Tag Management Service

API Reference

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HUAWEI

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Contents

1 Before You Start

Welcome to Tag Management Service (TMS). Tags are useful for identifying cloud resources, especially when you have a good many resources of the same type. You can classify resources by usage, ownership, or environment. TMS is a visualized service that allows you to efficiently and centrally manage tags and categorize cloud resources across regions and services.

This document describes how to use application programming interfaces (APIs) to perform operations on tags, such as creating or deleting predefined tags, and querying or modify predefined tags. For details about all supported operations, see **API Overview**.

Before using TMS APIs, ensure that you are familiar with TMS concepts. For details, see **Tag Management Service**.

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

Resources Supported by TMS

You can call **the API for querying services supported by TMS** to obtain the services, resources, and regions supported by TMS.

The **provider** field indicates the cloud service name, and the **resource_types** field indicates the resource.

Endpoints

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

Basic Concepts

- Account

  An account is created upon successful signing up. 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 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).

  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**.

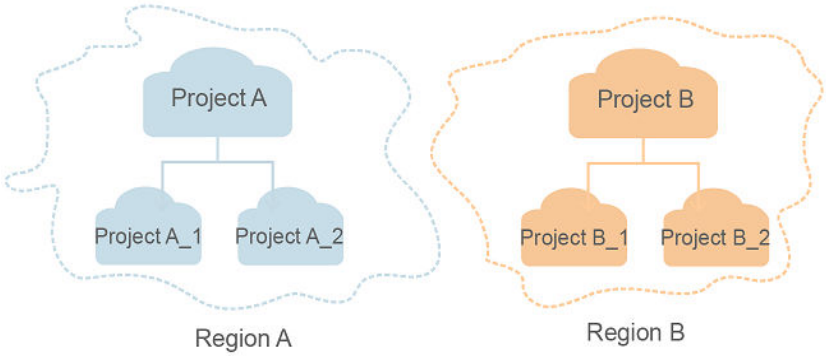
- AZ

  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 group and physically isolate resources (including computing, storage, and network resources) across regions. Users can be granted permissions in a default project to access all resources under their accounts in the region associated with 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.

  Figure 1-1 Project isolation model

- Enterprise project

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

2 API Overview

Table 2-1 TMS APIs

API	Description
Querying the API Version	API for querying TMS API versions
Querying Details About an API Version	API for querying details about a specified TMS API version
Creating Predefined Tags	API for creating or deleting predefined tags. You can use predefined tags to tag resources.
Deleting Predefined Tags	API for deleting predefined tags. You can delete predefined tags created.
Query a Predefined Tag List	API for querying predefined tags of a specified user
Modifying Predefined Tags	API for modifying a predefined tag
Querying the Tag Quota	API for querying the tag quota
Batch Adding Tags	API for batch adding tags to multiple resources
Batch Removing Tags	API for batch removing tags from multiple resources
Querying a Tag List	API for querying all tag keys in a specified region
Querying a Tag Value List	API for querying all tag values of a specified tag key in a region
Querying Resource Tags	API for querying tags of a specified resource
Filtering Resources by Tag	API for querying resources by tag

API	Description
Querying Services Supported by TMS	API for querying cloud services supported by TMS

3 API Calling

3.1 Making an API Request

This section describes the structure of a REST API request, and uses the IAM API for **creating an IAM User** as an example to demonstrate how to call an API. 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 **CN-Hong Kong** is **iam.ap-southeast-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**.

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.

IAM is a global service. You can create an IAM user using the endpoint of IAM in any region. For example, to create an IAM user in the **CN-Hong Kong** region, obtain the endpoint of IAM (**iam.ap-southeast-1.myhuaweicloud.com**) for this region and the **resource-path** (**/v3.0/OS-USER/users**) in the URI of the API for **creating an IAM user**. Then construct the URI as follows:

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

Figure 3-1 Example URI

NOTE

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

Request Methods

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

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.

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 for **creating an IAM user**, the request method is **POST**. An example request is as follows:

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

Request Header

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

Common request header fields are as follows.

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

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 following shows an example request of the API for **creating an IAM user** when AK/SK authentication is used:

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

(Optional) Request Body

This part is optional. A request body is generally sent in a structured format (for example, JSON or XML), which is specified by **Content-Type** in the request header. It is used to transfer content other than the request header. If the request body contains full-width characters, these characters must be coded in UTF-8.

The request body varies depending on APIs. Certain APIs do not require the request body, such as the APIs requested using the GET and DELETE methods.

The following shows an example request (a request body included) of the API for **creating an IAM user**. You can learn about request parameters and related

description from this example. The bold parameters need to be replaced for a real request.

- **accountid**: account ID of an IAM user
- **username**: name of an IAM user
- **email**: email of an IAM user
- **password**: login password of an IAM user

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

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

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

TMS 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.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
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 **create an IAM user**, 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 **create an IAM user**. 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 3-2 Header fields of the response to the request for creating an IAM user

```
"X-Frame-Options": "SAMEORIGIN",
"X-IAM-ETag-id": "2562365939-d8f6f12921974cb097338ac11fceac8a",
"Transfer-Encoding": "chunked",
"Strict-Transport-Security": "max-age=31536000; includeSubdomains;",
"Server": "api-gateway",
"X-Request-Id": "af2953f2bcc67a42325a69a19e6c32a2",
"X-Content-Type-Options": "nosniff",
"Connection": "keep-alive",
"X-Download-Options": "noopen",
"X-XSS-Protection": "1; mode=block;",
"X-IAM-Trace-Id": "token_[redacted]_null_af2953f2bcc67a42325a69a19e6c32a2",
"Date": "Tue, 21 May 2024 09:03:40 GMT",
"Content-Type": "application/json; charset=utf8"
```

(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 **create an IAM user**.

```
{
    "user": {
        "id": "c131886aec...",
        "name": "IAMUser",
        "description": "IAM User Description",
        "areacode": "",
```



```
        "phone": "",
        "email": "***@***.com",
        "status": null,
        "enabled": true,
        "pwd_status": false,
        "access_mode": "default",
        "is_domain_owner": false,
        "xuser_id": "",
        "xuser_type": "",
        "password_expires_at": null,
        "create_time": "2024-05-21T09:03:41.000000",
        "domain_id": "d78cbac1.........",
        "xdomain_id": "30086000........",
        "xdomain_type": "",
        "default_project_id": null
    }
}
```

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

```
{
    "error_msg": "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 Getting Started

This section describes how to create predefined tags using APIs.

NOTE

The token obtained from IAM is valid for only 24 hours. If you want to use a token for authentication, you can cache it to avoid frequently calling the IAM API.

Involved APIs

If you use a token for authentication, you must obtain the a token and add **X-Auth-Token** to the request header when making an API call.

- The IAM API used to obtain a token
- The TMS API used to create predefined tags

Procedure

1. Obtain the token by referring to **Authentication**.
2. Send **POST https://TMS endpoint/v1.0/predefine_tags/action**.

   Add **Content-Type** and **X-Auth-Token** to the request header.

   Specify the following parameters in the request body:

```
{
 "action": "create", //Operation (mandatory, string)
  "tags" : [
            {
                "key": "ENV1",  //Key (mandatory, string)
                "value": "DEV1" //Value (mandatory, string)
             },
            {
                "key" : "ENV2",
                "value" : "DEV2"
             }
            ]
}
```

   After the request is sent, the status code 204 is returned and the response body is empty.

NOTE

- The response message may be a success or a failure. This document takes the successful response as an example.
- If the request fails, an error code and error information are returned. For details, see **Error Codes**.
- For details about the elements and return values of response messages, see **Creating or Deleting Predefined Tags**.

5 API Description

5.1 API Version Querying

5.1.1 Querying API Versions

Function

Querying API versions

Calling Method

For details, see **Calling APIs**.

URI

GET /

Request Parameters

None

Response Parameters

Status code: 200

Table 5-1 Response body parameters

Parameter	Type	Description
versions	Array of **VersionDetail** objects	List of versions

Table 5-2 VersionDetail

Parameter	Type	Description
id	String	Specifies the version ID, for example, v1.0.
links	Array of **Link** objects	Specifies the API URL.
version	String	If there are minor versions, the earliest minor version is returned. If there are no minor versions, null is returned.
status	String	Specifies the version status. Possible values are as follows: **CURRENT**: widely used version **SUPPORTED**: earlier version which is still supported **DEPRECATED**: deprecated version which may be deleted later
updated	String	Specifies the version release time, which is a UTC time. For example, the release time of v1.0 is 2016-12-09T00:00:00Z.
min_version	String	If there are minor versions, the earliest minor version is returned. If there are no minor versions, null is returned.

Table 5-3 Link

Parameter	Type	Description
href	String	The API URL.
rel	String	self

Status code: 400

Table 5-4 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-5 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-6 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-7 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-8 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-9 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-10 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-11 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-12 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-13 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 410

Table 5-14 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-15 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 412

Table 5-16 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-17 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 429

Table 5-18 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-19 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-20 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-21 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-22 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-23 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-24 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-25 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

Querying API versions

