Tag Management Service

User Guide

Issue	01
Date	2023-08-10

Security Declaration

Vulnerability

Huawei's regulations on product vulnerability management are subject to "Vul. Response Process". For details about the policy, see the following website:https://www.huawei.com/en/psirt/vul-response-process For enterprise customers who need to obtain vulnerability information, visit:https://securitybulletin.huawei.com/enterprise/en/security-advisory

Contents

1 Resource Tags

1.1 Overview

By adding tags to resources under your account, you can classify resources. Tags are displayed in the table format for you to manage and you can perform operations on multiple tags at a time.

You can also search for all resource tags and predefined tags in a specified region on the TMS console. You can add a tag to up to 500 resources at a time.

This section describes how to query resources by tag, create tag keys, add a tag to multiple cloud resources at the same time, and update, modify, or delete resource tags.

Constraints and Limitations

- You can use up to 10 tags to query for resources at the same time.
- To search for specified tags, entering a key is mandatory but entering a value is optional.
- Each resource supports up to 10 key-value pairs.
- For each resource, each tag key must be unique, and each tag key can have only one tag value.
- **Key**: A key can contain up to 36 characters, including letters, digits, underscores (_), and hyphens (-).
- **Value**: A value can contain up to 43 characters, including letters, digits, underscores (_), periods (.), and hyphens (-).
- Up to 500 resources can be tagged at the same time.

1.2 Searching for Resources

Before adding tags, you must search for available cloud resources. Cloud resource tags will be displayed on the TMS console where you can manage them, including adding, deleting, and modifying tags.

TMS provides the following search options:

- **Region**
- **Resource Type**
- (Optional) **Resource Tag**
  - You can search for up to 10 tags at a time.
  - To search for specified tags, entering a key is mandatory but entering a value is optional.
  - When you specify the search criteria, the cloud resources you want to search for must meet all of the key criteria and at least one of the value criteria.
- **(Optional)** Search for only resources that are not tagged.
  - You can search for resources that are not tagged.

Searching for Cloud Resources

1. Log in to the management console.
2. Under **Management & Governance**, select **Tag Management Service**.
3. Select the **Tag Management** tab.
4. Set the resource search criteria.
5. Click **Search**.

   The target resources are displayed in the **Search Result** list.
6. **(Optional)** In the search box above the search result list, enter a resource name to search for a resource. Fuzzy search is supported and the resource name is case-insensitive.

   When there are too many resources listed or you need to locate some resources, you can use this function for quick search.
7. **(Optional)** Click Reset.

   You can reset the search criteria to search for cloud resources.
8. **(Optional)** In the upper right part of the **Search Result** area, click .

   The resource list is refreshed and the list refresh time is updated.

1.3 Creating a Key

To add tags with the same tag key to all resources, you can use the tag key creation function.

After being created, the tag key is displayed in the list and all default statuses in the key column are **Not tagged**. You can add a tag value to a cloud resource in the list to make the tag take effect.

Creating a Key

1. Sign in to the management console.
2. Under **Management & Governance**, select **Tag Management Service**.
3. Select the **Tag Management** tab.
4. Set the resource search options.

For details, see **Searching for Cloud Resources**.

5. Click **Search**.

6. Click **Create Key** in the upper left corner of the list displayed.

7. Specify a key.

   Key: Only letters, digits, underscores (_), and hyphens (-) are allowed. Enter a maximum of 36 characters.

8. Click **OK**.

   The created tag key is displayed in the tag display column.

   If you create a key but do not bind it to any cloud resource, it will be invalid and will not be displayed in the resource key list after you refresh the page.

Follow-up Procedure

To add a tag to a resource when a tag key has been created, perform the following steps:

1. In the upper right corner of the **Search Result** list, click **Edit**.

   The tag list enters the editable state.

2. Locate the row containing the cloud resource whose tag you want to add and click .

3. Enter a tag value.

4. Click .

   After the resource tag is modified, the cloud resources can be managed based on the new tag.

1.4 Adding a Resource Tag

On the TMS console, you can add one or more tags to one or more cloud resources. For details, see the following procedure. You can add up to 10 key-value pairs to each cloud resource.

Adding a Tag to One Resource

1. Sign in to the management console.

2. Under **Management & Governance**, select **Tag Management Service**.

3. Select the **Tag Management** tab.

4. Set the resource search options.

   For details, see **Searching for Cloud Resources**.

