

# Tag Management Service

## API Reference

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# 1 Before You Start

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## 1.1 Overview

Welcome to *Tag Management Service API Reference*. Tags are used to identify cloud resources. When you have many cloud resources of the same type, you can use tags to classify cloud resources by dimension (for example, use, owner, or environment). Tag Management Service (TMS) is a visualized service for fast and unified cross-region tagging and categorization of cloud 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](#).

If you plan to access TMS through an API, ensure that you are familiar with TMS concepts. For details, see [Tag Management Service](#).

## 1.2 API Calling

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

## 1.3 Endpoints

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

## 1.4 Notes and Constraints

- The number of tags that you can create is determined by your quota. To view or increase the quota, see [Modifying Resource Quotas](#).
- For more constraints, see API description.

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

An IAM user is created by an account 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**

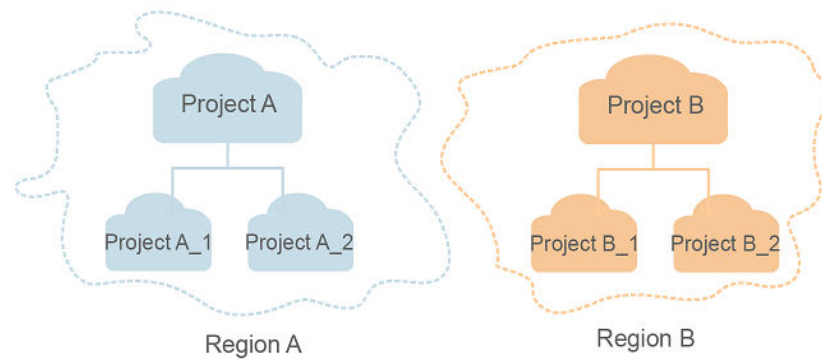
Regions are divided based on geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service (EVS), Object Storage Service (OBS), Virtual Private Cloud (VPC), Elastic IP (EIP), and Image Management Service (IMS), are shared within the same region. 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 of a cloud service
Batch Removing Tags	API for batch removing tags from multiple resources of a cloud service
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

API	Description
Filtering Resources by Tag	API for querying resources by tag
Querying Services Supported by TMS	API for querying cloud services supported by TMS

# 3 Calling APIs

## 3.1 Making an API Request

This section describes the structure of a REST API request, and uses the IAM API for **obtaining a user token** as an example to demonstrate how to call an API. The obtained token can then be used to authenticate the calling of other APIs.

### Request URI

A request URI is in the following format:

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

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

**Table 3-1** URI parameter description

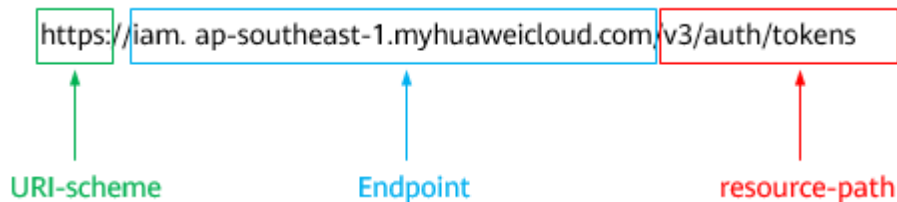
Parameter	Description
URI-scheme	Protocol used to transmit requests. All APIs use HTTPS.
Endpoint	Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from <b>Regions and Endpoints</b> . For example, the endpoint of IAM in region <b>CN-Hong Kong</b> is <b>iam.ap-southeast-1.myhuaweicloud.com</b> .
resource-path	Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the <b>resource-path</b> of the API used to obtain a user token is <b>/v3/auth/tokens</b> .

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 <i>Parameter name=Parameter value</i> . For example, <b>?limit=10</b> indicates that a maximum of 10 data records will be displayed.

For example, to obtain an IAM token 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/auth/tokens) in the URI of the API used to **obtain a user token**. Then, construct the URI as follows:

```
https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
```

**Figure 3-1** Example URI



**NOTE**

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

## Request Methods

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

**Table 3-2** HTTP methods

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

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

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

POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens

## Request Header

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

Common request header fields are as follows.

