

Enterprise Management

User Guide

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1 What Is Enterprise Management?

Overview

Enterprise Management (EM), also called Enterprise Project Management Service (EPS), provides customers with a cloud governance platform that well fits enterprise organization structures and service management models. It provides enterprise project, resource, and personnel management. With Enterprise Management, you can manage personnel, materials, permissions, and services in the cloud based on the hierarchical organization structure (companies, departments, and projects) and project service structure.

NOTE

EPS is free of charge.

2 Application Scenarios

Enterprise projects allow you to control access to your resources based on your organizational structure by granting different user groups different permissions and centrally manage resources across regions.

The following describes typical application scenarios of enterprise projects.

Scenarios Classified by Business

If an enterprise has multiple programs that need to be started or stopped independently without affecting each other, it can create an enterprise project for each program for settlement and grant permissions to different persons to manage resources of different programs.

For example, a game company launches multiple games, such as A, B, and C. The cost of each game is calculated separately. Some games are popular and continue to operate. Others receive poor customer response and are discontinued after a period of time. In this case, the game company can create an independent enterprise project for each game respectively, for example, project A, B, and C, and add user groups to manage the projects. To access Enterprise Project Management Service (EPS), the company needs to apply for an account. [Figure 2-1](#) shows the organization structure of the game company, and [Figure 2-2](#) shows the solution diagram.

Figure 2-1 Organization structure

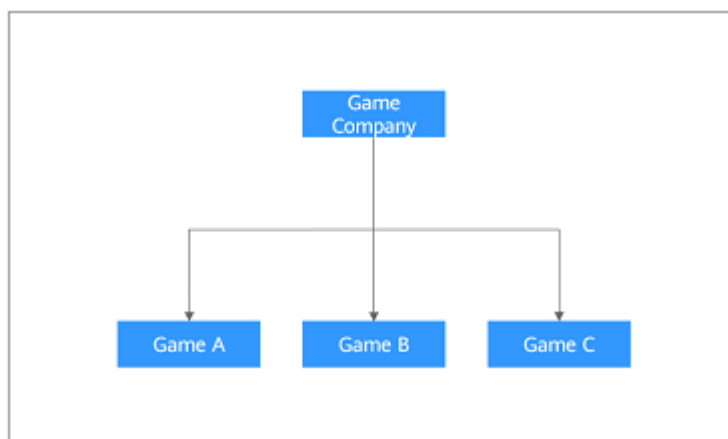
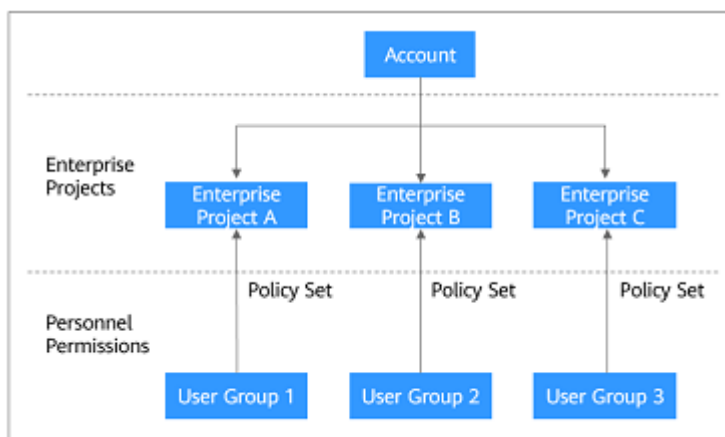


Figure 2-2 Solution diagram



Scenarios Classified by Organization Structure and Business

Enterprises can create projects and member accounts based on the organization structure. The resources and networks of the accounts can also be isolated from each other.

For example, an Internet enterprise needs to deploy the development environment and production environment during software development. The former is used for Alpha, Beta, and Gamma tests, and the latter is used to calculate costs based on programs (such as app program, mall program, and collaborative office program). The enterprise also requires that the two environments be isolated from each other to prevent the development tests from affecting the cost accounting in the production environment. Then two accounts are needed to separate the two environments. For account 1, projects A, B, and C can be created for Alpha, Beta, and Gamma. For account 2, projects D, E, and F can be created for the app program, mall program, and collaborative office program. Set a user group for each enterprise project to manage resources. **Figure 2-3** shows the organization structure of the game company, and **Figure 2-4** shows the solution diagram.

Figure 2-3 Organization structure

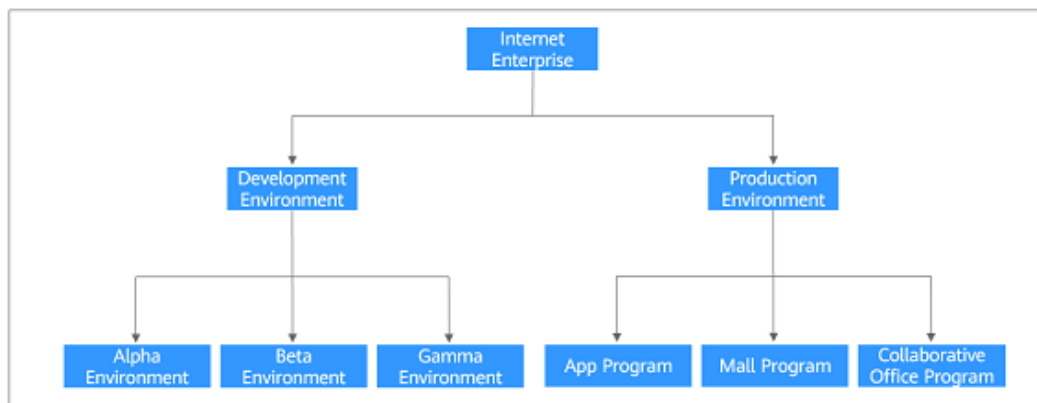
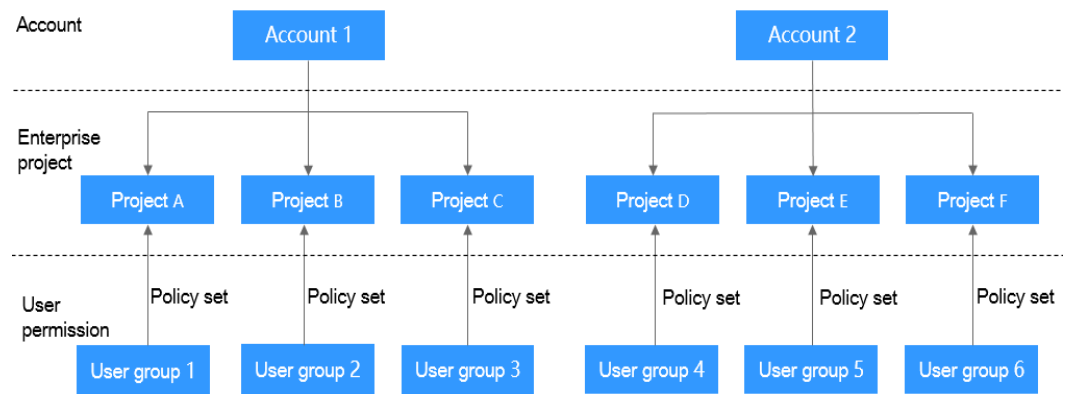


