

Tag Management Service

User Guide

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1 Product Profile

1.1 What Is Tag Management Service?

Tag Management Service (TMS) helps you centrally categorize and manage cloud resources across regions and services with tags.

You can group cloud resources by usage, owner or the environment where the resources are deployed.

Figure 1-1 Example tags

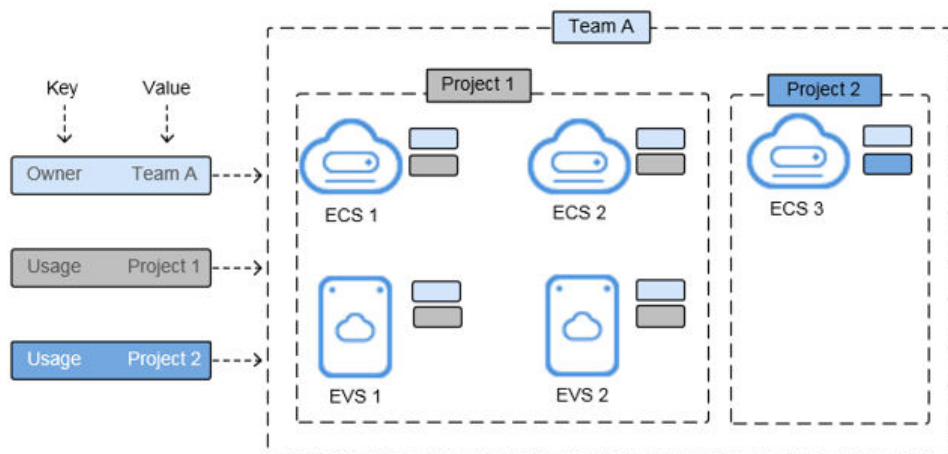


Figure 1-1 shows how tags work. In this example, you assign two tags to each cloud resource. Each tag contains a key and a value that you define. The key of one tag is **Owner**, and that of another tag is **Usage**. Each tag has a value.

You can quickly search for and filter cloud resources based on the tags added to them. For example, if you define a set of tags to specify resource owners or usage and attach these tags to your resources, you can easily filter these resources by owner or usage.

TMS provides the following functions:

- Resource management allows you to classify resources by tag. You can easily manage one tag or multiple tags at the same time in a visualized table.
- Searching for resources: Search for resources across services and regions by tag or by tag set.
- Predefined tag management: You can create, import, or export predefined tags. By predefining tags, you can plan tags according to your services to effectively manage tags.

 **NOTE**

TMS is free of charge.

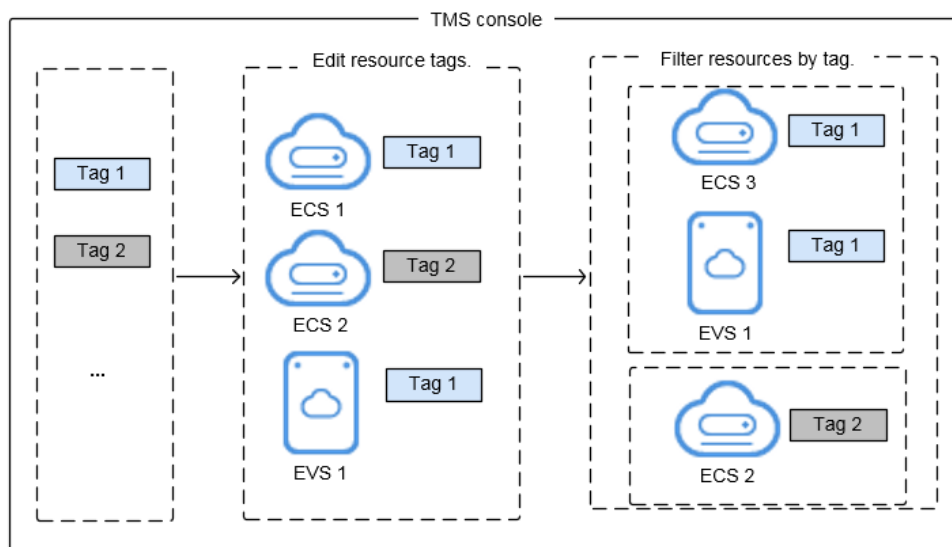
1.2 Application Scenarios

TMS is useful in the following typical application scenarios:

Central Management of Resources

For users who have many cloud resources, TMS allows them to quickly locate all of their resources with specific tags. TMS also provides a unified tag management platform, on which users can check, modify, or delete tags.