**Table 3-3** Common request header fields

Parameter	Description	Mandatory	Example Value
Host	Specifies the server domain name and port number of the resources being requested. The value can be obtained from the URL of the service API. The value is in the format of <i>Hostname:Port number</i> . If the port number is not specified, the default port is used. The default port number for <b>https</b> is <b>443</b> .	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 <b>application/json</b> 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 <a href="#">Obtaining a Project ID</a> .	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 <a href="#">obtaining a user token</a> (This is the only API that does not require authentication). After the request is processed, the value of <b>X-Subject-Token</b> in the response header is the token value.	No This field is mandatory for token authentication.	The following is part of an example token: MIIPAgYJKoZlhvcNAQcCo...ggg1BBIINPXsidG9rZ

 **NOTE**

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

For more details, see "Authentication Using AK/SK" in [Authentication](#).

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

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

## (Optional) Request Body

This part is optional. The body of a request is often sent in a structured format (for example, JSON or XML) as specified in the **Content-Type** header field. The request body transfers content except the request header.

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

In the case of the API used to [obtain a user token](#), the request parameters and parameter description can be obtained from the API request. The following provides an example request with a body included. Replace *username*,

*domainname*, *\$ADMIN\_PASS* (login password), and *xxxxxxxxxxxxxxxxxxxx* (project name) with the actual values. Obtain a project name from [Regions and Endpoints](#).

 NOTE

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

POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens  
Content-Type: application/json

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
          "password": "$ADMIN_PASS", //You are advised to store it in ciphertext in the
configuration file or an environment variable and decrypt it when needed to ensure security.
          "domain": {
            "name": "domainname"
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "xxxxxxxxxxxxxxxxxxxx"
      }
    }
  }
}
```

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

## 3.2 Authentication

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

- Token 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": "xxxxxxx" // 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/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

## AK/SK Authentication

### NOTE

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

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

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



In AK/SK authentication, you can use an AK/SK to sign requests based on the signature algorithm or using the signing SDK. For details about how to sign requests and use the signing SDK, see [API Request Signing Guide](#).

**NOTE**

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

## 3.3 Response

### Status Code

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

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

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

### Response Header

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

[Figure 3-2](#) shows the response header fields for the API used to [obtain a user token](#). The **X-Subject-Token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

**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 obtaining a user token

```

connection → keep-alive
content-type → application/json
date → Tue, 12 Feb 2019 06:52:13 GMT
server → Web Server
strict-transport-security → max-age=31536000; includeSubdomains;
transfer-encoding → chunked
via → proxy A
x-content-type-options → nosniff
x-download-options → noopen
x-frame-options → SAMEORIGIN
x-iam-trace-id → 218d45ab-d674-4995-af3a-2d0255ba41b5
x-subject-token → [REDACTED]
x-xss-protection → 1; mode=block;
    
```

## (Optional) Response Body

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

The following is part of the response body for the API used to [obtain a user token](#).

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

```

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

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

In the response body, **error\_code** is an error code, and **error\_msg** provides information about the error.

# 4 Getting Started

This section describes how to create predefined tags by invoking the TMS API.

## 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 user's token and add **X-Auth-Token** to the request header of the IMS API when making an API call.

- The IAM API used to obtain the 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 <a href="#">VersionDetail</a> objects	List of versions

**Table 5-2** VersionDetail

Parameter	Type	Description
id	String	Specifies the version ID, for example, v1.0.
links	Array of <a href="#">Link</a> objects	Specifies the API URL.
version	String	If the APIs of this version support microversions, the supported latest microversion is returned. If the microversion is not supported, no information is returned.
status	String	Specifies the version status. Possible values are as follows: <b>CURRENT</b> : widely used version <b>SUPPORTED</b> : earlier version which is still supported <b>DEPRECATED</b> : 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 the APIs of this version support microversions, the supported earliest microversion is returned. If the microversion is not supported, no information is returned.

**Table 5-3** Link

Parameter	Type	Description
href	String	Specifies the API URL.
rel	String	self

**Status code: 400**

**Table 5-4** Response body parameters

Parameter	Type	Description
error	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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

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

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

    credentials = 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
500	Internal Server Error

Status Code	Description
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 <b>scope</b> field to <b>domain</b> . The value of <b>X-Subject-Token</b> in the response header is the user token.

## Response Parameters

Status code: 200

**Table 5-28** Response body parameters

Parameter	Type	Description
version	<a href="#">VersionDetail</a> 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 <a href="#">Link</a> objects	Specifies the API URL.
version	String	If the APIs of this version support microversions, the supported latest microversion is returned. If the microversion is not supported, no information is returned.
status	String	Specifies the version status. Possible values are as follows: <b>CURRENT</b> : widely used version <b>SUPPORTED</b> : earlier version which is still supported <b>DEPRECATED</b> : 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 the APIs of this version support microversions, the supported earliest microversion is returned. If the microversion is not supported, no information is returned.

