

  To view services and resources supported by Config, sign in to the console and click **Supported Services and Regions** in **My Resources** page. You can view related information in the **Resource Type** column of the list.

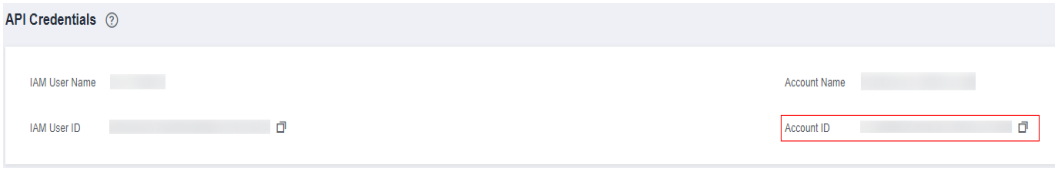
6.3 Obtaining an Account ID

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

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

   View the account ID on the **API Credentials** page.

Figure 6-1 Obtaining an account ID



6.4 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.
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.

Returned Value	Description
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.

6.5 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 a project ID by calling the API used to **query 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": "65ewtrgaggshhk1223245sghjlse684b",
            "is_domain": false,
            "parent_id": "65ewtrgaggshhk1223245sghjlse684b",
            "name": "project_name",
            "description": "",
            "links": {
                "next": null,
                "previous": null,
                "self": "https://www.example.com/v3/projects/a4adasfjljaaaakla12334jklga9sasfg"
            },
            "id": "a4adasfjljaaaakla12334jklga9sasfg",
            "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.

7 Change History

Released On	Description
2023-09-30	This issue is the first official release.