Figure 1-2 Central management of resources



Quick Identification of Resources Migrated and to Be Migrated

For users who need to migrate large numbers of resources, TMS allows for the import and export of predefined tags. This improves the accuracy and efficiency of resource migration while eliminating the need to set tags each time.

- Creating predefined tags: You can create predefined tags on TMS before migrating resources. After resources are migrated, they can be associated directly with predefined tags.
- Importing and exporting predefined tags: If you have inventory tags, you can quickly import them to the predefined tag library of TMS. After resources are

migrated, you can associate those resources with predefined tags. In addition, you can export predefined tags for editing.

1.3 TMS and Other Services

- Services that support TMS
TMS allows you to centrally manage resource tags. For which services are supported by TMS, you need to go to the TMS console to check it out.
A cloud service may contain multiple resource types. You can specify a resource type and then centrally manage tags on TMS console as need.
- Related services

Table 1-1 Relationships with other services

Function	Service	Reference
With CTS, you can record operations associated with TMS for later query, audit, and backtrack operations.	Cloud Trace Service (CTS)	Interconnecting with CTS

1.4 Constraints and Limitations

The following are basic constraints on using tags:

Table 1-2 Constraints

Item	Specifications
Maximum number of key-value pairs you can add for each resource	10
Tags of each resource	For each resource, each tag key must be unique, and each tag key can have only one tag value.
The maximum predefined tags that each account can create.	500
Predefined tags	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, both the tags are available.

Item	Specifications
Tag keys	A tag key can contain a maximum of 36 characters, including digits, letters, underscores (_), hyphens (-), and at signs (@).
Tag values	A tag value can contain a maximum of 43 characters, including digits, letters, underscores (_), periods (.), hyphens (-), and at signs (@).


 **NOTE**

Not all resources are supported by TMS. For which services and resources are supported, you can go to the service console to check it out..

1.5 Accessing TMS

The cloud platform provides a web-based service management platform. You can use either of the following ways to access TMS:

- APIs
To integrate TMS into a third-party system for secondary development, call APIs to access TMS. For details, see *Tag Management Service API Reference*.
- Management console

Log in to the management console, click  on the upper left corner, and choose **Tag Management Service** under **Management & Deployment**. The **Tag Management Service** page is displayed.

1.6 User Permissions

You have permissions to manage users and resources.

- You add users to user groups so that users can inherit permissions attached to user groups which they are in.
- You can control which resources and what actions a user can access.

To use resource tags, you must have the corresponding permissions on the cloud service. Otherwise, the tag operations on cloud resources may not take effect.

Contact the system administrator to assign the corresponding cloud service permissions to the user group to which you belong.

1.7 Permissions

If you need to assign different permissions to personnel in your enterprise to access your cloud resources, Identity and Access Management (IAM) is a good

choice for fine-grained permissions management. IAM provides identity authentication, permissions management, and access control, helping you securely access your cloud resources.

With IAM, you can create IAM users for your employees, and assign permissions to the users to control their access to specific resource types. For example, if you need to grant some users the permissions to view TMS resources, but do not want these users to delete predefined tags, you can create users using IAM and assign TMS ReadOnlyAccess permissions to these users.

If your account does not require IAM for permissions management, you can skip this section.

IAM can be used free of charge. You pay only for the resources in your account. For more information about IAM, see [IAM Service Overview](#).