Figure 2-4 Solution diagram



3 Supported Services

For services and resources supported by EPS, you need to go to the EPS console to check it out.

On the **Enterprise Project Management Service** page, you can locate a target project and click **View Resource** in the **Operation** column to view the services and resources supported by the project.

4 Permissions

4.1 Enterprise Project Permissions

Administrator: The administrator can perform any operations on the **Enterprise Project Management** page.

IAM user: An IAM user's permissions are granted by the administrator. After an IAM user logs in to the **Enterprise Project Management** page, the IAM user sees only the enterprise projects assigned by the administrator, and can only manage the resources allocated by the administrator. If the administrator assigns a permissions policy for an IAM user, the IAM user has all the permissions included in the policy.

The administrator can use the system-defined policies or custom policies to assign permissions to users. Policies related to enterprise projects include EPS FullAccess and EPS ReadOnlyAccess. You can use Identity and Access Management (IAM) to manage enterprise project permissions for IAM users. For details, see *Identity and Access Management User Guide*.

The permissions set in IAM are different from those in Enterprise Management. The administrator can select either IAM or Enterprise Management to manage resource permissions based on enterprise requirements.

Table 4-1 Enterprise Management permissions

| Service Name | Policy Name | Description | Typically Associated Personnel |
|-----------------------|--------------------|--|----------------------------------|
| Enterprise Management | EPS FullAccess | <ul style="list-style-type: none"> The Enterprise Management administrator policy, including all the permissions related to enterprise project management and personnel management. The policy allows users to create enterprises, migrate resources, add users to user groups, remove users from user groups, and set policies for user groups. The administrator can set the policy in the Global service in IAM. The administrator policy of a single enterprise project. The policy has only the permissions of the specific enterprise projects, including modifying, enabling, disabling, and viewing the specified enterprise projects. The administrator or the users granted the EPS FullAccess policy on IAM can set the policy in Enterprise Management. | Enterprise asset administrators |
| | EPS ReadOnlyAccess | <p>Read-only permissions for a specific or all enterprise projects</p> <ul style="list-style-type: none"> Read-only permissions on Enterprise Management to view the information of all enterprise projects and users. The administrator can set the policy in the Global service in IAM. The administrator or the user to whom the EPS FullAccess policy is attached can set the permission in Enterprise Management. | Enterprise asset query personnel |

Table 4-2 Common operations and required permissions

| Operation | EPS FullAccess | |
|--|----------------|---|
| Viewing resources in an enterprise project | √ | √ |
| Creating an enterprise project | √ | × |

| Operation | EPS FullAccess | |
|--|----------------|---|
| Modifying an enterprise project | √ | × |
| Enabling an enterprise project | √ | × |
| Disabling an enterprise project | √ | × |
| Adding a resource to an enterprise project | √ | × |
| Removing a resource from an enterprise project | √ | × |

4.2 Cloud Service Permissions

You need required permissions to access services in an enterprise project. If you are a member in a user group to which the permissions are granted, you can inherit all permissions from the group.

- On the Enterprise Management console, add policies to user groups. For details, see [Adding a User Group to an Enterprise Project](#).
- On the IAM console, add policies to user groups. For details, see .
- Create custom policies on the IAM console. For details, see .

5 Accessing the Project Management Page

Prerequisites

You have been granted with the permissions to use EPS.

Procedure

Step 1 Log in to the management console.

Step 2 Go to the management console. In the upper right corner, choose **Enterprise Management** from the drop-down list of your account name.

The **Enterprise Project Management** page is displayed.

----End

6 Multi-project Management

6.1 Scenario

Company A is an enterprise user and has multiple project teams that require different resources and personnel. This topic presents the best practice for multi-project management to address company A's requirements.

Requirements

- **Requirement 1:** Company A can create multiple types of resources in **region_01** and **region_02** for two project teams. Resources of the two project teams need to be isolated from each other.
- **Requirement 2:** Each member of the project teams can access only the resources of the project team to which the member belongs, and only has the permissions required to complete tasks.

Solution

- **Solution to requirement 1:** Enterprise Management and Identity and Access Management (IAM) are two cloud services that can isolate resources between projects. However, the implementation logic and functions of the two services are different.
 - Enterprise Management: You can create enterprise projects to group and manage resources across regions. Resources in enterprise projects are logically isolated from each other. **Each enterprise project can contain resources of multiple regions**, and resources can be added to or removed from enterprise projects.
 - IAM: IAM projects group and physically isolate resources in a region, **and each IAM project can only contain resources in the same region**. Resources cannot be transferred between IAM projects.