**Table 5-30** Link

Parameter	Type	Description
href	String	Specifies the API URL.
rel	String	self

Status code: 400

**Table 5-31** Response body parameters

Parameter	Type	Description
error	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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();  
        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
```

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

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

    credentials = GlobalCredentials(ak, sk) \

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

    try:
        request = ShowApiVersionRequest()
        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{}
    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 <b>scope</b> field to <b>domain</b> . The value of <b>X-Subject-Token</b> 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 <b>create</b> .
tags	Yes	Array of <a href="#">PredefineTagRequest</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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

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

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

example, set environment variables CLOUD\_SDK\_AK and CLOUD\_SDK\_SK in the local environment

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

credentials = 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 <b>delete</b> .
tags	Yes	Array of <a href="#">PredefineTag Request</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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.getErrMsg());
        }
    }
}
```

## Python

### Deleting predefined tags

```
# coding: utf-8

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

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

    credentials = 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. <b>Key</b> 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. <b>Value</b> 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 <b>10</b> by default. The maximum value is <b>1000</b> and the minimum value is <b>1</b> . If the value is <b>0</b> , the number of records to be queried is not limited. Minimum: <b>1</b> Maximum: <b>1000</b> Default: <b>10</b>
marker	No	String	Specifies the paging location marker (index position). The query starts from the next piece of data of the index specified by <b>marker</b> . 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 <b>marker</b> value returned in the response body for the previous query. If the returned <b>tags</b> is empty, the last page is queried.

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

## 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 <b>scope</b> field to <b>domain</b> . The value of <b>X-Subject-Token</b> 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 <a href="#">PredefineTag</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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();
request.withKey("<key>");
request.withValue("<value>");
request.withLimit(<limit>);
request.withMarker("<marker>");
request.withOrderField("<order_field>");

request.withOrderMethod(ListPredefineTagsRequest.OrderMethodEnum.fromValue("<order_method>"));
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

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

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

    credentials = GlobalCredentials(ak, sk) \

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

    try:
        request = ListPredefineTagsRequest()
        request.key = "<key>"
        request.value = "<value>"
        request.limit = <limit>
        request.marker = "<marker>"
        request.order_field = "<order_field>"
        request.order_method = "<order_method>"
        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{}
    keyRequest := "<key>"
    request.Key = &keyRequest
    valueRequest := "<value>"
    request.Value = &valueRequest
    limitRequest := int32(<limit>)
    request.Limit = &limitRequest
    markerRequest := "<marker>"
    request.Marker = &markerRequest
    orderFieldRequest := "<order_field>"
    request.OrderField = &orderFieldRequest
    orderMethodRequest := model.GetListPredefineTagsRequestOrderMethodEnum().<ORDER_METHOD>
    request.OrderMethod = &orderMethodRequest
    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
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 <b>scope</b> field to <b>domain</b> . The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 5-144** Request body parameters

Parameter	Mandatory	Type	Description
new_tag	Yes	<a href="#">PredefineTag Request</a> object	Specifies the modified tag.
old_tag	Yes	<a href="#">PredefineTag Request</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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

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

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

    credentials = 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
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 <b>scope</b> field to <b>domain</b> . The value of <b>X-Subject-Token</b> 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 <a href="#">TagQuota</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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

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

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

    credentials = 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

Status Code	Description
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 <b>scope</b> field to <b>domain</b> . The value of <b>X-Subject-Token</b> 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 <b>resource_type</b> is a region-specific service.
resources	Yes	Array of <b>ResourceTagBody</b> objects	Specifies the resource list.
tags	Yes	Array of <b>CreateTagRequest</b> 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.

**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 <a href="#">TagCreateResponseItem</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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": "xxxcffffffff",
  "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-8417-86a8096dddd")
            .withResourceType("vpc")
    );
    body.withTags(listbodyTags);
    body.withResources(listbodyResources);
    body.withProjectId("xxxxcffffff");
    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

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

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

    credentials = 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="xxxxcffffff"
)
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:= "xxxxcffffff"
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 <b>scope</b> field to <b>domain</b> . The value of <b>X-Subject-Token</b> 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 <b>resource_type</b> is a region-specific service.
resources	Yes	Array of <a href="#">ResourceTag Body</a> objects	Specifies the resource list.



Parameter	Mandatory	Type	Description
tags	Yes	Array of <a href="#">DeleteTagRequest</a> objects	Specifies tags.

**Table 5-235** ResourceTagBody

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

**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 <a href="#">TagDeleteResponseItem</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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": "xxxxcffffff",
  "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("xxxdcffffff");
        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  
  
from huaweicloudsdkcore.auth.credentials import GlobalCredentials  
from huaweicloudsdtms.v1.region.tms_region import TmsRegion  
from huaweicloudsdkcore.exceptions import exceptions  
from huaweicloudsdtms.v1 import *  
  
if __name__ == "__main__":  
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security  
    # risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment  
    # variables and decrypted during use to ensure security.  
    # In this example, AK and SK are stored in environment variables for authentication. Before running this  
    # example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment  
    ak = __import__('os').getenv("CLOUD_SDK_AK")  
    sk = __import__('os').getenv("CLOUD_SDK_SK")  
  
    credentials = 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="xxdcffffff"  
        )  
        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:= "xxxxdcffffff"
    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 <b>200</b> by default. The maximum value is <b>200</b> and the minimum value is <b>1</b> . Minimum: <b>1</b> Maximum: <b>200</b> Default: <b>200</b>
marker	No	String	Specifies the paging location marker (index position). The query starts from the next piece of data of the index specified by <b>marker</b> . 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 <b>marker</b> value returned in the response body for the previous query. If the returned <b>next_marker</b> is empty, the last page is 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 <b>scope</b> field to <b>domain</b> . The value of <b>X-Subject-Token</b> 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	<a href="#">PageInfoTagKeys</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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();
        request.withRegionId("<region_id>");
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        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

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

if __name__ == "__main__":
```