```
GET https://{Endpoint}/
```

Example Responses

Status code: 200

OK

```
{
  "versions" : [ {
    "id" : "v1.0",
    "links" : [ {
      "rel" : "self",
      "href" : "https://{Endpoint}/v1.0"
    } ],
    "version" : "",
    "status" : "CURRENT",
    "updated" : "2016-12-09T00:00:00Z",
    "min_version" : ""
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;


public class ListApiVersionsSolution {

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



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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        ListApiVersionsRequest request = new ListApiVersionsRequest();
        try {
            ListApiVersionsResponse response = client.listApiVersions(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

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

    credentials = GlobalCredentials(ak, sk)

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

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

Go

```
package main

import (
    "fmt"
```



```
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)

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

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request
404	Not Found
405	Method Not Allowed
406	Not Acceptable
409	Conflict
410	Gone
412	Precondition Failed
429	Too Many Requests

Status Code	Description
500	Internal Server Error
501	Not Implemented
503	Service Unavailable

Error Codes

See **Error Codes**.

5.1.2 Querying Details About an API Version

Function

This API is used to query details about a specified TMS API version.

Calling Method

For details, see **Calling APIs**.

URI

GET /{api_version}

Table 5-26 Path Parameters

Parameter	Mandatory	Type	Description
api_version	Yes	String	Specifies the API version.

Request Parameters

Table 5-27 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. TMS is a global service. When calling the Identity and Access Management (IAM) API to obtain a user token, set the **scope** field to **domain**. The value of **X-Subject-Token** in the response header is the user token.

Response Parameters

Status code: 200

Table 5-28 Response body parameters

Parameter	Type	Description
version	**VersionDetail** object	Specifies the version details.

Table 5-29 VersionDetail

Parameter	Type	Description
id	String	Specifies the version ID, for example, v1.0.
links	Array of **Link** objects	Specifies the API URL.
version	String	If there are minor versions, the earliest minor version is returned. If there are no minor versions, null is returned.
status	String	Specifies the version status. Possible values are as follows: **CURRENT**: widely used version **SUPPORTED**: earlier version which is still supported **DEPRECATED**: deprecated version which may be deleted later
updated	String	Specifies the version release time, which is a UTC time. For example, the release time of v1.0 is 2016-12-09T00:00:00Z.
min_version	String	If there are minor versions, the earliest minor version is returned. If there are no minor versions, null is returned.

Table 5-30 Link

Parameter	Type	Description
href	String	The API URL.
rel	String	self

Status code: 400

Table 5-31 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-32 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-33 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-34 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-35 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-36 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-37 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-38 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 408

Table 5-39 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-40 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-41 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-42 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 410

Table 5-43 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-44 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 412

Table 5-45 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-46 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 429

Table 5-47 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-48 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-49 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-50 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-51 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-52 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-53 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-54 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

Querying details about a TMS API version

```
GET https://{Endpoint}/v1.0
```

Example Responses

Status code: 200

OK

```
{
  "version" : {
    "id" : "v1.0",
    "links" : [ {
      "rel" : "self",
      "href" : "https://{Endpoint}/v1.0"
```



```
    } ],
    "version" : "",
    "status" : "CURRENT",
    "updated" : "2016-12-09T00:00:00Z",
    "min_version" : ""
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;


public class ShowApiVersionSolution {

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

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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowApiVersionRequest request = new ShowApiVersionRequest();
        request.withApiVersion("{api_version}");
        try {
            ShowApiVersionResponse response = client.showApiVersion(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

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



```
import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

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

    credentials = GlobalCredentials(ak, sk)

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

    try:
        request = ShowApiVersionRequest()
        request.api_version = "{api_version}"
        response = client.show_api_version(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)

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

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowApiVersionRequest{}
    request.ApiVersion = "{api_version}"
    response, err := client.ShowApiVersion(request)
    if err == nil {
```



```
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request
404	Not Found
405	Method Not Allowed
406	Not Acceptable
408	Request Timeout
409	Conflict
410	Gone
412	Precondition Failed
429	Too Many Requests
500	Internal Server Error
501	Not Implemented
503	Service Unavailable

Error Codes

See **Error Codes**.

5.2 Predefined Tags

5.2.1 Creating Predefined Tags

Function

This API is used to create predefined tags. This API supports idempotency and batch data processing.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1.0/predefine_tags/action

Request Parameters

Table 5-55 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. TMS is a global service. When calling the Identity and Access Management (IAM) API to obtain a user token, set the **scope** field to **domain**. The value of **X-Subject-Token** in the response header is the user token.

Table 5-56 Request body parameters

Parameter	Mandatory	Type	Description
action	Yes	String	Specifies the operation (case sensitive). The value is **create**.
tags	Yes	Array of **PredefineTag Request** objects	Tag list.

Table 5-57 PredefineTagRequest

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. The value can contain up to 36 characters including letters, digits, hyphens (-), and underscores (_).

Parameter	Mandatory	Type	Description
value	Yes	String	Specifies the tag value. The value can contain up to 43 characters including letters, digits, periods (.), hyphens (-), and underscores (_). It can be an empty string.

Response Parameters

Status code: 400

Table 5-58 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-59 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 401

Table 5-60 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-61 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 403

Table 5-62 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-63 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-64 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-65 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-66 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-67 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-68 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-69 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-70 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-71 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 410

Table 5-72 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-73 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 412

Table 5-74 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-75 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 429

Table 5-76 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-77 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-78 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-79 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-80 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-81 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-82 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-83 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

Creating predefined tags

```
POST https://{Endpoint}/v1.0/predefine_tags/action

{
  "action" : "create",
  "tags" : [ {
    "key" : "ENV1",
    "value" : "DEV1"
  }, {
    "key" : "ENV2",
    "value" : "DEV2"
  } ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Creating predefined tags

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;

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



```
public class CreatePredefineTagsSolution {

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

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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        CreatePredefineTagsRequest request = new CreatePredefineTagsRequest();
        ReqCreatePredefineTag body = new ReqCreatePredefineTag();
        List<PredefineTagRequest> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new PredefineTagRequest()
                .withKey("ENV1")
                .withValue("DEV1")
        );
        listbodyTags.add(
            new PredefineTagRequest()
                .withKey("ENV2")
                .withValue("DEV2")
        );
        body.withTags(listbodyTags);
        body.withAction(ReqCreatePredefineTag.ActionEnum.fromValue("create"));
        request.withBody(body);
        try {
            CreatePredefineTagsResponse response = client.createPredefineTags(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Creating predefined tags

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
```



```
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]

    credentials = GlobalCredentials(ak, sk)

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

    try:
        request = CreatePredefineTagsRequest()
        listTagsbody = [
            PredefineTagRequest(
                key="ENV1",
                value="DEV1"
            ),
            PredefineTagRequest(
                key="ENV2",
                value="DEV2"
            )
        ]
        request.body = ReqCreatePredefineTag(
            tags=listTagsbody,
            action="create"
        )
        response = client.create_predefine_tags(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Creating predefined tags

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)

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

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())
```



```
    request := &model.CreatePredefineTagsRequest{}
    var listTagsbody = []model.PredefineTagRequest{
        {
            Key: "ENV1",
            Value: "DEV1",
        },
        {
            Key: "ENV2",
            Value: "DEV2",
        },
    }
    request.Body = &model.ReqCreatePredefineTag{
        Tags: listTagsbody,
        Action: model.GetReqCreatePredefineTagActionEnum().CREATE,
    }
    response, err := client.CreatePredefineTags(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable
409	Conflict
410	Gone
412	Precondition Failed
429	Too Many Requests
500	Internal Server Error
501	Not Implemented
503	Service Unavailable

Error Codes

See **Error Codes**.

5.2.2 Deleting Predefined Tags

Function

This API is used to delete predefined tags. This API supports idempotency and batch data processing.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1.0/predefine_tags/action

Request Parameters

Table 5-84 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. Note: TMS is a global service. Therefore, when calling the IAM service to obtain user tokens, set the scope field to domain. The value of X-Subject-Token in the response header is the user token.

Table 5-85 Request body parameters

Parameter	Mandatory	Type	Description
action	Yes	String	Specifies the operation (case sensitive). The value is **delete**.
tags	Yes	Array of **PredefineTag Request** objects	Specifies a tag list. Up to 50 tags can be deleted at the same time.

Table 5-86 PredefineTagRequest

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. The value can contain up to 36 characters including letters, digits, hyphens (-), and underscores (_).
value	Yes	String	Specifies the tag value. The value can contain up to 43 characters including letters, digits, periods (.), hyphens (-), and underscores (_). It can be an empty string.

Response Parameters

Status code: 400

Table 5-87 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-88 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 401

Table 5-89 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-90 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 403

Table 5-91 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-92 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-93 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-94 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-95 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-96 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-97 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-98 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-99 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-100 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 410

Table 5-101 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-102 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 412

Table 5-103 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-104 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 429

Table 5-105 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-106 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-107 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-108 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-109 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-110 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-111 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-112 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

Deleting predefined tags