In conclusion, Enterprise Management provides more flexible cross-region resource isolation between projects than IAM. Therefore, it is recommended that company A use Enterprise Management to manage project resources. The solutions to the following requirements are proposed using the Enterprise Management service. For details about the two services, see [What Are the Differences Between IAM and Enterprise Management?](#).

- Solution to requirement 2:** In IAM, company A creates IAM users for employees and adds the IAM users to different groups. In Enterprise Management, company A adds the user groups to the enterprise projects created to address **Requirement 1** and assigns required resource access permissions (see **Table 6-1**) to each user group.

Figure 6-1 Personnel management model of company A

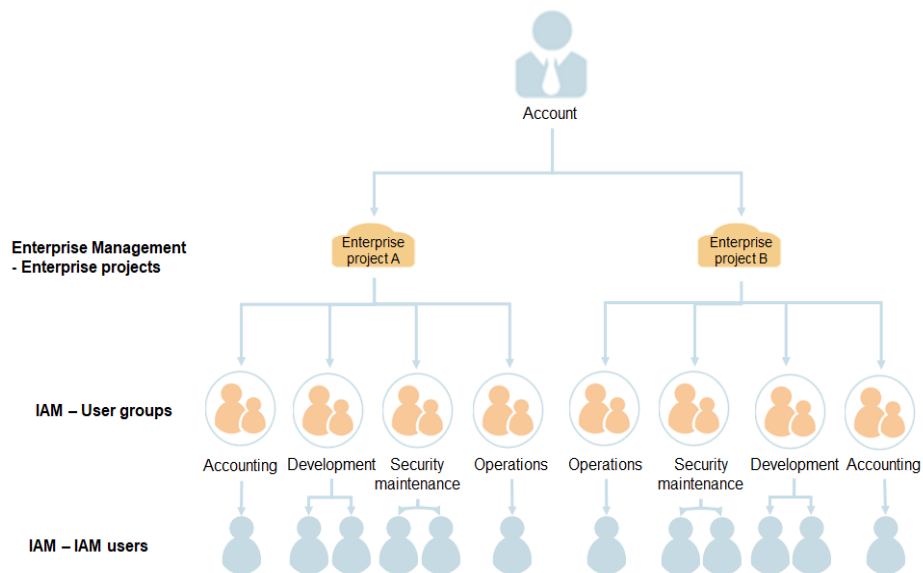


Table 6-1 User group permissions in company A

| User Group | Responsibility | Permissions | Description |
|---------------------------|-----------------------------------|----------------------|---|
| Development team | Project development | | Full permissions for Elastic Load Balance (ELB) |
| | | OBS Administrator | Full permissions for Object Storage Service (OBS) |
| | | EPS FullAccess | Full permissions for Enterprise Management |
| Security maintenance team | Security O&M of the project | ECS CommonOperations | Permissions for basic ECS operations |
| Operations team | Overall operations of the project | EPS FullAccess | Full permissions for Enterprise Management, including modifying, enabling, disabling, and viewing enterprise projects |

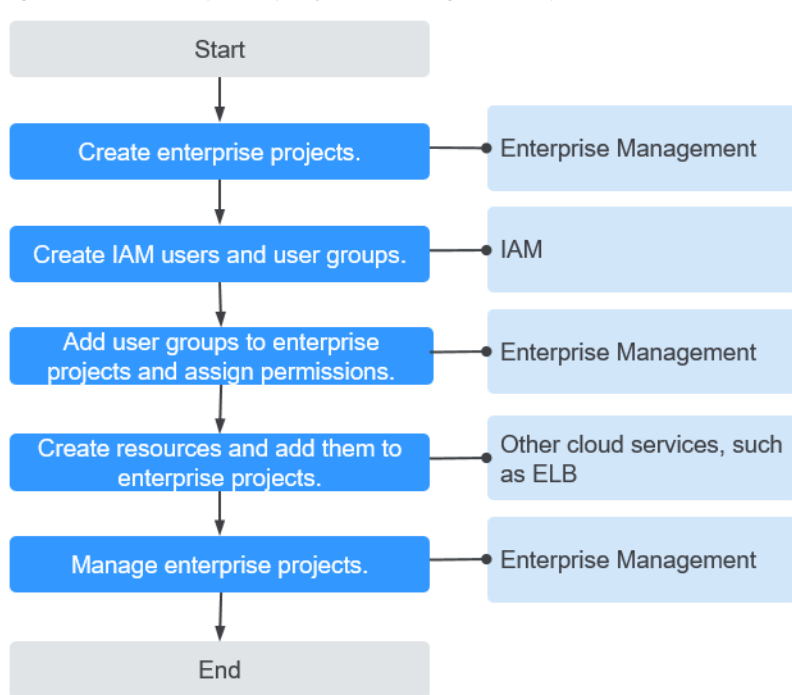
NOTE

For details about system permissions of all cloud services, see [System Permissions](#).

6.2 Procedure

The following figure illustrates the process of enterprise project management for addressing company A's requirements.

Figure 6-2 Enterprise project management process



Step 1: Create enterprise projects on the **Enterprise Management console**.

Step 2: On the **IAM console**, create a user group for each functional team, create IAM users for employees, and add the users to different user groups.

Step 3: On the **Enterprise Management console**, assign the required permissions to each user group, and add the user group to the corresponding enterprise project. Users in the group automatically inherit its permissions.

Step 4: Create resources on **other cloud service consoles** and add the resources to the corresponding enterprise projects.

Follow-Up Operation: Enterprise Project Management: Manage users and resources on the **Enterprise Management console**.

Creating Enterprise Projects

Perform the following procedure to create two enterprise projects (A and B) on the Enterprise Management console.

Step 1 On the **Enterprise Project Management** page, click **Create Enterprise Project**.

Step 2 Enter **EnterpriseProject_A** for **Name** and click **OK**.

Step 3 Repeat **Step 1** to **Step 2** to create **EnterpriseProject_B**.