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

credentials = GlobalCredentials(ak, sk) \

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

try:
    request = ListTagKeysRequest()
    request.region_id = "<region_id>"
    request.limit = <limit>
    request.marker = "<marker>"
    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{}
    regionIdRequest := "<region_id>"
    request.RegionId = &regionIdRequest
    limitRequest := int32(<limit>)
    request.Limit = &limitRequest
    markerRequest := "<marker>"
    request.Marker = &markerRequest
    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 <b>200</b> by default. The maximum value is <b>200</b> and the minimum value is <b>1</b> . Minimum: <b>1</b> Maximum: <b>200</b> Default: <b>200</b>
marker	No	String	Specifies the paging location marker (index position). The query starts from the next piece of data of the index specified by <b>marker</b> . 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 <b>marker</b> value returned in the response body for the previous query. If the returned <b>next_marker</b> 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 <b>scope</b> field to <b>domain</b> . The value of <b>X-Subject-Token</b> 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	<a href="#">PageInfoTagValues</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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();
        request.withRegionId("<region_id>");
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withKey("<key>");
        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

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

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

    credentials = GlobalCredentials(ak, sk) \

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

    try:
        request = ListTagValuesRequest()
        request.region_id = "<region_id>"
        request.limit = <limit>
        request.marker = "<marker>"
        request.key = "<key>"
        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{
    regionIdRequest:= "<region_id>"
    request.RegionId = &regionIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    request.Key = "<key>"
    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.

## 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 <b>scope</b> field to <b>domain</b> . The value of <b>X-Subject-Token</b> 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 <a href="#">TagVo</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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.withProjectId("<project_id>");
request.withResourceType("<resource_type>");
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

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

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

    credentials = GlobalCredentials(ak, sk) \

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

    try:
        request = ShowResourceTagRequest()
        request.project_id = "<project_id>"
        request.resource_type = "<resource_type>"
        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{}
    projectIdRequest := "<project_id>"
    request.ProjectId = &projectIdRequest
    request.ResourceType = "<resource_type>"
    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



Status Code	Description
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](#).

## 5.4.6 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 <b>scope</b> field to <b>domain</b> . The value of <b>X-Subject-Token</b> 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 <b>resource_type</b> is a region-specific service.
resource_types	Yes	Array of strings	Specifies the resource type. The value of this parameter is case sensitive, for example, <b>ecs</b> , <b>scaling_group</b> , <b>images</b> , <b>disk</b> , <b>vpcs</b> , <b>security-groups</b> , <b>shared_bandwidth</b> , <b>eip</b> , and <b>cdn</b> . For details, see the section "Appendix - Resource Types Supported by TMS".
tags	Yes	Array of <b>Tag</b> 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 <b>offset</b> . The value must be a number and cannot be a negative number. The default value is <b>0</b> .

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of records to be queried. If the value is not specified, its default value is <b>200</b> . The maximum value of <b>limit</b> is <b>200</b> and the minimum value is <b>1</b> .

**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 <b>Resources</b> objects	Specifies the resource list.
errors	Array of <b>Errors</b> 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 <b>Project</b> 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.
tags	Array of <a href="#">FilterTagResponse</a> 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	<a href="#">RespErrorMessage</a> object	Response error information.