```
POST https://{Endpoint}/v1.0/predefine_tags/action

{
  "action" : "delete",
  "tags" : [ {
    "key" : "ENV1",
    "value" : "DEV1"
  }, {
    "key" : "ENV2",
    "value" : "DEV2"
  } ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Deleting predefined tags

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;

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

public class DeletePredefineTagsSolution {

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

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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        DeletePredefineTagsRequest request = new DeletePredefineTagsRequest();
        ReqDeletePredefineTag body = new ReqDeletePredefineTag();
        List<PredefineTagRequest> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new PredefineTagRequest()
                .withKey("ENV1")
                .withValue("DEV1")
        );
        listbodyTags.add(
            new PredefineTagRequest()
                .withKey("ENV2")
                .withValue("DEV2")
        );
        body.withTags(listbodyTags);
        body.withAction(ReqDeletePredefineTag.ActionEnum.fromValue("delete"));
        request.withBody(body);
        try {
            DeletePredefineTagsResponse response = client.deletePredefineTags(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```


Python

Deleting predefined tags

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

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

    credentials = GlobalCredentials(ak, sk)

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

    try:
        request = DeletePredefineTagsRequest()
        listTagsbody = [
            PredefineTagRequest(
                key="ENV1",
                value="DEV1"
            ),
            PredefineTagRequest(
                key="ENV2",
                value="DEV2"
            )
        ]
        request.body = ReqDeletePredefineTag(
            tags=listTagsbody,
            action="delete"
        )
        response = client.delete_predefine_tags(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Deleting predefined tags

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
```



```
risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeletePredefineTagsRequest{}
    var listTagsbody = []model.PredefineTagRequest{
        {
            Key: "ENV1",
            Value: "DEV1",
        },
        {
            Key: "ENV2",
            Value: "DEV2",
        },
    }
    request.Body = &model.ReqDeletePredefineTag{
        Tags: listTagsbody,
        Action: model.GetReqDeletePredefineTagActionEnum().DELETE,
    }
    response, err := client.DeletePredefineTags(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable

Status Code	Description
409	Conflict
410	Gone
412	Precondition Failed
429	Too Many Requests
500	Internal Server Error
501	Not Implemented
503	Service Unavailable

Error Codes

See **Error Codes**.

5.2.3 Querying Predefined Tags

Function

This API is used to query predefined tags.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1.0/predefine_tags

Table 5-113 Query Parameters

Parameter	Mandatory	Type	Description
key	No	String	Specifies the tag key. Fuzzy search is supported. **Key** is case insensitive. If the key contains non-URL-safe characters, it must be URL encoded.
value	No	String	Specifies the tag value. Fuzzy search is supported. **Value** is case insensitive. If the value contains non-URL-safe characters, it must be URL encoded.

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of records to be queried, which is **10** by default. The maximum value is **1000** and the minimum value is **1**. If the value is **0**, the number of records to be queried is not limited.
marker	No	String	Specifies the paging location marker (index position). The query starts from the next piece of data of the index specified by **marker**.Note:You do not need to specify this parameter when you query the data on the first page. When you query the data on subsequent pages, set this parameter to the **marker** value returned in the response body for the previous query. If the returned **tags** is empty, the last page is queried.

Parameter	Mandatory	Type	Description
order_field	No	String	Specifies the sorting field. The value can be **update_time**, **key**, or **value**. The value is case sensitive. You can sort tags based on the value of **order_method**. If this value is not specified, the default value is **update_time**. For example: If **order_field** is set to **update_time**, values of **key** and **value** are sorted in ascending order. If **order_field** is set to **key**, values of **update_time** are sorted in descending order and **value** in ascending order. If **order_field** is set to **value**, values of **update_time** are sorted in descending order and **value** in ascending order. If **order_field** is not specified, the default value **update_time** is used, and values of **key** and **value** are sorted in ascending order.
order_method	No	String	Specifies the sorting method of **order_field**. The value can be **asc** or **desc**. The value is case sensitive. If this parameter is not specified, the default value is **desc**.

Request Parameters

Table 5-114 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. TMS is a global service. When calling the Identity and Access Management (IAM) API to obtain a user token, set the **scope** field to **domain**. The value of **X-Subject-Token** in the response header is the user token.

Response Parameters

Status code: 200

Table 5-115 Response body parameters

Parameter	Type	Description
marker	String	Specifies the paging location marker (index position).
total_count	Integer	Total number of queried tags.
tags	Array of **PredefineTag** objects	List of queried tags.

Table 5-116 PredefineTag

Parameter	Type	Description
key	String	Specifies the tag key. The value can contain up to 36 characters including letters, digits, hyphens (-), and underscores (_).
value	String	Specifies the tag value. The value can contain up to 43 characters including letters, digits, periods (.), hyphens (-), and underscores (_). It can be an empty string.
update_time	String	Update time, which must be the UTC time. 2016-12-09T00:00:00Z

Status code: 400

Table 5-117 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-118 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 401

Table 5-119 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-120 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 403

Table 5-121 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-122 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-123 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-124 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-125 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-126 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-127 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-128 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-129 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-130 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 410

Table 5-131 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-132 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 412

Table 5-133 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-134 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 429

Table 5-135 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-136 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-137 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-138 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-139 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-140 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-141 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-142 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

Querying predefined tags

```
GET https://{Endpoint}/v1.0/predefine_tags?
key=ENV&value=DEV&limit=10&marker=9&order_field=key&order_method=asc
```

Example Responses

Status code: 200

OK

```
{
  "marker" : "12",
  "total_count" : 13,
  "tags" : [ {
    "key" : "ENV1",
    "value" : "DEV1",
    "update_time" : "2017-04-12T14:22:34Z"
  }, {
    "key" : "ENV2",
    "value" : "DEV2",
    "update_time" : "2017-04-12T14:22:34Z"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;


public class ListPredefineTagsSolution {

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



```
        String sk = System.getenv("CLOUD_SDK_SK");

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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        ListPredefineTagsRequest request = new ListPredefineTagsRequest();
        try {
            ListPredefineTagsResponse response = client.listPredefineTags(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

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

    credentials = GlobalCredentials(ak, sk)

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

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

Go

```
package main

import (
```



```
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)

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

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable
409	Conflict
410	Gone

Status Code	Description
412	Precondition Failed
429	Too Many Requests
500	Internal Server Error
501	Not Implemented
503	Service Unavailable

Error Codes

See **Error Codes**.

5.2.4 Modifying a Predefined Tag

Function

Modify predefined tags.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1.0/predefine_tags

Request Parameters

Table 5-143 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. TMS is a global service. When calling the Identity and Access Management (IAM) API to obtain a user token, set the **scope** field to **domain**. The value of **X-Subject-Token** in the response header is the user token.

Table 5-144 Request body parameters

Parameter	Mandatory	Type	Description
new_tag	Yes	**PredefineTagRequest** object	Specifies the modified tag.
old_tag	Yes	**PredefineTagRequest** object	Specifies the tag before modification.

Table 5-145 PredefineTagRequest

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. The value can contain up to 36 characters including letters, digits, hyphens (-), and underscores (_).
value	Yes	String	Specifies the tag value. The value can contain up to 43 characters including letters, digits, periods (.), hyphens (-), and underscores (_). It can be an empty string.

Response Parameters

Status code: 400

Table 5-146 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-147 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 401

Table 5-148 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-149 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 403

Table 5-150 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-151 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-152 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-153 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-154 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-155 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-156 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-157 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-158 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-159 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 410

Table 5-160 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-161 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 412

Table 5-162 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-163 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 429

Table 5-164 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-165 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-166 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-167 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-168 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-169 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-170 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-171 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

Modifying a predefined tag