TMS Permissions

New IAM users do not have any permissions assigned by default. You need to first add them to one or more groups and attach policies or roles to these groups. The users then inherit permissions from the groups and can perform specified operations on cloud services based on the permissions they have been assigned.

TMS is a global service deployed for all regions. When you set the authorization scope to **Global services**, users have permission to access TMS resources in all regions.

You can grant permissions by using roles and policies.

- **Roles:** A coarse-grained authorization strategy provided by IAM to assign permissions based on users' job responsibilities. Only a limited number of service-level roles are available for authorization. When using roles to grant permissions, you must also assign other roles which the permissions depend on to take effect. Roles are not ideal for fine-grained authorization and least privilege access.
- **Policies:** A fine-grained authorization strategy that defines permissions required to perform operations on specific cloud resources under certain conditions. This type of authorization is more flexible and is ideal for least privilege access. The administrator can restrict a user to only specified operations on TMS using IAM policies. For example, if the user is granted a fine-grained permission to only view predefined tags, the user cannot perform other operations on predefined tags (such as creating or deleting predefined tags) with this permission. A majority of fine-grained policies contain permissions for specific APIs. For the API actions supported by TMS, see the section "Permissions Policies and Supported Actions" in the *Tag Management Service API Reference*.

Table 1-3 lists all TMS system-defined policies and roles. Some TMS policies depend on the policies of other services to take effect. When you assign TMS permissions to users, you also assign dependent policies for the TMS permissions to take effect.

Table 1-3 TMS system-defined permissions

Role/Policy Name	Description	Type	Dependencies
TMS Administrator	Full permissions for TMS. Users with these permissions can query, create, delete, import, or export predefined tags, and create, delete, modify, or query resource tags.	System-defined role	Dependent on the following policies: <ul style="list-style-type: none"> ● Tenant Guest: a global/project-level policy that grants read-only permissions for all cloud services (except IAM). ● Server Administrator: A project-level policy, which must be assigned in the same project as the TMS Administrator policy. ● Tenant Administrator: A global/project-level policy that grants permissions of all cloud service administrators (except the IAM administrator permissions). ● IMS Administrator: a project-level policy, which must be assigned in the same project as the TMS Administrator policy ● AutoScaling Administrator: a project-level policy, which must be assigned in the same project as the TMS Administrator policy ● VPC Administrator: a project-level policy, which must be assigned in the same project as the TMS Administrator policy ● VBS Administrator: a project-level policy, which must be assigned in the same project as the TMS Administrator policy

Table 1-4 lists the common operations supported by TMS system-defined permissions.

Table 1-4 Common operations supported by system-defined permissions

Operation	TMS FullAccess	TMS ReadOnlyAccess	TMS Administrator
Querying the cloud resource list	Supported (permissions of corresponding services for querying resources required)	Supported (permissions of corresponding services for querying resources required)	Supported (Tenant Guest required)
Creating a key	Supported	Not supported	Supported (Tenant Guest required)
Viewing resource tags	Supported	Supported	Supported (Tenant Guest required)
Creating resource tags	Supported (permissions of corresponding services for creating tags required)	Not supported	Supported (Tenant Guest and corresponding project policies of cloud resources required. For example, if you need to manage VPC tags, select Tenant Guest in the same project.)
Modifying resource tags	Supported (permissions of corresponding services for creating, deleting, and viewing tags required)	Not supported	Supported (Tenant Guest and corresponding project policies of cloud resources required. For example, if you need to manage VPC tags, select Tenant Guest in the same project.)
Deleting resource tags	Supported (permissions of corresponding services for deleting tags required)	Not supported	Supported (Tenant Guest and corresponding project policies of cloud resources required. For example, if you need to manage VPC tags, select Tenant Guest in the same project.)
Querying predefined tags	Supported	Supported	Supported

Operation	TMS FullAccess	TMS ReadOnlyAccess	TMS Administrator
Creating predefined tags	Supported	Not supported	Supported
Deleting predefined tags	Supported	Not supported	Supported
Exporting predefined tags	Supported	Supported	Supported
Importing predefined tags	Supported	Not supported	Supported

Related Documents

- To learn about the IAM service, see [What Is IAM?](#).
- For details about how to create a user or a user group and how to grant TMS permissions, see [Creating a User and Granting Permissions](#).
- For details about permission policies and supported actions for TMS, see the Permission Policies and Supported Actions section in *Tag Management Service API Reference*.