The two enterprise projects are displayed on the **Enterprise Project Management** page.

----End

Creating IAM Users and User Groups

The following is an example procedure for creating a user group (**Enterprise Project A_Development**) and user (**Murphy**) and adding the user to the user group.

Step 1 Create a user group.

1. On the management console, choose **Management & Deployment > Identity and Access Management**.
2. On the IAM console, choose **User Groups** from the left navigation bar, and click **Create User Group** in the upper right corner.
3. Set the user group name to **Enterprise Project A_Development** and click **OK**.
4. Repeat **2** to **3** to create accounting, security maintenance, and operation teams for the two enterprise projects.

The user groups are displayed in the user group list.

Step 2 Create an IAM user and add the user to a user group. For details, see *Identity and Access Management User Guide*.

1. In the left navigation of the IAM console, choose **Users**. Then click **Create User**.
2. On the **Create User** page, enter user information, select **Access Type**, **Credential Type**, and **Login Protection**, and click **Next**.
3. Enter the target user group to add the user. Then the user will inherit permissions from the group. Click **Next** and the IAM user Murphy is created.
4. Repeat **1** to **3** to create users for all employees and add the users to corresponding user groups.

The user is displayed in the user list. You can view the IAM users of each user group on the **Users** tab page.

----End

Adding User Groups to Enterprise Projects

The following is an example of associating a user group, Enterprise Project A_Development, with an enterprise project, project A, and adding the **EPS FullAccess** policy to the user group. Then users in Enterprise Project A_Development can manage project A.

Step 1 On the **Enterprise Project Management** page, click **View User Group** in the row that contains enterprise project A.

Step 2 On the details page of enterprise project A, choose **Permissions > User Groups** and click **Assign Permissions**.

Step 3 In the **Assign Permission** dialog box, select **Enterprise Project A_Development** and click **Next**.


Step 4 Search for and select **EPS FullAccess** and click **OK**. User group, **Enterprise Project A_Development**, then has the permissions for managing enterprise project A.

To view or modify user group permissions of an enterprise project, go to the enterprise project details page, click the **Permissions** tab, click **Attach Policy** in the row that contains the target user group, and view or modify the permissions of the user group.

----End

Creating Resources and Adding Them to Enterprise Projects

The following is an example procedure for creating a load balancer and adding it to enterprise project A.

Step 1 Log in to the management console, click  in the upper left corner, and choose **Network > Elastic Load Balance**.

Step 2 Click **Create Elastic Load Balance** in the upper right corner of the page.

Step 3 Configure the load balancer information and select enterprise project A from the **Enterprise Project** drop-down list.

Step 4 Click **Create Now** in the lower right corner of the page.

Step 5 Confirm the configuration and submit your request.

Step 6 Repeat **Step 1** to **Step 5** to create required resources for the two enterprise projects.

To view the created resources, go to the Enterprise Management console and click **View Resource** in the row that contains enterprise project A or B.

NOTE

- Currently, Enterprise Management only supports specific cloud services. For details, see [Supported Services](#).
- If you have already created required resources, you can directly add them to enterprise projects. For details, see [Adding Resources to an Enterprise Project](#).

----End

Follow-Up Operation: Enterprise Project Management

After completing the preceding steps, you can manage your enterprise projects on the **Enterprise Project Management** page.

- **Resource management:** Click **View Resource** in the **Operation** column to view the existing resources of an enterprise project and [add more resources to the enterprise project](#).
- **User management:** Click **View User Group** to view the users and user groups of an enterprise project, and modify their permissions.

7 Enterprise Project Management

7.1 Creating an Enterprise Project

Scenario

You can create an enterprise project for a department or business.

Prerequisites

Only the administrator or the user attached with the EPS FullAccess policy is allowed to create enterprise projects.

Restrictions and Limitations

Up to 100 enterprise projects can be created in an account.

Procedure

- Step 1** On the management console, click the username in the upper right corner and choose **Enterprise Management** from the drop-down list.
The **Enterprise Project Management** page is displayed.
- Step 2** On the **Enterprise Project Management** page, click **Create Enterprise Project** in the upper right corner.
The **Create Enterprise Project** page is displayed.
- Step 3** Set **Name** and **Description**, and click **OK**.

Table 7-1 Configuration rules

| Parameter | Description |
|-------------|---|
| Name | A project name can contain up to 255 characters. Only letters, digits, underscores (_), and hyphens (-) are allowed. It cannot contain the word default in any form. Example: project_A |
| Description | The description can contain up to 512 characters. Example: The enterprise project is used to manage the resources of Project A. |

 **NOTE**

To avoid personal data leakage, you are advised not to include personal and sensitive information in enterprise project descriptions or resource tags.

----End

7.2 Modifying, Enabling, or Disabling an Enterprise Project

Scenarios

You can modify, enable, or disable enterprise projects when your business changes.

For resource security, enterprise projects cannot be deleted. If a project will no longer be used, disable it.

 **NOTE**

- Disabled enterprise projects cannot be modified.
- Disabled enterprise projects still occupy the enterprise project quota. If your enterprise project quota cannot meet your requirement, contact O&M personnel to enable you to delete enterprise projects.
- Disabled enterprise projects will be deleted from **Enterprise Project** on the page of creating cloud services. Disabled enterprise projects will not support adding resources or creating user groups. Enable the enterprise projects if you want to use them.
- The default enterprise project cannot be modified or disabled.

Modifying an Enterprise Project

To modify the name or description of an enterprise project, perform the following steps:

- Step 1** Sign in to the management console. In the upper right corner, choose **Enterprise Management** from the drop-down list of your account name.

The **Enterprise Project Management** page is displayed.

Step 2 Locate the target enterprise project and click **More > Modify** in the **Operation** column.

The **Modify Enterprise Project** dialog box pops up.

Step 3 Modify the project name or description.