```
PUT https://{Endpoint}/v1.0/predefined_tags

{
  "new_tag" : {
    "key" : "ENV1",
    "value" : "DEV1"
  },
  "old_tag" : {
    "key" : "ENV2",
    "value" : "DEV2"
  }
}
```


Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Modifying a predefined tag

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;


public class UpdatePredefineTagsSolution {

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

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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdatePredefineTagsRequest request = new UpdatePredefineTagsRequest();
        ModifyPrefineTag body = new ModifyPrefineTag();
        PredefineTagRequest oldTagbody = new PredefineTagRequest();
        oldTagbody.withKey("ENV2")
            .withValue("DEV2");
        PredefineTagRequest newTagbody = new PredefineTagRequest();
        newTagbody.withKey("ENV1")
            .withValue("DEV1");
        body.withOldTag(oldTagbody);
        body.withNewTag(newTagbody);
        request.withBody(body);
        try {
            UpdatePredefineTagsResponse response = client.updatePredefineTags(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
```



```
        }
    }
}
```

Python

Modifying a predefined tag

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

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

    credentials = GlobalCredentials(ak, sk)

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

    try:
        request = UpdatePredefineTagsRequest()
        oldTagbody = PredefineTagRequest(
            key="ENV2",
            value="DEV2"
        )
        newTagbody = PredefineTagRequest(
            key="ENV1",
            value="DEV1"
        )
        request.body = ModifyPrefineTag(
            old_tag=oldTagbody,
            new_tag=newTagbody
        )
        response = client.update_predefine_tags(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Modifying a predefined tag

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)
```



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

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdatePredefineTagsRequest{}
    oldTagbody := &model.PredefineTagRequest{
        Key: "ENV2",
        Value: "DEV2",
    }
    newTagbody := &model.PredefineTagRequest{
        Key: "ENV1",
        Value: "DEV1",
    }
    request.Body = &model.ModifyPrefineTag{
        OldTag: oldTagbody,
        NewTag: newTagbody,
    }
    response, err := client.UpdatePredefineTags(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	No Content
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable

Status Code	Description
409	Conflict
410	Gone
412	Precondition Failed
429	Too Many Requests
500	Internal Server Error
501	Not Implemented
503	Service Unavailable

Error Codes

See **Error Codes**.

5.3 Quotas

5.3.1 Querying Tag Quotas

Function

Queries the tag quota.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1.0/tms/quotas

Request Parameters

Table 5-172 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. TMS is a global service. When calling the Identity and Access Management (IAM) API to obtain a user token, set the **scope** field to **domain**. The value of **X-Subject-Token** in the response header is the user token.

Response Parameters

Status code: 200

Table 5-173 Response body parameters

Parameter	Type	Description
quotas	Array of **TagQuota** objects	Quotas.

Table 5-174 TagQuota

Parameter	Type	Description
quota_key	String	Quota key
quota_limit	Integer	Quota value
used	Integer	Used
unit	String	Unit

Status code: 400

Table 5-175 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-176 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 401

Table 5-177 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-178 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 403

Table 5-179 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-180 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-181 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-182 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-183 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-184 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-185 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-186 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-187 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-188 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 410

Table 5-189 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-190 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 412

Table 5-191 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-192 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 429

Table 5-193 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-194 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-195 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-196 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-197 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-198 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-199 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-200 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

Querying Tag Quotas

```
GET https://{Endpoint}/v1.0/tms/quotas
```


Example Responses

Status code: 200

OK

```
{
  "quotas" : [ {
    "used" : 4,
    "unit" : "count",
    "quota_key" : "predefine_tag",
    "quota_limit" : 5000
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;


public class ShowTagQuotaSolution {

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

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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowTagQuotaRequest request = new ShowTagQuotaRequest();
        try {
            ShowTagQuotaResponse response = client.showTagQuota(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
```



```
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

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

    credentials = GlobalCredentials(ak, sk)

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

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

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)

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

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
```



```
            Build())

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

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable
409	Conflict
410	Gone
412	Precondition Failed
429	Too Many Requests
500	Internal Server Error
501	Not Implemented
503	Service Unavailable

Error Codes

See **Error Codes**.

5.4 Resource Tags

5.4.1 Creating Tags in Batches

Function

This API is used to add tags to multiple resources of a cloud service. A maximum of 10 tags can be added to one resource. A maximum of 50 resources can be tagged at a time.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1.0/resource-tags/batch-create

Request Parameters

Table 5-201 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. TMS is a global service. When calling the Identity and Access Management (IAM) API to obtain a user token, set the **scope** field to **domain**. The value of **X-Subject-Token** in the response header is the user token.

Table 5-202 Request body parameters

Parameter	Mandatory	Type	Description
project_id	No	String	Specifies the project ID. This parameter is mandatory when **resource_type** is a region-specific service.
resources	Yes	Array of **ResourceTagBody** objects	Specifies the resource list.
tags	Yes	Array of **CreateTagRequest** objects	Specifies tags.

Table 5-203 ResourceTagBody

Parameter	Mandatory	Type	Description
resource_id	Yes	String	Specifies the resource ID.
resource_type	Yes	String	Specifies the resource type. This parameter is case-sensitive. Examples include: ecs, scaling_group, images, disk,vpcs, security-groups, shared_bandwidth, eip, and cdn. For more details, see "Querying Service Supported by TMS".

Table 5-204 CreateTagRequest

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. The value can contain up to 36 characters including letters, digits, hyphens (-), and underscores (_).
value	Yes	String	Specifies the tag value. The value can contain up to 43 characters including letters, digits, periods (.), hyphens (-), and underscores (_). It can be an empty string.

Response Parameters

Status code: 200

Table 5-205 Response body parameters

Parameter	Type	Description
failed_resources	Array of **TagCreateResponseItem** objects	Specifies the information about resources failed to be tagged.

Table 5-206 TagCreateResponseItem

Parameter	Type	Description
resource_id	String	Specifies the resource ID.
resource_type	String	Specifies the resource type.
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 400

Table 5-207 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-208 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 401

Table 5-209 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-210 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 403

Table 5-211 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-212 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-213 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-214 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-215 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-216 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-217 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-218 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-219 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-220 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 410

Table 5-221 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-222 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 412

Table 5-223 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-224 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 429

Table 5-225 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-226 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-227 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-228 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-229 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-230 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-231 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-232 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

Adding tags to a resource in batches

```
POST https://{Endpoint}/v1.0/resource-tags/batch-create

{
  "project_id" : "xxxdcfffffffff",
  "resources" : [ {
    "resource_id" : "a28531fa-a8d5-468e-8417-86a80962ee5e",
    "resource_type" : "disk"
  }, {
    "resource_id" : "a28531fa-a8d5-468e-8417-86a8096ddddd",
    "resource_type" : "vpc"
  } ],
  "tags" : [ {
    "key" : "ENV",
    "value" : "dev"
  }, {
    "key" : "DEPT",
    "value" : "pdd"
  } ]
}
```