**Table 5-362** RespErrorMessage

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

**Status code: 401**

**Table 5-363** Response body parameters

Parameter	Type	Description
error	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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

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

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

    credentials = 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. Default: <b>zh-cn</b>
limit	No	Integer	Specifies the number of records to be queried, which is <b>10</b> by default. The maximum value is <b>200</b> and the minimum value is <b>1</b> .
offset	No	Integer	Specifies the index position, which starts from the next data record specified by <b>offset</b> . The value must be a number and cannot be a negative number. The default value is <b>0</b> .
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 <b>scope</b> field to <b>domain</b> . The value of <b>X-Subject-Token</b> 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 <b>ProviderResponseBody</b> 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 <b>locale</b> parameter.
resource_types	Array of <b>ResourceTypeBody</b> 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 <b>locale</b> 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	<b>RespErrorMessage</b> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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	<a href="#">RespErrorMessage</a> 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();
        request.withLocale(ListProvidersRequest.LocaleEnum.fromValue("<locale>"));
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withProvider("<provider>");
        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

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

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

    credentials = GlobalCredentials(ak, sk) \

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

    try:
        request = ListProvidersRequest()
        request.locale = "<locale>"
        request.limit = <limit>
        request.offset = <offset>
        request.provider = "<provider>"
        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{}
localeRequest:= model.GetListProvidersRequestLocaleEnum().<LOCALE>
request.Locale = &localeRequest
limitRequest:= int32(<limit>)
request.Limit = &limitRequest
offsetRequest:= int32(<offset>)
request.Offset = &offsetRequest
providerRequest:= "<provider>"
request.Provider = &providerRequest
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:resource Tags: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 <b>Tenant Guest</b> permissions.	Not supported	Not supported
Querying services supported by TMS	GET /v1.0/tms/providers	Included in the <b>Tenant Guest</b> permissions.	Not supported	Not supported

# A Appendix

## A.1 Cloud Services Supported by TMS

To obtain the services, resources, and regions supported by TMS, you can call the [Querying Services Supported by TMS](#) API. The **provider** field indicates the cloud service name, and the **resource\_type** field indicates the resource type.

## A.2 Status Codes

- Normal

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

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

## A.3 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.



Status Code	Error Codes	Error Message	Description	Solution
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.
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.

Status Code	Error Codes	Error Message	Description	Solution
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.
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.4 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/a4adasfjljaaakla12334jklga9sasfg"
      },
      "id": "a4adasfjljaaakla12334jklga9sasfg",
      "enabled": true
    }
  ],
  "links": {
    "next": null,
    "previous": null,
    "self": "https://www.example.com/v3/projects"
  }
}
```

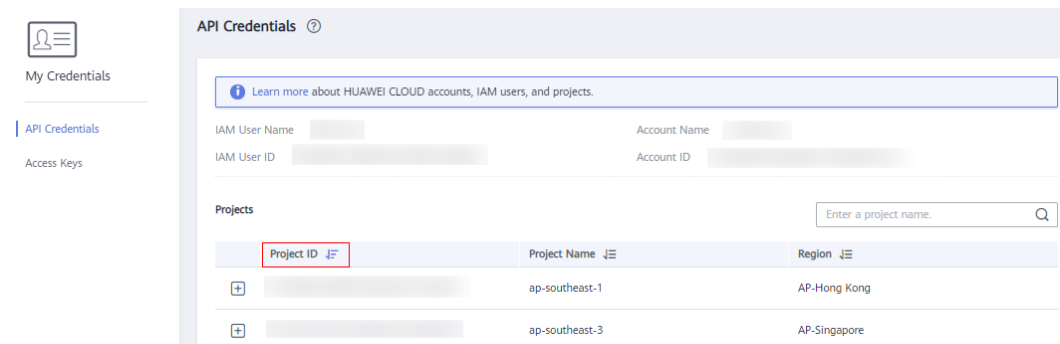
## Obtain a Project ID from the Console

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: Added <a href="#">Cloud Services Supported by TMS</a> .
2022-12-09	This issue is the third official release, which incorporates the following changes: <ul style="list-style-type: none"><li>• Added <a href="#">Resource Tags</a>.</li><li>• Add <a href="#">Querying Services Supported by TMS</a>.</li></ul>
2021-11-30	This issue is the second official release, which incorporates the following change: Added <a href="#">Querying Tag Quotas</a> .
2019-02-15	This issue is the first official release.