Table 7-2 Configuration rules

| Parameter | Description |
|-------------|--|
| Name | A project name can contain a maximum of 255 characters. Only letters, digits, underscores (_), and hyphens (-) are allowed. The name cannot contain any case-insensitive form of the word default . Example: project_A |
| Description | The project description can contain a maximum of 512 characters. Example: The enterprise project is used to manage the resources of Project A. |

Step 4 Click **OK**.

----End

Enabling an Enterprise Project

To use a disabled enterprise project again, enable it.

Step 1 Sign in to the management console. In the upper right corner, choose **Enterprise Management** from the drop-down list of your account name.

The **Enterprise Project Management** page is displayed.

Step 2 Choose the disabled enterprise project, click **More > Enable** in the **Operation** column.

The **Enable Enterprise Project** dialog box pops up.

Step 3 Click **Yes**. The enterprise project is enabled successfully.

----End

Disabling an Enterprise Project

You can disable an enterprise project if you no longer need to use it because your enterprise structure is adjusted or business is reduced.

Step 1 Sign in to the management console. In the upper right corner, choose **Enterprise Management** from the drop-down list of your account name.

The **Enterprise Project Management** page is displayed.

Step 2 Choose the enabled enterprise project, click **More > Disable** in the **Operation** column.

The **Disable Enterprise Project** dialog box pops up

Step 3 Click **Yes** and the project is disabled.

----End

7.3 Selecting an Enterprise Project for a New Cloud Resource

Scenarios

Newly created cloud resources are added to an enterprise project enabled and managed by project.

You can add cloud resources to an enterprise project using either of the following methods:

- EPS console
- Consoles of cloud services that support EPS

Limitations and Constraints

New cloud resources cannot be added to a disabled enterprise project.

Using the EPS Console

Step 1 Sign in to the management console. In the upper right corner, choose **Enterprise Management** from the drop-down list of your account name.

The **Enterprise Project Management** page is displayed.

Step 2 In the enterprise project list, click the name of an enterprise project to access the enterprise project details page.

Step 3 Click **Create Resource** or **Plan Network** in the upper right corner of the page to add required cloud resources to the enterprise project.

----End

Using the Console of Cloud Services that Support EPS

You can select an enabled enterprise project when configuring **Enterprise Project** on the cloud resource creation page. New cloud resources can be managed by the selected enterprise project.

Take ECS as an example. Perform the following operations:

Step 1 Log in to the management console.

Step 2 Click  in the upper left corner to select a region and a project.

Step 3 Select **Computing > Elastic Cloud Server**.

Step 4 In the upper right corner of the page, click **Create ECS**.

The **Elastic Cloud Server** page is displayed.

Step 5 Configure the ECS data and select the target enterprise project from the **Enterprise Project** drop-down list.

Step 6 Click **Submit**.

Step 7 You can view the enterprise project to which the created ECS belongs on the **Elastic Cloud Server** page.

----End

8 Enterprise Project Resource Management

8.1 Resource Management Overview

Enterprise Project Management Service (EPS) provides a unified method to manage cloud resources and personnel by enterprise project.

 NOTE

For details about the differences between IAM projects and enterprise projects, see [What Are the Differences Between IAM Projects and Enterprise Projects?](#)

8.2 Viewing Resources in an Enterprise Project

Scenario

You can view all resources of an enterprise project.

Procedure

Step 1 Sign in to the management console. In the upper right corner, choose **Enterprise Management** from the drop-down list of your account name.

The **Enterprise Project Management** page is displayed.

Step 2 Click **View Resource** in the **Operation** column of the row containing the target enterprise project.

The enterprise project details page is displayed. You can view the resources in the enterprise project on the **Resources** tab page.

Step 3 Set the resource search options.

1. Select a region.
2. Select a service type.
3. Select a resource type.

All resources that meet the filter criteria are displayed in the lower part of the page.

----End

8.3 Adding Resources to an Enterprise Project

Scenarios

If your need to group and manage resources based on your business or when resource groups need to be changed, you can reallocate resources by adding or removing them from projects.

EPS supports cross-region resource movement from one enterprise project to another.

Procedure

Step 1 Sign in to the management console. In the upper right corner, choose **Enterprise Management** from the drop-down list of your account name.

The **Enterprise Project Management** page is displayed.

Step 2 Locate the target enterprise project, and click **View Resource** in the **Operation** column.

The enterprise project details page is displayed. View resources in the current enterprise project on the **Resources** tab page.

Step 3 Click **Add**.

The **Add Resource** dialog box is displayed.

Step 4 Select a way of adding resources.

- **Independent resources:** Each resource is added as an independent resource. You can add multiple independent resources at the same time.


If resources other than ECSs need to be added, you must select this mode.

You can select this mode to add ECSs to the enterprise project, but resources associated with the ECSs, such as EIPs and EVS disks, are not added to the enterprise project.

- **ECSs and ECS associated resources:** You only need to select the ECSs to be added, and the resources associated with the ECSs will be automatically added to the enterprise project at the same time.

Select this way only when the resources to be added are ECSs. Currently, only the associated EVS disks and EIPs can be added to an enterprise project along with the ECSs.

Step 5 Filter resources by service, region, or enterprise project in the filter box above the resource list or enter resource name in the search box for resource search.

Step 6 Click  in the resource type column to filter resources by type.

Resources meeting the search criteria will be displayed in the lower part of the page.

When ECS associated resources are added, resources cannot be filtered by service or resource type.

Step 7 Select the resources to be added and click **OK**.

After the resources are added, they appear in the resource list of the target enterprise project.

----End

8.4 Removing Resources from an Enterprise Project

Scenarios

If you need to group and manage resources based on your business or when resource groups need to be changed, you can reallocate resources by adding or removing them from projects.

EPS allows removal of cross-region resources from the same enterprise project for management.

Resources can be removed from an enterprise project that the resources belong to in the following two scenarios:

- Resources are removed from one enterprise project to another project.
- Resources are removed from one enterprise project to the **default** enterprise project.