Example Responses

Status code: 200

Success

```
{
  "failed_resources" : [ {
    "resource_id" : "e1eb7c40cbea4c8389cde527594a306d",
    "resource_type" : "disk",
    "error_code" : "TMS.0002",
    "error_msg" : "Bad request"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Adding tags to a resource in batches

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;

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

public class CreateResourceTagSolution {

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

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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateResourceTagRequest request = new CreateResourceTagRequest();
        ReqCreateTag body = new ReqCreateTag();
        List<CreateTagRequest> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new CreateTagRequest()
                .withKey("ENV")
                .withValue("dev")
        );
        listbodyTags.add(
            new CreateTagRequest()
                .withKey("DEPT")
                .withValue("pdd")
        );
        List<ResourceTagBody> listbodyResources = new ArrayList<>();
        listbodyResources.add(
            new ResourceTagBody()
                .withResourceId("a28531fa-a8d5-468e-8417-86a80962ee5e")
                .withResourceType("disk")
        );
        listbodyResources.add(
            new ResourceTagBody()
                .withResourceId("a28531fa-a8d5-468e-8417-86a8096ddddd")
                .withResourceType("vpc")
        );
        body.withTags(listbodyTags);
        body.withResources(listbodyResources);
        body.withProjectId("xxxdcfffffffff");
        request.withBody(body);
        try {
            CreateResourceTagResponse response = client.createResourceTag(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
```



```
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Adding tags to a resource in batches

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

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

    credentials = GlobalCredentials(ak, sk)

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

    try:
        request = CreateResourceTagRequest()
        listTagsbody = [
            CreateTagRequest(
                key="ENV",
                value="dev"
            ),
            CreateTagRequest(
                key="DEPT",
                value="pdd"
            )
        ]
        listResourcesbody = [
            ResourceTagBody(
                resource_id="a28531fa-a8d5-468e-8417-86a80962ee5e",
                resource_type="disk"
            ),
            ResourceTagBody(
                resource_id="a28531fa-a8d5-468e-8417-86a8096ddddd",
                resource_type="vpc"
            )
        ]
        request.body = ReqCreateTag(
            tags=listTagsbody,
            resources=listResourcesbody,
            project_id="xxxdcfffffffff"
        )
        response = client.create_resource_tag(request)
```



```
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Adding tags to a resource in batches

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)

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

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateResourceTagRequest{}
    var listTagsbody = []model.CreateTagRequest{
        {
            Key: "ENV",
            Value: "dev",
        },
        {
            Key: "DEPT",
            Value: "pdd",
        },
    }
    var listResourcesbody = []model.ResourceTagBody{
        {
            ResourceId: "a28531fa-a8d5-468e-8417-86a80962ee5e",
            ResourceType: "disk",
        },
        {
            ResourceId: "a28531fa-a8d5-468e-8417-86a8096ddddd",
            ResourceType: "vpc",
        },
    }
    projectIdReqCreateTag:= "xxxdcfffffffff"
    request.Body = &model.ReqCreateTag{
        Tags: listTagsbody,
        Resources: listResourcesbody,
        ProjectId: &projectIdReqCreateTag,
    }
    response, err := client.CreateResourceTag(request)
```



```
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable
409	Conflict
410	Gone
412	Precondition Failed
429	Too Many Requests
500	Internal Server Error
501	Not Implemented
503	Service Unavailable

Error Codes

See **Error Codes**.

5.4.2 Deleting Tags in Batches

Function

This API is used to delete tags from multiple resources of a cloud service in batches. A maximum of 10 tags can be deleted from one resource. Tags of up to 50 resources can be deleted at a time.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1.0/resource-tags/batch-delete

Request Parameters

Table 5-233 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. TMS is a global service. When calling the Identity and Access Management (IAM) API to obtain a user token, set the **scope** field to **domain**. The value of **X-Subject-Token** in the response header is the user token.

Table 5-234 Request body parameters

Parameter	Mandatory	Type	Description
project_id	No	String	Specifies the project ID. This parameter is mandatory when **resource_type** is a region-specific service.
resources	Yes	Array of **ResourceTagBody** objects	Specifies the resource list.
tags	Yes	Array of **DeleteTagRequest** objects	Specifies tags.

Table 5-235 ResourceTagBody

Parameter	Mandatory	Type	Description
resource_id	Yes	String	Specifies the resource ID.

Parameter	Mandatory	Type	Description
resource_type	Yes	String	Specifies the resource type. This parameter is case-sensitive. Examples include: ecs, scaling_group, images, disk,vpcs, security-groups, shared_bandwidth, eip, and cdn. For more details, see "Querying Service Supported by TMS".

Table 5-236 DeleteTagRequest

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. The value can contain up to 36 characters including letters, digits, hyphens (-), and underscores (_).
value	No	String	Specifies a tag value. A tag value can contain a maximum of 43 characters and can contain letters (A-Z and a-z), digits (0-9), periods (.), hyphens (-), underscores (_), and Unicode characters (\u4E00-\u9FFF).

Response Parameters

Status code: 200

Table 5-237 Response body parameters

Parameter	Type	Description
failed_resources	Array of **TagDeleteResponseItem** objects	Specifies resources whose tags failed to be deleted.

Table 5-238 TagDeleteResponseItem

Parameter	Type	Description
resource_id	String	Specifies the resource ID.
resource_type	String	Specifies the resource type.
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.

Status code: 400

Table 5-239 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-240 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 401

Table 5-241 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-242 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 403

Table 5-243 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-244 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-245 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-246 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-247 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-248 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-249 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-250 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-251 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-252 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 410

Table 5-253 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-254 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 412

Table 5-255 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-256 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 429

Table 5-257 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-258 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-259 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-260 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-261 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-262 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-263 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-264 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

Deleting tags in batches

```
POST https://{Endpoint}/v1.0/resource-tags/batch-delete

{
  "project_id" : "xxxdcfffffffff",
  "resources" : [ {
    "resource_id" : "a28531fa-a8d5-468e-8417-86a80962ee5e",
    "resource_type" : "disk"
  }, {
    "resource_id" : "vpc-dc7d19b7",
    "resource_type" : "vpc"
  } ],
  "tags" : [ {
    "key" : "ENV"
  } ]
}
```

Example Responses

Status code: 200

Success

```
{
  "failed_resources" : [ {
    "resource_id" : "e1eb7c40cbea4c8389cde527594a306d",
    "resource_type" : "disk",
    "error_code" : "TMS.0002",
    "error_msg" : "Bad request"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Deleting tags in batches


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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;

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

public class DeleteResourceTagSolution {

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

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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteResourceTagRequest request = new DeleteResourceTagRequest();
        ReqDeleteTag body = new ReqDeleteTag();
        List<DeleteTagRequest> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new DeleteTagRequest()
                .withKey("ENV")
        );
        List<ResourceTagBody> listbodyResources = new ArrayList<>();
        listbodyResources.add(
            new ResourceTagBody()
                .withResourceId("a28531fa-a8d5-468e-8417-86a80962ee5e")
                .withResourceType("disk")
        );
        listbodyResources.add(
            new ResourceTagBody()
                .withResourceId("vpc-dc7d19b7")
                .withResourceType("vpc")
        );
        body.withTags(listbodyTags);
        body.withResources(listbodyResources);
        body.withProjectId("xxxdcfffffffff");
        request.withBody(body);
        try {
            DeleteResourceTagResponse response = client.deleteResourceTag(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
```



```
    }
}
```

Python

Deleting tags in batches

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

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

    credentials = GlobalCredentials(ak, sk)

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

    try:
        request = DeleteResourceTagRequest()
        listTagsbody = [
            DeleteTagRequest(
                key="ENV"
            )
        ]
        listResourcesbody = [
            ResourceTagBody(
                resource_id="a28531fa-a8d5-468e-8417-86a80962ee5e",
                resource_type="disk"
            ),
            ResourceTagBody(
                resource_id="vpc-dc7d19b7",
                resource_type="vpc"
            )
        ]
        request.body = ReqDeleteTag(
            tags=listTagsbody,
            resources=listResourcesbody,
            project_id="xxxdcfffffffff"
        )
        response = client.delete_resource_tag(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Deleting tags in batches

```
package main

import (
```



```
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)

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

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteResourceTagRequest{}
    var listTagsbody = []model.DeleteTagRequest{
        {
            Key: "ENV",
        },
    }
    var listResourcesbody = []model.ResourceTagBody{
        {
            ResourceId: "a28531fa-a8d5-468e-8417-86a80962ee5e",
            ResourceType: "disk",
        },
        {
            ResourceId: "vpc-dc7d19b7",
            ResourceType: "vpc",
        },
    }
    projectIdReqDeleteTag:= "xxxdcfffffffff"
    request.Body = &model.ReqDeleteTag{
        Tags: listTagsbody,
        Resources: listResourcesbody,
        ProjectId: &projectIdReqDeleteTag,
    }
    response, err := client.DeleteResourceTag(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable
409	Conflict
410	Gone
412	Precondition Failed
429	Too Many Requests
500	Internal Server Error
501	Not Implemented
503	Service Unavailable

Error Codes

See **Error Codes**.

5.4.3 Querying Tag Keys

Function

This API is used to query all tag keys in a specified region.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1.0/tag-keys

Table 5-265 Query Parameters

Parameter	Mandatory	Type	Description
region_id	No	String	Specifies the region ID.
limit	No	Integer	Specifies the number of records to be queried, which is **200** by default. The maximum value is **200** and the minimum value is **1**.
marker	No	String	Specifies the paging location marker (index). The query starts from the next piece of data indexed by this parameter. When querying the data on the first page, you do not need to specify this parameter. When querying the next page of data, set this parameter to the value of marker obtained from the last hit. If empty lists are returned, the last page has been queried.

Request Parameters

Table 5-266 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. TMS is a global service. When calling the Identity and Access Management (IAM) API to obtain a user token, set the **scope** field to **domain**. The value of **X-Subject-Token** in the response header is the user token.

Response Parameters

Status code: 200

Table 5-267 Response body parameters

Parameter	Type	Description
keys	Array of strings	Specifies tag keys.
page_info	**PageInfoTagKeys** object	Specifies the pagination information.