2 Getting Started

2.1 Adding Tags to Cloud Resources

Constraints

- 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.
- A tag key can contain a maximum of 36 characters, including digits, letters, underscores (_), hyphens (-), and at signs (@).
- A tag value can contain a maximum of 43 characters, including digits, letters, underscores (_), periods (.), hyphens (-), and at signs (@).

Adding Tags on the TMS Console

You can tag your resources using TMS to classify and manage your resources centrally.

1. Log in to the management console.
2. Under **Management & Deployment**, select **Tag Management Service**.
3. Set the resource search criteria.
For details, see [Searching for Resources](#).
4. Click **Search**.
5. In the **Search Result** list, select the cloud resource to which you want to add tags and click **Manage Tag** in the upper left corner.
6. In the **Add Tag** area, enter a tag key and a tag value.
You can also directly select existing tags from the drop-down list.
7. Click **OK**.

Checking Whether a Tag Takes Effect

If you have added a tag to a resource, you can check whether the tag takes effect by searching for the resource with the added tag.

1. Log in to the management console.
2. Under **Management & Deployment**, select **Tag Management Service**.
3. Set the resource search criteria.
Set the region and resource type as needed.
For **Resource Tag**, enter the tag that has been added to the resource.
4. Click **Search**.
The resource is displayed in the **Search Result** list.

3 Management

3.1 Resource Tags

3.1.1 Overview

TMS allows you to easily classify and search for your resources with tags. You can manage multiple tags in a list view.

This section describes how to query resources by tag, create tag keys, and update, modify, or delete resource tags.

Constraints and Limitations

- Up to 10 tags can be specified to query for resources at a 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.
- A tag key can contain a maximum of 36 characters, including digits, letters, underscores (_), hyphens (-), and at signs (@).
- A tag value can contain a maximum of 43 characters, including digits, letters, underscores (_), periods (.), hyphens (-), and at signs (@).

3.1.2 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.

Searching for Cloud Resources

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


The target resources are displayed in the **Search Result** list.

5. **(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.

6. **(Optional)** Click **Reset**.

You can reset the search criteria to search for cloud resources.

7. **(Optional)** In the upper right part of the **Search Result** area, click .

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

3.1.3 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 & Deployment**, select **Tag Management Service**.
3. Set the resource search options.

For details, see [Searching for Resources](#).

4. Click **Search**.
5. Click **Create Key** in the upper left corner of the list displayed.
6. Specify a key.

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



7. 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.

3.1.4 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 & Deployment**, select **Tag Management Service**.
3. Set the resource search options.
For details, see [Searching for Resources](#).
4. Click **Search**.
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 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](#).

7. 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.

8. Enter a tag value as needed or leave it blank.
9. 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 & Deployment**, select **Tag Management Service**.
3. Set the resource search options.
For details, see [Searching for Resources](#).
4. Click **Search**.
5. Select target resources and click **Manage Tag** above the list.
6. In the **Add Tag** area, add keys and values to create tags.
You can also directly select existing tags from the drop-down list.

 **NOTE**

To add different tags to multiple cloud resources, see [Adding a Tag to One Resource](#).


7. Click **OK**.
Then you can use added tags to manage resources.



3.1.5 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 & Deployment**, select **Tag Management Service**.
3. Set the resource search criteria.
For details, see [Searching for Resources](#).
4. Click **Search**.
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 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 to display no more than 10 keys.
 7. Locate the row containing the cloud resource whose tag you want to modify and click .
 8. Enter a new tag value.
 9. 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 & Deployment**, select **Tag Management Service**.
3. Set the resource search criteria.
For details, see [Searching for Resources](#).
4. Click **Search**.
5. Select one or more target resources in the list and click **Manage Tag** above the list.
6. 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](#).