Procedure

Step 1 Sign in to the management console. In the upper right corner, choose **Enterprise Management** from the drop-down list of your account name.

The **Enterprise Project Management** page is displayed.

Step 2 Locate the target enterprise project, and click **View Resource** in the **Operation** column.

The enterprise project details page is displayed. View resources in the current enterprise project on the **Resources** tab page.

Step 3 Select the resources to be removed, and click **Remove**.

The **Remove Resource** dialog box is displayed.

Step 4 Select a mode.

- **Independent resources:** Each resource is removed as an independent resource. You can remove multiple independent resources at the same time. If resources other than ECSs need to be added, you must select this mode. You can select this mode to remove ECSs from the enterprise project, but resources associated with the ECSs, such as EIPs and EVS disks, are not removed from the enterprise project.
- **ECSs and ECS associated resources:** You only need to select the ECSs to be removed, and the resources associated with the ECSs will be automatically removed from the enterprise project at the same time.

This mode is available only when the resources to be removed are ECSs. Currently, only ECSs and their associated EVS disks and EIPs can be removed from an enterprise project at the same time.

Step 5 Select the destination enterprise project that resources are removed to and click **OK**.

Resources removed can be added to and managed in other enterprise projects.

Resources can also be added into the **default** enterprise project if they do not need to be added into other projects.

The resources are removed from the enterprise project. You can view the resources in the resource list of the destination enterprise project.

----End

9 Enterprise Personnel Management

9.1 Viewing User Groups in an Enterprise Project

Step 1 Sign in to the management console. In the upper right corner, choose **Enterprise Management** from the drop-down list of your account name.

The **Enterprise Project Management** page is displayed.

Step 2 Click **View User Group** in the **Operation** column of the row containing the target enterprise project.

The enterprise project details page is displayed. View information about user groups in the current enterprise project under the **Permissions >User Groups** tab.

----End

9.2 Adding a User Group to an Enterprise Project

After you add a user group to an enterprise project and set policies for the user group, users in the user group have the permissions defined by the policies and can use resources in the enterprise project. This section describes how to add a user group to an enterprise project.

Procedure

Step 1 Sign in to the management console. In the upper right corner, choose **Enterprise Management** from the drop-down list of your account name.

The **Enterprise Project Management** page is displayed.

Step 2 Click **View User Group** in the **Operation** column of the row containing the target enterprise project.

The enterprise project details page is displayed. View information about user groups in the current enterprise project under the **Permissions >User Groups** tab.

Step 3 Click **Assign Permissions**.

The **Assign Permissions** dialog box is displayed.

Step 4 (Optional) Query available user groups.

If too many user groups are displayed in the **Available** area, filter them by the name of the user group to be added.

Step 5 Select the user group to be added to move the user group to the **Selected** area.

You can also click **Create User Group** in the lower left corner of the dialog box to create a user group. For details about how to create a user group, see the *Identity and Access Management User Guide*.

Step 6 Click **Next** to attach policies to the newly added user group. The policies define the operations that the user group can perform on the enterprise project to which the user group belongs.

1. Select a policy. You can filter policies by selecting **All policies**, **Custom policy**, or **System-defined policy** from the drop-down list under **Available**, or click **Create Custom Policy** to create your own policies.

Up to 25 policies can be attached to each user group.

- For details about how to create a custom policy, see the *Identity and Access Management User Guide*.

2. Select the policy to be added to synchronize the selected policy to the **Selected** area.

Step 7 Click **OK**.

The newly added user group appears in the user group list of the current enterprise project.

 **NOTE**

It takes about 30s for policies to take effect. You can log in again to view the policies.

----End

Other Operations

To attach policies to a user group in an enterprise project, click **Attach policy** in the same row as the user group. For details, see [Step 6](#).

At first, user groups are created and granted permissions by an administrator. Then users can be added to the groups to inherit the permissions of the groups. To change the permissions of a user, add the user to a new group or remove the user from an existing group.

9.3 Removing User Groups from an Enterprise Project

You can remove a user group from an enterprise project if the enterprise's business has changed and the user group should not have the permissions to use the enterprise project.

You can remove one or multiple users at a time.

After a user group is removed from an enterprise project, users of the user group can no longer manage the project. Users can manage an enterprise project after the group they belong to is added to the project.

Removing One User Group

- Step 1** Sign in to the management console. In the upper right corner, choose **Enterprise Management** from the drop-down list of your account name.
- The **Enterprise Project Management** page is displayed.
- Step 2** Click **View User Group** in the **Operation** column of the row containing the enterprise project from which you want to remove a user group.
- The enterprise project details page is displayed. View information about user groups in the current enterprise project under the **User Groups** tab.
- Step 3** Locate the user group to be removed, and click **Remove** in the **Operation** column.
- A confirmation dialog box is displayed.
- Step 4** Click .
- The user group is removed from the current enterprise project.
- End

Removing Multiple User Groups

- Step 1** Sign in to the management console. In the upper right corner, choose **Enterprise Management** from the drop-down list of your account name.
- The **Enterprise Project Management** page is displayed.
- Step 2** Click **View User Group** in the **Operation** column of the row containing the enterprise project from which you want to remove a user group.
- The enterprise project details page is displayed. View information about user groups in the current enterprise project under the **User Groups** tab.
- Step 3** Select the user groups to be removed, and click **Remove** above the user group list.
- A confirmation dialog box is displayed.
- Step 4** Click .
- The selected user groups are removed from the current enterprise project.
- End

10 Interconnecting with CTS

10.1 Key TMS Operations

Table 10-1 lists the enterprise project operations that will be recorded by CTS.