Table 5-268 PageInfoTagKeys

Parameter	Type	Description
next_marker	String	Specifies the paging location marker (index position).
current_count	Integer	Specifies the number of tag keys on the current page.

Status code: 400

Table 5-269 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-270 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 401

Table 5-271 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-272 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 403

Table 5-273 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-274 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-275 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-276 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-277 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-278 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-279 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-280 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-281 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-282 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 410

Table 5-283 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-284 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 412

Table 5-285 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-286 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 429

Table 5-287 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-288 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-289 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-290 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-291 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-292 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-293 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-294 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

Querying tag keys

```
GET https://{Endpoint}/v1.0/tag-keys?limit=10&marker=xxx
```

Example Responses

Status code: 200

OK

```
{
  "keys" : [ "ENV1", "ENV2" ],
  "page_info" : [ {
    "next_marker" : "xxxxx",
    "current_count" : 10
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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



```
import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;


public class ListTagKeysSolution {

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

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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        ListTagKeysRequest request = new ListTagKeysRequest();
        try {
            ListTagKeysResponse response = client.listTagKeys(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

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

    credentials = GlobalCredentials(ak, sk)

    client = TmsClient.new_builder() \
```



```
        .with_credentials(credentials) \
        .with_region(TmsRegion.value_of("<YOUR REGION>")) \
        .build()

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

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)

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

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable
409	Conflict
410	Gone
412	Precondition Failed
429	Too Many Requests
500	Internal Server Error
501	Not Implemented
503	Service Unavailable

Error Codes

See **Error Codes**.

5.4.4 Querying Tag Values

Function

This API is used to query all tag values by tag key in a specified region.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1.0/tag-values

Table 5-295 Query Parameters

Parameter	Mandatory	Type	Description
region_id	No	String	Specifies the region ID. If this parameter is specified, tag values of the specified region are returned.
limit	No	Integer	Specifies the number of records to be queried, which is **200** by default. The maximum value is **200** and the minimum value is **1**.
marker	No	String	Specifies the paging location marker (index position). The query starts from the next piece of data of the index specified by **marker**.Note:You do not need to specify this parameter when you query the data on the first page. When you query the data on subsequent pages, set this parameter to the **marker** value returned in the response body for the previous query. If the returned **next_marker** is empty, the last page is queried.
key	Yes	String	Specifies the tag key.

Request Parameters

Table 5-296 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. TMS is a global service. When calling the Identity and Access Management (IAM) API to obtain a user token, set the **scope** field to **domain**. The value of **X-Subject-Token** in the response header is the user token.

Response Parameters

Status code: 200

Table 5-297 Response body parameters

Parameter	Type	Description
values	Array of strings	Specifies tag values queried.
page_info	**PageInfoTagValues** object	Specifies the pagination information.

Table 5-298 PageInfoTagValues

Parameter	Type	Description
next_marker	String	Specifies the paging location marker (index position).
current_count	Integer	Specifies the number of tag values on the current page.

Status code: 400

Table 5-299 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-300 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 401

Table 5-301 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-302 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 403

Table 5-303 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-304 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-305 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-306 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-307 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-308 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-309 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-310 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-311 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-312 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 410

Table 5-313 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-314 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 412

Table 5-315 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-316 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 429

Table 5-317 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-318 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-319 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-320 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-321 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-322 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-323 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-324 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

Querying tag values

```
GET https://{Endpoint}/v1.0/tag-values?limit=10&marker=9
```

Example Responses

Status code: 200

OK

```
{
  "values" : [ "ENV1", "ENV2" ],
  "page_info" : [ {
    "next_marker" : "xxxxx",
    "current_count" : 10
  } ]
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;


public class ListTagValuesSolution {

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

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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        ListTagValuesRequest request = new ListTagValuesRequest();
        try {
            ListTagValuesResponse response = client.listTagValues(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
```



```
variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]

    credentials = GlobalCredentials(ak, sk)

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

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

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)

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

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable
409	Conflict
410	Gone
412	Precondition Failed
429	Too Many Requests
500	Internal Server Error
501	Not Implemented
503	Service Unavailable

Error Codes

See **Error Codes**.

5.4.5 Querying Resource Tags

Function

This API is used to query tags of a resource.

Calling Method

For details, see **Calling APIs**.

URI

GET /v2.0/resources/{resource_id}/tags

Table 5-325 Path Parameters

Parameter	Mandatory	Type	Description
resource_id	Yes	String	Specifies the resource ID.

Table 5-326 Query Parameters

Parameter	Mandatory	Type	Description
project_id	No	String	Specifies the project ID. This parameter is mandatory for region-specific resources.
resource_type	Yes	String	Specifies the resource type. This parameter is case-sensitive. Examples include: ecs, scaling_group, images, disk,vpcs, security-groups, shared_bandwidth, eip, and cdn. For more details, see "Querying Service Supported by TMS".

Request Parameters

Table 5-327 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. TMS is a global service. When calling the Identity and Access Management (IAM) API to obtain a user token, set the **scope** field to **domain**. The value of **X-Subject-Token** in the response header is the user token.

Response Parameters

Status code: 200

Table 5-328 Response body parameters

Parameter	Type	Description
tags	Array of **TagVo** objects	Specifies resource tags.

Table 5-329 TagVo

Parameter	Type	Description
key	String	Specifies the tag key. The value can contain up to 36 characters including letters, digits, hyphens (-), and underscores (_).
value	String	Specifies the tag value. The value can contain up to 43 characters including letters, digits, periods (.), hyphens (-), and underscores (_). It can be an empty string.

Status code: 401

Table 5-330 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-331 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 403

Table 5-332 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-333 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-334 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-335 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-336 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-337 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-338 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-339 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-340 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-341 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 410

Table 5-342 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-343 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 412

Table 5-344 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-345 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 429

Table 5-346 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-347 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-348 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-349 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-350 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-351 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-352 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-353 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

Querying tags of a resource

```
GET https://{Endpoint}/v2.0/resources/xxxx/tags?project_id=xxxx&resource_type=disk
```

Example Responses

Status code: 200

OK

```
{
  "tags" : [ {
    "key" : "key1",
    "value" : "value1"
  }, {
    "key" : "key2",
    "value" : "value2"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;


public class ShowResourceTagSolution {

    public static void main(String[] args) {
```



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

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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowResourceTagRequest request = new ShowResourceTagRequest();
        request.withResourceId("{resource_id}");
        try {
            ShowResourceTagResponse response = client.showResourceTag(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

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

    credentials = GlobalCredentials(ak, sk)

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

    try:
        request = ShowResourceTagRequest()
        request.resource_id = "{resource_id}"
        response = client.show_resource_tag(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
```



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

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)

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

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed

Status Code	Description
406	Not Acceptable
409	Conflict
410	Gone
412	Precondition Failed
429	Too Many Requests
500	Internal Server Error
501	Not Implemented
503	Service Unavailable

Error Codes

See **Error Codes**.

5.4.6 Querying Resources by Tag

Function

This API is used to query resources by tag.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1.0/resource-instances/filter

Request Parameters

Table 5-354 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. TMS is a global service. When calling the Identity and Access Management (IAM) API to obtain a user token, set the **scope** field to **domain**. The value of **X-Subject-Token** in the response header is the user token.

Table 5-355 Request body parameters

Parameter	Mandatory	Type	Description
project_id	No	String	Specifies the project ID. This parameter is mandatory when **resource_type** is a region-specific service.
resource_types	Yes	Array of strings	Specifies the resource type. This parameter is case-sensitive. Examples include: ecs, scaling_group, images, disk,vpcs, security-groups, shared_bandwidth, eip, and cdn. For more details, see "Querying Service Supported by TMS".
tags	Yes	Array of **Tag** objects	Specifies tags.
without_any_tag	No	Boolean	If this parameter is set to true, only untagged resources are queried.
offset	No	Integer	Specifies the index position. The query starts from the next data record specified by **offset**. The value must be a number and cannot be a negative number. The default value is **0**.
limit	No	Integer	Specifies the number of records to be queried. If the value is not specified, its default value is **200**. The maximum value of **limit** is **200** and the minimum value is **1**.

Table 5-356 Tag

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. The value can contain up to 36 characters including letters, digits, hyphens (-), and underscores (_).
values	Yes	Array of strings	Specifies tag values.Each value can contain up to 43 characters including letters, digits, periods (.), hyphens (-), and underscores (_). It can be an empty string.

Response Parameters

Status code: 200

Table 5-357 Response body parameters

Parameter	Type	Description
resources	Array of **Resources** objects	Specifies the resource list.
errors	Array of **Errors** objects	Specifies errors.
total_count	Integer	Specifies the total number of resources queried by tag.