7. Click **OK**.
Then you can use the modified tags to manage resources.

3.1.6 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 & Deployment**, select **Tag Management Service**.
 3. Set the resource search criteria.
For details, see [Searching for Resources](#).
 4. Click **Edit** in the upper part of the **Search Result** area so that you can edit tag values in the list.
 5. (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.
 6. 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. Set the resource search criteria.
For details, see [Searching for Resources](#).
4. Click **Search**.
5. Select one or more target resources.
6. Click **Manage Tag** above the list.
7. In the **Edit Tag** area, locate a target tag 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.

8. Click **OK**.

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

3.2 Predefined Tags

3.2.1 Overview

TMS allows you to create tags in advance for service management. You can import or export tags in batches. You can attach predefined tags to resources as needed.

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

Constraints and Limitations

- Predefined tags must be different from each other either in tag keys or in tag values.
- Up to 500 predefined tags can be created for each account.
- A tag key can contain a maximum of 36 characters, including digits, letters, underscores (_), hyphens (-), and at signs (@).
- A tag value can contain a maximum of 43 characters, including digits, letters, underscores (_), periods (.), hyphens (-), and at signs (@).
- A null value cannot be included in a predefined tag.

3.2.2 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 & Deployment**, 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**.

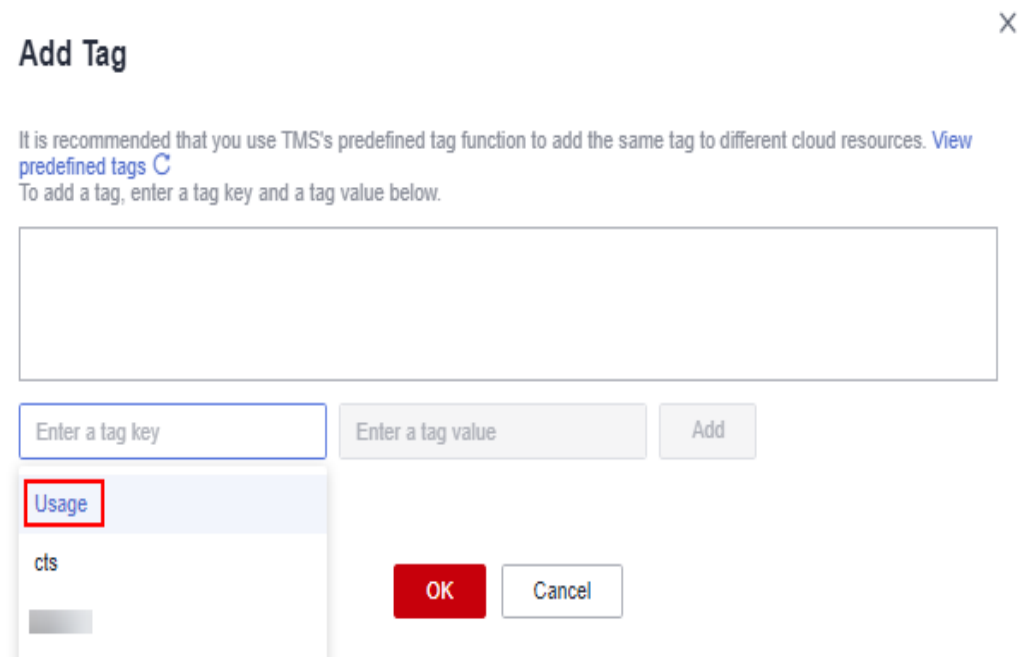
The predefined tag is created and displayed on the top of the list.

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 3-1 Example



3.2.3 Searching for Predefined Tags

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

The target predefined tags are displayed.

Click  if you want to refresh the predefined tag list.

3.2.4 Deleting Predefined Tags

1. Log in to the management console.
2. Under **Management & Deployment**, 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 **Yes**.