5. Click **Search**.

6. Click **Edit** in the upper part of the **Search Result** area so that you can edit tag values in the list.

7. (Optional) Set tag key display

   If tag keys to be modified are not displayed in the list, perform the following steps:

a. In the upper right corner of the **Search Result** area, click ⚙ .

b. Select target tag keys from the drop-down list.

    You are advised to display no more than 10 keys.

    📖 **NOTE**

    For details about how to create a tag key, see **Creating a Key**.

8. Locate the target resource, and click ➕ in the tag key column.

    In the tag key column, resources that have not been tagged, **Not tagged** is

    displayed and the ➕ icon is also displayed.

9. Enter a tag value as needed or leave it blank.

10. Click ✓ .

    Then you can use added tags to manage resources.

    📖 **NOTE**

    To add more tags to the cloud resource, repeat the preceding steps. You can also select
    a target resource in the list, click **Manage Tag** above the list to add one or more tags
    as needed. For details, see **Adding a Tag to Multiple Resources**.

Adding a Tag to Multiple Resources

To add one or more tags to multiple cloud resources, perform the following steps:

1. Sign in to the management console.

2. Under **Management & Governance**, select **Tag Management Service**.

3. Select the **Tag Management** tab.

4. Set the resource search options.

    For details, see **Searching for Cloud Resources**.

5. Click **Search**.

6. Select target resources and click **Manage Tag** above the list.

7. In the **Add Tag** area, add keys and values to create tags.

    📖 **NOTE**

    To add different tags to multiple cloud resources, see **Adding a Tag to One Resource**.

8. Click **OK**.

    Then you can use added tags to manage resources.

1.5 Modifying Resource Tags

Modifying a Tag for a Cloud Resource

In this section, modifying a tag is through modifying the value of a tag key, and
the corresponding tag key remains unchanged.

1. Log in to the management console.
2. Under **Management & Governance**, select **Tag Management Service**.
3. Select the **Tag Management** tab.
4. Set the resource search criteria.

   For details, see **Searching for Cloud Resources**.
5. Click **Search**.
6. Click **Edit** in the upper part of the **Search Result** area so that you can edit tag values in the list.
7. (Optional) Set the key display list.

   If the key of the tag to be modified is not displayed in the list, perform the following steps:

   a. In the upper right corner of the **Search Result** list, click ⚙ .
   b. Select the key of the tag to be modified from the drop-down list.

      You are advised not to select more than 10 keys to display.
8. Locate the row containing the cloud resource whose tag you want to modify and click ✏ .
9. Enter a new tag value.
10. Click ✔ .

    After the resource tag is modified, the cloud resources can be managed based on the new tag.

    📖 **NOTE**

    > To modify multiple tags of a resource, repeat the preceding steps. You can also select the target resource in the list and click **Manage Tag** above the list to modify one or more tags. For details, see **Modifying Tags for Multiple Cloud Resources**.

Modifying Tags for Multiple Cloud Resources

You can only modify tags of resources that have already been tagged.

NOTICE

Exercise caution when modifying tags in batches. After a tag value is modified, the tag values of corresponding cloud resources will be modified and cannot be recovered.

1. Log in to the management console.
2. Under **Management & Governance**, select **Tag Management Service**.
3. Select the **Tag Management** tab.
4. Set the resource search criteria.

   For details, see **Searching for Cloud Resources**.
5. Click **Search**.
6. Select one or more target resources in the list and click **Manage Tag** above the list.

7. In the **Edit Tag** area, specify new values for tags.

   All tags of the target resources are displayed in the **Edit Tag** area. You can modify one or more tags as needed.

   📖 **NOTE**

   > To set different values of a tag for multiple cloud resources, see **Modifying a Tag for a Cloud Resource**.

8. Click **OK**.

   Then you can use the modified tags to manage resources.

1.6 Deleting Resource Tags

Deleting a Tag for a Cloud Resource

To delete a tag for a cloud resource, perform the following steps:

1. Log in to the management console.

2. Under **Management & Governance**, select **Tag Management Service**.

3. Select the **Tag Management** tab.

4. Set the resource search criteria.

   For details, see **Searching for Cloud Resources**.