Table 5-358 Resources

Parameter	Type	Description
project_id	String	ProjectID
project_name	String	Specifies the **Project** name.
resource_detail	Object	Specifies the resource details.
resource_id	String	Specifies the resource ID.
resource_name	String	Specifies the resource name.
resource_type	String	Specifies the resource type.

Parameter	Type	Description
tags	Array of **FilterTagResponse** objects	Resource Tags

Table 5-359 FilterTagResponse

Parameter	Type	Description
key	String	Specifies the tag key. The value can contain up to 36 characters including letters, digits, hyphens (-), and underscores (_).
value	String	Specifies the tag value. The value can contain up to 43 characters including letters, digits, periods (.), hyphens (-), and underscores (_). It can be an empty string.

Table 5-360 Errors

Parameter	Type	Description
error_code	String	Specifies the error code.
error_msg	String	Specifies the error message.
project_id	String	ProjectID
resource_type	String	Specifies the resource type.

Status code: 400

Table 5-361 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-362 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code

Parameter	Type	Description
error_msg	String	Error message

Status code: 401

Table 5-363 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-364 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 402

Table 5-365 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-366 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 403

Table 5-367 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-368 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-369 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-370 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-371 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-372 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-373 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-374 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 407

Table 5-375 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-376 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 408

Table 5-377 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-378 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-379 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-380 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-381 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-382 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-383 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-384 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 502

Table 5-385 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-386 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-387 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-388 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 504

Table 5-389 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-390 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

Querying resources by tag

```
POST https://v1.0/resource-instances/filter

{
  "project_id" : "e1eb7c40cbea4c8389cde527594a306d",
  "resource_types" : [ "disk", "ecs" ],
  "tags" : [ {
    "key" : "env",
    "values" : [ "dev", "prod" ]
  }, {
    "key" : "test",
    "values" : [ "test" ]
  } ],
  "offset" : 0,
  "limit" : 10
}
```


Example Responses

Status code: 200

OK


```
{
  "resources" : [ {
    "project_id" : "e1eb7c40cbea4c8389cde527594a306d",
    "project_name" : "XXXX",
    "resource_type" : "disk",
    "resource_id" : "b621f5ae-b5c1-49d7-a660-752c445434b4",
    "resource_name" : "lhj1-volume-0001",
    "tags" : [ {
      "key" : "ENV",
      "value" : "dev"
    } ]
  }, {
    "project_id" : "e1eb7c40cbea4c8389cde527594a306d",
    "project_name" : "XXXX",
    "resource_type" : "disk",
    "resource_id" : "87c9edc9-f66c-48b8-a22f-372b2e22d579",
    "resource_name" : "lhj2-volume-0002",
    "tags" : [ {
      "key" : "prod",
      "value" : "disk"
    } ]
  } ],
  "errors" : [ {
    "project_id" : "e1eb7c40cbea4c8389cde527594a306d",
    "resource_type" : "disk",
    "error_code" : "TMS.0002",
    "error_msg" : "Bad request"
  } ],
  "total_count" : 2
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

Querying resources by tag

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;

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

public class ListResourceSolution {

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



```
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        ListResourceRequest request = new ListResourceRequest();
        ResqTagResource body = new ResqTagResource();
        List<String> listTagsValues = new ArrayList<>();
        listTagsValues.add("test");
        List<String> listTagsValues1 = new ArrayList<>();
        listTagsValues1.add("dev");
        listTagsValues1.add("prod");
        List<Tag> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new Tag()
                .withKey("env")
                .withValues(listTagsValues1)
        );
        listbodyTags.add(
            new Tag()
                .withKey("test")
                .withValues(listTagsValues)
        );
        List<String> listbodyResourceTypes = new ArrayList<>();
        listbodyResourceTypes.add("disk");
        listbodyResourceTypes.add("ecs");
        body.withLimit(10);
        body.withOffset(0);
        body.withTags(listbodyTags);
        body.withResourceTypes(listbodyResourceTypes);
        body.withProjectId("e1eb7c40cbea4c8389cde527594a306d");
        request.withBody(body);
        try {
            ListResourceResponse response = client.listResource(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Querying resources by tag

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

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



```
risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]

    credentials = GlobalCredentials(ak, sk)

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

    try:
        request = ListResourceRequest()
        listValuesTags = [
            "test"
        ]
        listValuesTags1 = [
            "dev",
            "prod"
        ]
        listTagsbody = [
            Tag(
                key="env",
                values=listValuesTags1
            ),
            Tag(
                key="test",
                values=listValuesTags
            )
        ]
        listResourceTypesbody = [
            "disk",
            "ecs"
        ]
        request.body = ResqTagResource(
            limit=10,
            offset=0,
            tags=listTagsbody,
            resource_types=listResourceTypesbody,
            project_id="e1eb7c40cbea4c8389cde527594a306d"
        )
        response = client.list_resource(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Querying resources by tag

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
```



```
variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListResourceRequest{}
    var listValuesTags = []string{
        "test",
    }
    var listValuesTags1 = []string{
        "dev",
        "prod",
    }
    var listTagsbody = []model.Tag{
        {
            Key: "env",
            Values: listValuesTags1,
        },
        {
            Key: "test",
            Values: listValuesTags,
        },
    }
    var listResourceTypesbody = []string{
        "disk",
        "ecs",
    }
    limitResqTagResource:= int32(10)
    offsetResqTagResource:= int32(0)
    projectIdResqTagResource:= "e1eb7c40cbea4c8389cde527594a306d"
    request.Body = &model.ResqTagResource{
        Limit: &limitResqTagResource,
        Offset: &offsetResqTagResource,
        Tags: listTagsbody,
        ResourceTypes: listResourceTypesbody,
        ProjectId: &projectIdResqTagResource,
    }
    response, err := client.ListResource(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
402	Payment Required
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable
407	Proxy Authentication Required
408	Request Timeout
409	Conflict
500	Internal Server Error
501	Not Implemented
502	Bad Gateway
503	Service Unavailable
504	Gateway Timeout

Error Codes

See **Error Codes**.

5.5 Services Supported by Tag Management Service

5.5.1 Querying Services Supported by TMS

Function

This API is used to query services supported by TMS.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1.0/tms/providers

Table 5-391 Query Parameters

Parameter	Mandatory	Type	Description
locale	No	String	Specifies the display language.
limit	No	Integer	Specifies the number of records to be queried, which is **10** by default. The maximum value is **200** and the minimum value is **1**.
offset	No	Integer	Specifies the index position, which starts from the next data record specified by **offset**. The value must be a number and cannot be a negative number. The default value is **0**.
provider	No	String	Specifies the cloud service name.

Request Parameters

Table 5-392 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. TMS is a global service. When calling the Identity and Access Management (IAM) API to obtain a user token, set the **scope** field to **domain**. The value of **X-Subject-Token** in the response header is the user token.

Response Parameters

Status code: 200

Table 5-393 Response body parameters

Parameter	Type	Description
providers	Array of **ProviderResponseBody** objects	Specifies cloud services.
total_count	Integer	Specifies the total number of cloud services supported by TMS.

Table 5-394 ProviderResponseBody

Parameter	Type	Description
provider	String	Specifies the cloud service name.
provider_i18n_display_name	String	Specifies the display name of the resource. You can configure the language by setting the **locale** parameter.
resource_types	Array of **ResourceTypeBody** objects	Specifies the resource type list.

Table 5-395 ResourceTypeBody

Parameter	Type	Description
resource_type	String	Specifies the resource type.
resource_type_i18n_display_name	String	Specifies the display name of the resource type. You can configure the language by setting the **locale** parameter.
regions	Array of strings	Specifies supported regions.
global	Boolean	Specifies whether the resource is a global resource.

Status code: 400

Table 5-396 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-397 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 401

Table 5-398 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-399 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 402

Table 5-400 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-401 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 403

Table 5-402 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-403 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 404

Table 5-404 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-405 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 405

Table 5-406 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-407 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 406

Table 5-408 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-409 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 407

Table 5-410 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-411 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 408

Table 5-412 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-413 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 409

Table 5-414 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-415 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 500

Table 5-416 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-417 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 501

Table 5-418 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-419 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 502

Table 5-420 Response body parameters

Parameter	Type	Description
error	**RespErrorMessage** object	Response error information.

Table 5-421 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 503

Table 5-422 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-423 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Status code: 504

Table 5-424 Response body parameters

Parameter	Type	Description
error	RespErrorMessage object	Response error information.

Table 5-425 RespErrorMessage

Parameter	Type	Description
error_code	String	Request error code
error_msg	String	Error message

Example Requests

None

Example Responses

Status code: 200

OK