The predefined tags have been deleted.

NOTE

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

3.2.5 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 Explorer 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 create up to 500 predefined tags for each account.
- A tag key can contain a maximum of 36 characters, including digits, letters, underscores (_), hyphens (-), and at signs (@).
- A tag value can contain a maximum of 43 characters, including digits, letters, underscores (_), periods (.), hyphens (-), and at signs (@).

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 & Deployment**, 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 & Deployment**, 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.

4 Permissions Management

4.1 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 for employees based on your organizational structure. Each IAM user has their own security credentials for accessing TMS resources.
- Grant users only the permissions required to perform a given task based on their job responsibilities.
- Entrust an account or a cloud service to perform operations for your TMS resources.

If your account does not need individual IAM users, skip this section.

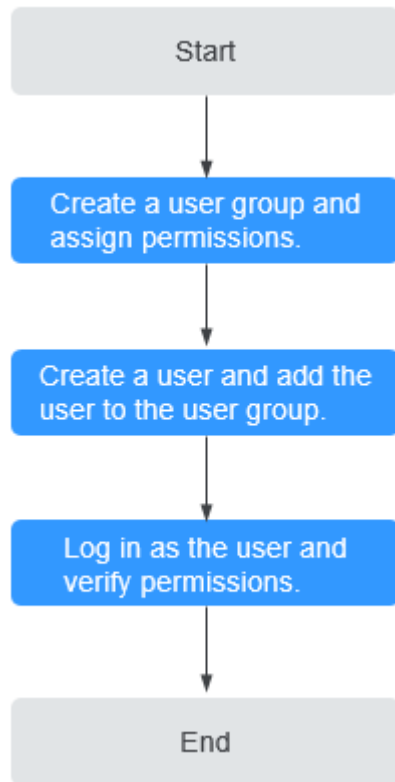
[Figure 4-1](#) shows the process flow for granting permissions.

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 [permissions](#).

Flowchart

Figure 4-1 Granting TMS permissions



1. On the IAM console, **create a user group and assigning 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.

5 Interconnecting with CTS

5.1 Key TMS Operations

[Table 5-1](#) list the TMS operations that will be recorded by CTS.

Table 5-1 TMS operations that can be recorded by CTS

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

5.2 Querying Real-Time Traces

Scenarios






After you enable CTS and the management tracker is created, CTS starts recording operations on cloud resources. After a data tracker is created, the system starts recording operations on data in OBS buckets. CTS stores operation records generated in the last seven days.

This section describes how to query and export operation records of the last seven days on the CTS console.

- [Viewing Real-Time Traces in the Trace List of the New Edition](#)

- [Viewing Real-Time Traces in the Trace List of the Old Edition](#)

Viewing Real-Time Traces in the Trace List of the New Edition

1. Log in to the management console.
2. Click  in the upper left corner and choose **Management & Deployment** > **Cloud Trace Service**. The CTS console is displayed.
3. Choose **Trace List** in the navigation pane on the left.
4. On the **Trace List** page, use advanced search to query traces. You can combine one or more filters.
 - **Trace Name:** Enter a trace name.
 - **Trace ID:** Enter a trace ID.
 - **Resource Name:** Enter a resource name. If the cloud resource involved in the trace does not have a resource name or the corresponding API operation does not involve the resource name parameter, leave this field empty.
 - **Resource ID:** Enter a resource ID. Leave this field empty if the resource has no resource ID or if resource creation failed.
 - **Trace Source:** Select a cloud service name from the drop-down list.
 - **Resource Type:** Select a resource type from the drop-down list.
 - **Operator:** Select one or more operators from the drop-down list.
 - **Trace Status:** Select **normal**, **warning**, or **incident**.
 - **normal:** The operation succeeded.
 - **warning:** The operation failed.
 - **incident:** The operation caused a fault that is more serious than the operation failure, for example, causing other faults.
 - Time range: Select **Last 1 hour**, **Last 1 day**, or **Last 1 week**, or specify a custom time range.
5. On the **Trace List** page, you can also export and refresh the trace list, and customize the list display settings.
 - Enter any keyword in the search box and click  to filter desired traces.
 - Click **Export** to export all traces in the query result as an .xlsx file. The file can contain up to 5000 records.
 - Click  to view the latest information about traces.
 - Click  to customize the information to be displayed in the trace list. If **Auto wrapping** is enabled () , excess text will move down to the next line; otherwise, the text will be truncated. By default, this function is disabled.
6. For details about key fields in the trace structure, see section "Trace References" > "Trace Structure" and section "Trace References" > "Example Traces".
7. (Optional) On the **Trace List** page of the new edition, click **Go to Old Edition** in the upper right corner to switch to the **Trace List** page of the old edition.