Table 10-1 EPS operations recorded by CTS

| Operation | Resource Type | Trace Name |
|---|---------------------------|--------------------------|
| Creating an enterprise project | enterpriseProject | createEnterpriseProject |
| Modifying an enterprise project | enterpriseProject | modifyEnterpriseProject |
| Disabling an enterprise project | enterpriseProject | disableEnterpriseProject |
| Enabling an enterprise project | enterpriseProject | enableEnterpriseProject |
| Migrating resources | enterpriseProjectResource | migrate |
| Removing resources and their associated resources | enterpriseProjectResource | associatedMigrateOut |
| Adding resources and their associated resources | enterpriseProjectResource | associatedMigrateIn |
| Adding resources to an enterprise project. | enterpriseProjectResource | migrateIn |
| Removing resources | enterpriseProjectResource | migrateOut |

10.2 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](#)

Viewing Real-Time Traces in the Trace List


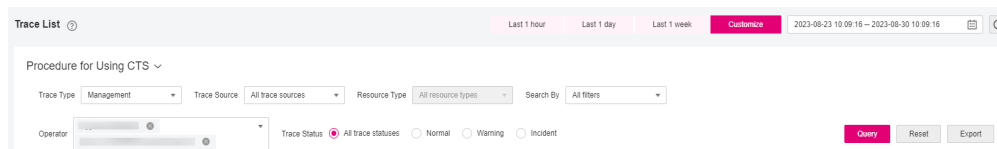


1. Log in to the management console.
2. Click  in the upper left corner and choose **Management & Deployment** > **Cloud Trace Service**. The CTS console is displayed.
3. Choose **Trace List** in the navigation pane on the left.
4. Set filters to search for your desired traces, as shown in [Figure 10-1](#). The following filters are available:

Figure 10-1 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.
5. Click **Query**.
 6. 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.
- 7. Click  on the left of a trace to expand its details.

| Trace Name | Resour... | Trac... | Resource ID | Resource Name... | Trace Stat... | Operator | Operation Time | Operat... |
|------------|-----------|---------|-------------|------------------|---------------|----------|--------------------|------------|
| login | user | IAM | 3c... | F... | normal | ... | Nov 25, 2022 15... | View Trace |

```

trace_id: c1...
code: 302
trace_name: login
resource_type: user
trace_rating: normal
message: {"login":{"user_type":"domain owner","login_protect":{"status":"off"}}}
source_ip: ...
trace_type: ConsoleAction
service_type: IAM
event_type: global
project_id: ...
resource_id: 3...
tracker_name: system
time: Nov 25, 2022 15:35:44 GMT+08:00
resource_name: user
user: {"domain":{"name":"...", "id":"..."}, "name":"...", "id":"..."}
record_time: Nov 25, 2022 15:35:44 GMT+08:00
    
```

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

View Trace ✕

```

{
  "request": "",
  "trace_id": "...",
  "code": "200",
  "trace_name": "createDockerConfig",
  "resource_type": "dockerlogincmd",
  "trace_rating": "normal",
  "api_version": "",
  "message": "createDockerConfig, Method: POST Url=/v2/manage/utlils/secret, Reason:",
  "source_ip": "...",
  "domain_id": "...",
  "trace_type": "ApiCall",
  "service_type": "SWR",
  "event_type": "system",
  "project_id": "...",
  "response": "",
  "resource_id": "",
  "tracker_name": "system",
  "time": "Nov 16, 2023 10:54:04 GMT+08:00",
  "resource_name": "dockerlogincmd",
  "user": {
    "domain": {
      "name": "...",
      "id": "..."
    }
  }
}
    
```

- 9. For details about key fields in the trace structure, see section "Trace References" > "Trace Structure" and section "Trace References" > "Example Traces".

11 Quotas

What Is Quota?

Quotas are the limits put on resources to prevent waste. Each service has their own quotas. For example, a quota can restrict the maximum enterprise projects that a user can create.

If the existing resource quota cannot meet your service requirements, you can apply for a higher quota.

By default, up to 100 projects can be created for an account. You can request to increase the quota.

The quota can be increased up to 256.

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**.

12 FAQs

12.1 What Are the Differences Between IAM and Enterprise Management?

Enterprise Management enables enterprises to manage cloud resources at the organization and project levels. Enterprise Management mainly provides project management, personnel management, and resource management.

Identity and Access Management (IAM) is an identity management service that provides identity authentication, permissions management, and access control.

Both IAM and Enterprise Management can be used to manage users and access permissions. However, Enterprise Management supports more fine-grained resource permissions management than IAM. Enterprise Management is recommended for medium- and large-sized enterprises.

For more information about IAM features, see *Identity and Access Management User Guide*.

Differences Between IAM and Enterprise Management

- Enabling method
 - IAM can be used free of charge immediately upon successful account registration.
 - Enterprise Management can be used free of charge immediately upon successful account registration.
- Resource isolation
 - Using IAM, you can create multiple projects in a region to isolate resources, and authorize users to access resources in specific projects.
 - Using Enterprise Management, you can create enterprise projects to isolate resources across regions. Enterprise Management makes it easy to assign permissions for specific cloud resources. For example, you can add an Elastic Cloud Server (ECS) to an enterprise project, and assign permissions to a user for it to manage the ECS in the project. The user then can manage only this ECS.

Relationship Between Enterprise Management and IAM

- The functions of creating users and user groups are synchronous between IAM and Enterprise Management.
- The function of granting permissions to user groups in Enterprise Management is subject to the fine-grained IAM authorization. If the system-defined policies cannot meet your requirements, you can create custom policies in IAM. The custom policies will then be synchronized to Enterprise Management and can be associated with user groups in the two services.
- If a user group is granted permissions in both IAM and Enterprise Management, users in the group get permissions from the policies attached to the group in the two services. Requests of these users will then be authenticated based on the actions in the associated policies.
 - If the attached policies contain the same action, the effect of the action in IAM takes the priority. For example, when a user requests for creating a cloud server, the Deny effect defined in IAM is applied. Therefore, the user cannot create cloud servers.