```
{
  "providers" : [ {
    "provider" : "evs",
    "provider_i18n_display_name" : "Elastic Volume Service",
    "resource_types" : {
      "resource_type_i18n_display_name" : "EVS-Disk",
      "global" : false,
      "resource_type" : "disk",
```



```
    "regions" : [ "regionId1" ]
   }
  } ],
  "total_count" : 1
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.GlobalCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.tms.v1.region.TmsRegion;
import com.huaweicloud.sdk.tms.v1.*;
import com.huaweicloud.sdk.tms.v1.model.*;


public class ListProvidersSolution {

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

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

        TmsClient client = TmsClient.newBuilder()
                .withCredential(auth)
                .withRegion(TmsRegion.valueOf("<YOUR REGION>"))
                .build();
        ListProvidersRequest request = new ListProvidersRequest();
        try {
            ListProvidersResponse response = client.listProviders(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import GlobalCredentials
```



```
from huaweicloudsdktms.v1.region.tms_region import TmsRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdktms.v1 import *

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

    credentials = GlobalCredentials(ak, sk)

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

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

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/global"
    tms "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/tms/v1/region"
)

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

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

    client := tms.NewTmsClient(
        tms.TmsClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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



```
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized
402	Payment Required
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable
407	Proxy Authentication Required
408	Request Timeout
409	Conflict
500	Internal Server Error
501	Not Implemented
502	Bad Gateway
503	Service Unavailable
504	Gateway Timeout

Error Codes

See **Error Codes**.

6 Permissions Policies and Supported Actions

6.1 Permissions Policies and Supported Actions

You can use Identity and Access Management (IAM) for fine-grained permissions management of your TMS resources. If your account does not need individual IAM users, you can skip this section.

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.

You can grant users permissions by using **roles** and **policies**. Roles are a type of 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.

Each 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 predefined tags using an API, the user must have been granted permissions that allow the **tms:predefineTags:list** action.

Supported Actions

Operations supported by a fine-grained policy 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.
- Dependencies: actions which a specific action depends on. When allowing an action for a user, you also need to allow any existing action dependencies for that user.
- IAM or enterprise projects: Type of projects for which an action will take effect. Policies that contain actions for both IAM and enterprise projects can be used and applied for both IAM and Enterprise Management. Policies that contain actions only for IAM projects can be used and applied to IAM only. Administrators can check whether an action supports IAM projects or enterprise projects in the action list. For details about the differences between IAM and enterprise projects, see **What Are the Differences Between IAM and Enterprise Management?**

6.2 TMS API Actions

Table 6-1 API actions

Permission	API	Action	IAM Project	Enterprise Project
Querying predefined tags	GET /v1.0/predefine_tags	tms:predefineTags:list	Supported	Not supported
Creating predefined tags	POST /v1.0/predefine_tags/action	tms:predefineTags:create	Supported	Not supported
Deleting predefined tags	POST /v1.0/predefine_tags/action	tms:predefineTags:delete	Supported	Not supported
Modifying a predefined tag	PUT /v1.0/predefine_tags	tms:predefineTags:update	Supported	Not supported
Creating tags in batches	POST /v1.0/resource-tags/batch-create	tms:resourceTags:create	Supported	Not supported
Deleting tags in batches	POST /v1.0/resource-tags/batch-delete	tms:resourceTags:delete	Supported	Not supported
Querying tag keys	GET /v1.0/tag-keys	tms:tagKeys:list	Supported	Not supported
Querying tag values	GET /v1.0/tag-values	tms:tagValues:list	Supported	Not supported

Permission	API	Action	IAM Project	Enterprise Project
Querying resource tags	GET /v2.0/resources/{resource_id}/tags	tms:resourceTags:list	Supported	Not supported
Querying resources by tag	POST /v1.0/resource-instances/filter	tms:resources:list	Supported	Not supported
Querying tag quotas	GET /v1.0/tms/quotas	Included in the **Tenant Guest** permissions.	Not supported	Not supported
Querying services supported by TMS	GET /v1.0/tms/providers	Included in the **Tenant Guest** permissions.	Not supported	Not supported

A Appendix

A.1 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	Normal response code

- 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	Access to the requested page is denied.
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.

Returned Value	Description
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.

A.2 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 **API Gateway Error Codes**.

Status Code	Error Codes	Error Message	Description	Solution
400	TMS.0002	Bad request.	Invalid request data.	Check request parameters.
400	TMS.0007	Limit is invalid.	Invalid limit.	Specify a valid limit.
400	TMS.0008	Marker is invalid.	Invalid marker.	Specify a valid marker.
400	TMS.0009	Key is invalid.	Invalid key.	Specify a valid key.
400	TMS.0010	Value is invalid.	Invalid value.	Specify a valid value.
400	TMS.0011	Action is invalid.	Invalid action.	Specify a valid action.
400	TMS.0012	Tags is empty.	tags is left blank.	Specify a valid tags.

Status Code	Error Codes	Error Message	Description	Solution
400	TMS.0013	Empty element in tags.	Elements in tags are empty.	Specify a valid tags.
400	TMS.0016	Values is too much.	The maximum number of characters for value has been reached.	Specify a valid value.
400	TMS.0017	Offset is invalid.	Invalid offset.	Specify a valid tags.
400	TMS.1001	The number of predefine tag exceeds the upper limit.	The maximum number of predefined tags has been reached.	Delete unnecessary predefined tags.
400	TMS.1002	Old_tag cannot be found.	The old tag does not exist.	Check the old tag.
400	TMS.1003	New_tag already exists.	The new tag already exists.	Check the new tag.
400	TMS.1004	Old_tag is empty.	The old tag is left blank.	Check the old tag.
400	TMS.1005	Invalid key in old_tag.	Invalid key in the old tag.	Specify a valid key for the old tag.
400	TMS.1006	Invalid value in old_tag.	Invalid value in the old tag.	Specify a valid value for the old tag.
400	TMS.1007	New_tag is empty.	The new tag is left blank.	Check the new tag.
400	TMS.1008	Invalid key in new_tag.	Invalid key in the new tag.	Specify a valid key for the new tag.
400	TMS.1009	Invalid value in new_tag.	Invalid value in the new tag.	Specify a valid value for the new tag.
400	TMS.1010	Order_field is invalid.	Invalid sortField.	Specify a valid sortField.
400	TMS.1011	Order_method is invalid.	Invalid orderMethod.	Specify a valid orderMethod.

Status Code	Error Codes	Error Message	Description	Solution
401	TMS.0003	Unauthorized user.	Unauthorized request.	Check the authentication token.
403	TMS.0004	Permission error.	Insufficient permissions.	Check your permissions.
403	TMS.0006	The request is too much, try again later.	Too many requests.	Try again later.
404	TMS.0005	Requested resources not found.	Failed to find the resource.	Contact the service support personnel to check whether the API has been registered.
409	TMS.0014	Conflict	Internal conflict.	Contact service support personnel.
500	TMS.0001	System error.	System error.	Contact service support personnel.
504	TMS.0018	Query Time Out.	Query timed out.	Try again later.

A.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 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.

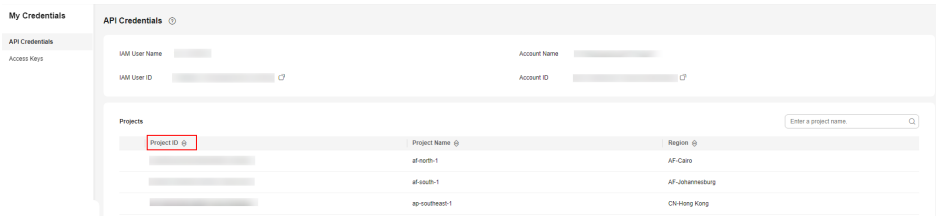

```
{
    "projects": [
        {
            "domain_id": "65ewtrgaggshhk1223245sghjlse684b",
            "is_domain": false,
            "parent_id": "65ewtrgaggshhk1223245sghjlse684b",
            "name": "project_name",
            "description": "",
            "links": {
                "next": 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.

Figure A-1 Viewing the project ID



B Change History

Release On	Description
2023-07-10	This issue is the fourth official release, which incorporates the following change: The **Resources Supported by TMS** section was added.
2022-12-09	This issue is the third official release, which incorporates the following changes: • Added **Resource Tags**. • Add **Querying Services Supported by TMS**.
2021-11-30	This issue is the second official release, which incorporates the following change: Added **Querying Tag Quotas**.
2019-02-15	This issue is the first official release.