5. Click **Edit** in the upper part of the **Search Result** area so that you can edit tag values in the list.

6. (Optional) Set the key display list.

   If the key of the tag to be deleted is not displayed in the list, perform the following steps:

   a. In the upper right corner of the **Search Result** list, click 　.

   b. Select the key of the tag to be deleted from the drop-down list.

      You are advised not to select more than 10 keys to display.

7. Locate the row containing the resource whose tag you want to delete and click 　.

   After a resource tag is deleted, resources cannot be managed based on the deleted tag.

   📖 **NOTE**

   > To delete multiple tags of a resource, repeat the preceding steps. You can also select the target resource in the list and click **Manage Tag** above the list to delete one or more tags. For details, see **Deleting Tags for Multiple Cloud Resources**.

Deleting Tags for Multiple Cloud Resources

To delete tags for multiple cloud resources, perform the following steps:

> **NOTICE**
>
> Exercise caution when deleting tags in batches.
>
> After you delete a tag, it will be removed from all corresponding cloud resources and you will not be able to recover it.

1. Log in to the management console.
2. Under **Management & Deployment**, select **Tag Management Service**.
3. Select the **Tag Management** tab.
4. Set the resource search criteria.

   For details, see **Searching for Cloud Resources**.
5. Click **Search**.
6. Select one or more target resources.
7. Click **Manage Tag** above the list.
8. In the **Edit Tag** area, locate target tags and click **Delete** in the **Operation** column.

   All tags of the target resources are displayed in the **Edit Tag** area. You can delete one or more tags as needed.
9. Click **OK**.

   After a resource tag is deleted, resources cannot be managed based on the deleted tag.

1.7 Adding Tags to Resources

On the TMS console, you can search for all tags in a specified region. You can add a tag to up to 500 resources at a time.

Searching for Tags

1. Log in to the management console.
2. Under **Management & Governance**, select **Tag Management Service**.
3. Select the **Resource Tagging** tab.
4. Select a **Region** to display all the resource tags and predefined tags in the region.

   The search results are displayed in the **Search Result** list.

Attaching Resources to Tags

You can use the searched tags to tag resources.

1. In the **Search Result** area, locate target tags and click **Tag Resource** in the **Operation** column.
2. Select a region.
3. Select a resource type.
4. Specify **Tagged by**.

- **ID**: Enter one or more resource IDs.

- **List**: Select one or more resources in the resource list.

    You can add a tag to up to 500 resources at a time. If you need to tag more resources, repeat the operation for multiple times.

5. Click **OK**.

2 Predefined Tags

2.1 Overview

By using predefined tags, you can plan and create tags in advance from the service perspective, or import or export tags in batches. When using cloud service resources, you can quickly associate predefined tags with cloud resources.

This topic describes how to search for, delete, import, or export predefined tags.

Constraints and Limitations

- If the created predefined tag is the same as an existing predefined tag, the existing predefined tag is overwritten. If only keys are the same and values are different, the new predefined tag is created.

- You can create up to 500 predefined tags.

- A tag key can contain a maximum of 36 characters, including digits, letters, underscores (_), and hyphens (-).

- A tag value can contain a maximum of 43 characters, including digits, letters, underscores (_), periods (.), and hyphens (-).

- A null value cannot be included in a predefined tag.

2.2 Creating Predefined Tags

You can use predefined tags to quickly identify cloud resources. To create a predefined tag, perform the following steps:

1. Log in to the management console.
2. Under **Management & Governance**, select **Tag Management Service**.
3. Click **Predefined Tags**.
4. In the upper right corner of the displayed page, click **Create Tag**.

   The **Create Tag** dialog box is displayed.
5. Configure **Key** and **Value**.
6. Click **OK**.

The predefined tag is created and displayed on the top of the list.

Follow-up Procedure

When adding a tag to a cloud resource, you can directly select the created predefined tag from the drop-down list in the tag text box. You do not need to enter the key and value of the tag.

For example, if a predefined tag whose key is **Usage** and value is **Project1** has been created, you can select it from the drop-down list when you create tags for a cloud resource.

Figure 2-1 Example

2.3 Searching for Predefined Tags

1. Log in to the management console.
2. Under **Management & Governance**, select **Tag Management Service**.
3. Click **Predefined Tags**.
4. In the filter boxes, enter a tag value or tag key to search for tags.