Viewing Real-Time Traces in the Trace List of the Old Edition


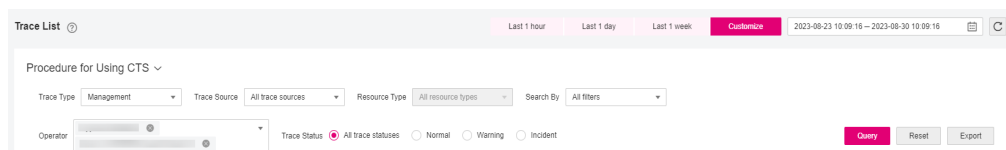


1. Log in to the management console.
2. Click  in the upper left corner and choose **Management & Deployment > Cloud Trace Service**. The CTS console is displayed.
3. Choose **Trace List** in the navigation pane on the left.
4. Each time you log in to the CTS console, the new edition is displayed by default. Click **Go to Old Edition** in the upper right corner to switch to the trace list of the old edition.
5. Set filters to search for your desired traces, as shown in [Figure 5-1](#). The following filters are available:

Figure 5-1 Filters



- **Trace Type, Trace Source, Resource Type, and Search By:** Select a filter from the drop-down list.
 - If you select **Resource ID** for **Search By**, specify a resource ID.
 - If you select **Trace name** for **Search By**, specify a trace name.
 - If you select **Resource name** for **Search By**, specify a resource name.
 - **Operator:** Select a user.
 - **Trace Status:** Select **All trace statuses, Normal, Warning, or Incident**.
 - **Time range:** You can query traces generated during any time range in the last seven days.
 - Click **Export** to export all traces in the query result as a CSV file. The file can contain up to 5000 records.
6. Click **Query**.
 7. On the **Trace List** page, you can also export and refresh the trace list.
 - Click **Export** to export all traces in the query result as a CSV file. The file can contain up to 5000 records.
 - Click  to view the latest information about traces.
 8. Click  on the left of a trace to expand its details.

Trace Name	Resource	Trace...	Resource ID	Resource Name...	Trace Stat...	Operator	Operation Time	Operat...								
login	user	IAM	3c...	...	normal	...	Nov 25, 2022 15...	View Trace								
trace_id	code	trace_name	resource_type	trace_status	message	source_ip	trace_type	service_type	event_type	project_id	resource_id	resource_name	time	resource_name	user	record_time
	01		302	login	normal		ConsoleAction	IAM	global			system	Nov 25, 2022 15:35:44 GMT+08:00			Nov 25, 2022 15:35:44 GMT+08:00