A policy attached in an IAM project contains the following action:

```
{
  "Action": [
    "ecs:cloudServers:create"
  ],
  "Effect": "Deny"
}
```

A policy attached in an enterprise project contains the following action:

```
{
  "Action": [
    "ecs:cloudServers:create"
  ],
  "Effect": "Allow"
}
```

- All different actions in the policies attached in IAM and Enterprise Management will take effect. The following are two actions that allow users to create and delete cloud servers.

A policy attached in an IAM project contains the following action:

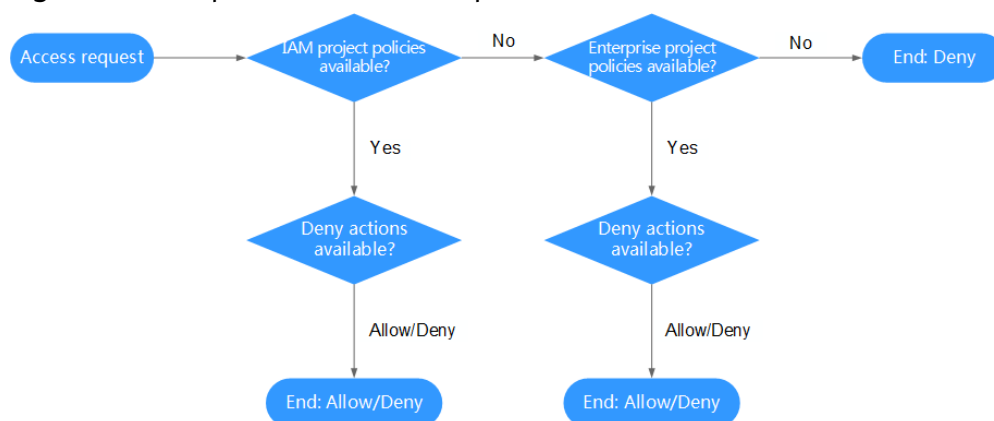
```
{
  "Action": [
    "ecs:cloudServers:create"
  ],
  "Effect": "Allow"
}
```

A policy attached in an enterprise project contains the following action:

```
{
  "Action": [
    "ecs:cloudServers:delete"
  ],
  "Effect": "Allow"
}
```

Authentication Process

When a user initiates an access request, the system authenticates the request based on the actions in the policies attached to the group to which the user belongs. The following figure shows the authentication process.

Figure 12-1 Request authentication process

1. A user initiates an access request.
2. The system looks for IAM project policies and then looks for matched actions in the policies.
3. If a matched Allow or Deny action is found, the system returns an authentication result (Allow or Deny). Then the authentication is finished.
4. If no matched actions are found in IAM project policies, the system continues to look for enterprise project policies and matched actions.
5. If a matched Allow or Deny action is found, the system returns an authentication result (Allow or Deny). Then the authentication is finished.
6. If no matched actions are found, the system returns a Deny. Then the authentication is finished.

12.2 What Are the Differences Between IAM Projects and Enterprise Projects?

IAM Projects

IAM projects group and **physically isolate** resources in the same region.

Resources cannot be transferred between IAM projects, but can only be deleted and then rebuilt.

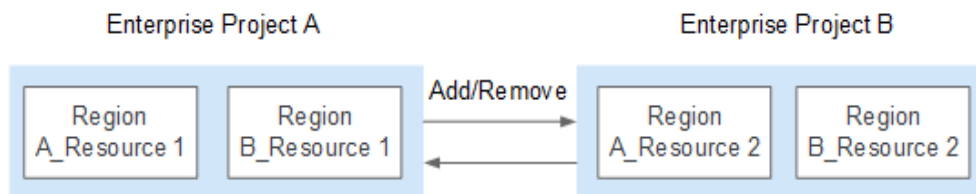


Enterprise Projects

Enterprise projects group, manage, and **logically isolate** resources of an enterprise in all regions.

An enterprise project can contain resources in multiple regions, and resources can be directly transferred between enterprise projects.

You cannot create projects in IAM after enabling Enterprise Management.



12.3 How Can I View All Enterprise Projects?

- When logging in to the Enterprise Management console as the enterprise administrator, you can view information about all enterprise projects.
- When logging in to the Enterprise Management console as an IAM user, you can also view information about all enterprise projects if this IAM user has the global authorization granted by the enterprise administrator.

12.4 How Do I Obtain an Enterprise Project ID?

- By calling an API
Cloud services can be authorized by IAM to call the API that is used to query a list of enterprise projects. The returned project list contains the ID of each enterprise project. For details about the APIs, see *Enterprise Project Management Service API Reference*.

- From the enterprise project details page.

The procedure is as follows:

- a. On the management console, click **username** in the upper right corner and choose **Enterprise Management** from the drop-down list.
The **Enterprise Project Management** page is displayed.
- b. Click the name of the target enterprise project to view its ID on the displayed details page.

12.5 How Many Enterprise Projects Can I Create?

By default, you can create up to 100 enterprise projects.

If the default quota cannot meet your requirements, you can [apply for a higher quota](#).

12.6 Will Adding or Removing a Resource from Enterprise Projects Change Its VPC and CIDR Block?

No.

Migrating a resource between enterprise projects only affects permissions of users associated with the projects.

Migrating a resource from one enterprise project to another does not affect the resource itself. For example, the resource instance will not be restarted, the network configuration will not be changed, and the ownership of the resource will not be changed.

However, the access to the resources of an enterprise project may be affected if resource permissions are configured based on the project and the project is adjusted. For example, if you only grant a member the permissions to access resources of project A, the member may be rejected to access the resources when project A is migrated to another project, such as project B.

13 Change History

| Released On | Description |
|-------------|---|
| 2022-11-30 | <p>This issue is the second official release.</p> <p>This release incorporates the following change:</p> <p>Added:</p> <ul style="list-style-type: none">• Multi-project Management Cases• How Many Enterprise Projects Can I Create at Most?• Will Adding or Removing a Resource from Enterprise Projects Change Its VPC and CIDR Block? |
| 2022-08-11 | <p>This issue is the first official release.</p> |