   The target predefined tags are displayed.

   Click   if you want to refresh the predefined tag list.

2.4 Deleting Predefined Tags

1. Log in to the management console.
2. Under **Management & Governance**, select **Tag Management Service**.
3. Click **Predefined Tags**.
4. Select the tags you need to delete.
5. Click **Delete** above the predefined tag list.
6. In the displayed **Delete Tag** dialog box, click **OK**.

The predefined tags have been deleted.

☐ **NOTE**

You can also click **Delete** in the **Operation** column to delete a specific tag.

2.5 Importing or Exporting Predefined Tags

Constraints and Limitations

You can import a .csv file from a third party to TMS. The encoding format of the .csv file must be UTF-8.

Tag files or templates downloaded with Internet Explorer 9 cannot be imported to TMS via other browsers, and vice versa those downloaded with other browsers cannot be imported to TMS via Internet Explore 9.

If duplicate tags exist between the current environment and the imported file, the tags of the current environment will be overwritten after the import.

When you edit imported tags, the following rules need to be followed:

- You can add up to 500 predefined tags.
- **Key**: You can enter a maximum of 36 characters, including letters, digits, underscores (_), and hyphens (-).
- **Value**: You can enter a maximum of 43 characters, including letters, digits, underscores (_), periods (.), and hyphens (-).

NOTICE

Predefined tag importation does not support .csv files that have been modified in Excel files. Attempting to import such files will produce garbled characters and result in an importation failure. To edit a .csv file, open it with notepad.

Importing Predefined Tags

If you have inventory tags, you can quickly import them to the TMS predefined tags to facilitate subsequent resource association.

To import predefined tags, perform the following steps:

1. Log in to the management console.
2. Under **Management & Governance**, select **Tag Management Service**.
3. Click **Predefined Tags**.
4. Click **Download template (CSV file)**.
5. Fill in the template by referring to the format of existing tags.
6. Click **Import** and select the target file.
7. Click **OK**.

   The predefined tags are imported successfully and displayed in the predefined tag list.

Exporting Predefined Tags

To export predefined tags for editing, perform the following steps:

1. Log in to the management console.
2. Under **Management & Governance**, select **Tag Management Service**.
3. Click **Predefined Tags**.
4. You can export predefined tags in either of the following ways:

   a. Click **Export All**.

      The .csv file is generated, and all predefined tags are exported.

   b. Select target predefined tags and click **Export**.

      The .csv file is generated, and selected predefined tags are exported.

3 Permissions Management

3.1 Creating a User and Granting Permissions

This section describes how to use **IAM** to implement fine-grained permissions control for your TMS resources. With IAM, you can:

- Create IAM users or user groups for personnel based on your enterprise's organizational structure. Each IAM user has their own identity credentials for accessing TMS resources.

- Grant users only the permissions required to perform a given task based on their job responsibilities.

- Entrust a Huawei Cloud account or a cloud service to perform efficient O&M on your TMS resources.

If your Huawei Cloud account meets your permissions requirements, you can skip this section.

Figure 3-1 shows the process flow for granting permissions.

Prerequisites

Before granting permissions, learn about the TMS permissions and select the permissions as required. For details about the system-defined permissions supported by TMS, see **TMS Permissions**. To grant permissions for other services, learn about all **system-defined permissions**.
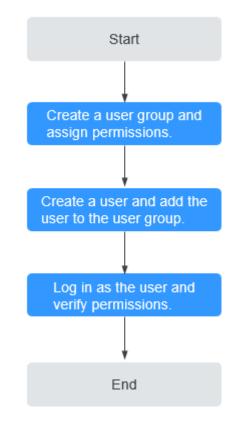
Flowchart

Figure 3-1 Granting TMS permissions

1. On the IAM console, **create a user group and assign permissions**. Here, TMS ReadOnlyAccess permissions are used as an example.

2. **Create an IAM user and add it to the created user group**.

3. **Log in** and verify permissions.

   The created user logs in to the console and verifies permissions as described below:

   – Choose **Service List** > **Tag Management Service**. In the navigation pane on the left, click **Predefined Tags**. In the upper right corner of the displayed page, click **Create Tag**. If a message appears indicating that you have insufficient permissions to perform the operation, and if you can view existing predefined tags in the **Predefined Tags** page, the **TMS ReadOnlyAccess** policy is in effect.