9. Click **View Trace** in the **Operation** column. The trace details are displayed.

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```
{
  "request": "",
  "trace_id": "676d4ae3-842b-11ee-9299-9159eee6a3ac",
  "code": "200",
  "trace_name": "createDockerConfig",
  "resource_type": "dockerlogincmd",
  "trace_rating": "normal",
  "api_version": "",
  "message": "createDockerConfig, Method: POST Url=/v2/manage/utils/secret. Reason:",
  "source_ip": " ",
  "domain_id": " ",
  "trace_type": "ApiCall",
  "service_type": "SWR",
  "event_type": "system",
  "project_id": " ",
  "response": "",
  "resource_id": "",
  "tracker_name": "system",
  "time": "2023/11/16 10:54:04 GMT+08:00",
  "resource_name": "dockerlogincmd",
  "user": {
    "domain": {
      "name": " ",
      "id": " "
```



10. For details about key fields in the trace structure, see section "Trace References" > "Trace Structure" and section "Trace References" > "Example Traces" in *Cloud Trace Service User Guide*.
11. (Optional) On the **Trace List** page of the old edition, click **New Edition** in the upper right corner to switch to the **Trace List** page of the new edition.

6 Quotas

What Is Quota?

Quotas are the limits put on resources to prevent waste. Each service has their own quotas. 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, click  .
The **Service Quota** page is displayed.
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.
3. Click **Increase Quota** in the upper right corner of the page.
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**.

7 FAQs

7.1 What Is the Difference Between Adding a Tag and Creating a Key?

When you add a tag, if you set only the tag key, the value of the tag is empty value by default. After you click **OK**, a specific tag will be bound to the cloud resource. You can add tags in batches.

Creating a key adds a key list to the resource tag list. By default, the status of every **Value** in the key list is **Not Tagged**, so no specific tags are bound to any cloud resources. You can add specific values to the list to generate new tags and bind them to cloud resources.

For example, for a VPC, the key is set to **Owner** and the value is not set. Create a tag whose key is **Usage**. This tag is displayed in the resource list.

The VPC has been associated with a tag, in which **Key** is **Owner** and **Value** is empty value by default. The tag whose key is **Usage** is not associated with the VPC. To make the tag key take effect, set the tag **Value**.

Figure 7-1 Example


<input type="checkbox"/>	Resource Type	Resource Name	Region	Total Tags	Usage	Owner
<input type="checkbox"/>	vpc	vpc-default		1	Not tagged	(Empty value)

7.2 How Do I Start the ActiveX Plug-in When Using Internet Explorer 9 to Import Files?

Description

If you use Internet Explorer 9 to import files, you need to start the ActiveX plug-in.

Procedure

1. Click  in the upper right corner of the browser.
2. Select **Internet Options**.
3. Click the **Security** tab in the displayed dialog box.
4. Click **Internet**.
5. (Optional) Click **Default level**.
If the security level is set to **Custom level**, reset it to **Default level**.
6. Move the security level slider to set the security level to **Medium**.
7. Click **Apply**.
8. Click **Custom Level**.
9. Set **Initialize and script ActiveX controls not marked as safe for scripting** to **Prompt**.
10. Click **OK**.


7.3 What Can I Do If I Failed to Import Tags Edited on the Template to TMS?

You may have used the Excel to edit the tag template.

The predefined tag import function allows you to import the .csv file exported from a third party to TMS. The encoding format of the .csv file must be UTF-8.

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.

7.4 How Can I Restore an Invalid Tag?

If an invalid tag appears,  is displayed in the resource tag list, then you need to manually restore the invalid tag.

An invalid tag can be restored in either of the following situations:

- If the tag key is invalid, delete the tag and add a new tag that meets the requirements to the resource.
- If only the tag value is invalid, change the tag value.

Procedure

1. Log in to the management console.
2. Under **Management & Deployment**, select **Tag Management Service**.
3. Set the resource search criteria and click **Search**.
4. Click **Restore** in the resource tag list.
5. In the **Edit Tag** area, restore the invalid tag.
 - Invalid tag key

- i. Locate the row containing the invalid tag key and click **Delete**.
 - ii. In the **Add Tag** area, enter a tag key and a tag value.
 - Invalid tag value
In the **Edit Tag** area, specify new values for tags.
6. Click **OK**.
The invalid tag has been restored.

A Change History

Released On	Description
2022-10-31	This issue is the second official issue, which incorporates the following changes: <ul style="list-style-type: none">• Added User Permissions.• Added Permissions.• Added Creating a User and Granting Permissions.
2020-07-30	This issue is the first official release.