   – Choose another service from **Service List**. If a message appears indicating that you have insufficient permissions to access the service, the **TMS ReadOnlyAccess** policy is in effect.

3.2 Custom Policies

Custom policies can be created to supplement the predefined policies provided by TMS. For the actions supported by custom policies, see **TMS API Actions**.

You can create a custom policy in either of the following ways:

- Visual editor: Select cloud services, actions, resources, and request conditions. This does not require knowledge of policy syntax.
- JSON: Create a JSON policy or edit an existing one.

For details, see **Creating a Custom Policy**. Examples of common TMS custom policies are as follows:

Example Custom Policies

- Example 1: Grant permission to view predefined tags

```
{
    "Version": "1.1",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "tms:predefineTags:list"
            ]
        }
    ]
}
```

- Example 2: Grant permission to deny predefined tag deletion

A policy with only "Deny" permissions must be used together with other policies. If the permissions granted to an IAM user contain both "Allow" and "Deny", the "Deny" permissions take precedence over the "Allow" permissions.

Assume that you want to grant the permissions of the **TMS FullAccess** to a user but want to prevent them from deleting predefined tags. You can create a custom policy for denying predefined tag deletion, and attach this policy together with the **TMS FullAccess** policy to the user. As an explicit deny in any policy overrides any allows, the user can perform all operations on these tags excepting deleting them. Example policy denying predefined tag deletion:

```
{
    "Version": "1.1",
    "Statement": [
        {
            "Effect": "Deny",
            "Action": [
                "tms:predefineTags:delete"
            ]
        }
    ]
}
```
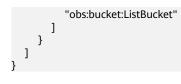
- Example 3: Create a custom policy containing multiple actions.

A custom policy can contain the actions of one or multiple services that are of the same type (global or project-level).

Example policy containing multiple actions:

```
{
    "Version": "1.1",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "tms:predefineTags:create",
                "tms:predefineTags:delete"
            ]
        },
        {
            "Effect": "Allow",
            "Action": [
                "obs:bucket:ListAllMyBuckets",
```

```
                   "obs:bucket:ListBucket"
            ]
        }
    ]
}
```

4 Interconnecting with CTS

4.1 Key TMS Operations

Table 4-1 list the TMS operations that will be recorded by CTS.

Table 4-1 TMS operations that can be recorded by CTS

Operation	Resource Type	Trace Name
Creating Predefined Tags	predefineTag	addPredefineTag
Deleting Predefined Tags	predefineTag	deletePredefineTag
Creating Resource Tags	application	createResourceTag
Deleting Resource Tags	application	deleteResourceTag

4.2 Viewing CTS Traces

For details about how to view audit logs, see **Querying Real-Time Traces**.

5 Quotas

What Is Quota?

Quotas are the maximum amount of resources and capacity allowed for users to prevent waste. For example, you are allowed to create up to 500 predefined tags. You can request for an increase in quota if the existing quota does not meet your service requirements.

How Do I View My Quotas?

1. Log in to the management console.

2. Click ⊙ in the upper left corner and select the desired region and project.

3. In the upper right corner of the page, choose **Resources** > **My Quotas**.
   The **Service Quota** page is displayed.

   Figure 5-1 My Quotas

4. View the used and total quota of each type of resources on the displayed page.
   If a quota cannot meet service requirements, apply for a higher quota.

How Do I Apply for a Higher Quota?

1. Log in to the management console.

2. In the upper right corner of the page, choose **Resources** > **My Quotas**.
    The **Service Quota** page is displayed.

    Figure 5-2 My Quotas

3. Click **Increase Quota** in the upper right corner of the page.

    Figure 5-3 Increasing quota

4. On the **Create Service Ticket** page, configure parameters as required.
    In the **Problem Description** area, fill in the content and reason for adjustment.

5. After all necessary parameters are configured, select **I have read and agree to the Ticket Service Protocol and Privacy Statement** and click **Submit**.

A Change History

Released On	Description
2023-08-10	This issue is the third official release, which incorporates the following change: ● Added **Adding Tags to Resources**.
2022-11-30	This issue is the second official release, which incorporates the following change: ● Optimized **Importing and Exporting Predefined Tags**.
2019-02-15	This issue is the first official release.