

Alibaba Cloud

Resource Management Product Introduction

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Document conventions

| Style | Description | Example |
|--|---|---|
|  Danger | A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results. |  Danger: Resetting will result in the loss of user configuration data. |
|  Warning | A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results. |  Warning: Restarting will cause business interruption. About 10 minutes are required to restart an instance. |
|  Notice | A caution notice indicates warning information, supplementary instructions, and other content that the user must understand. |  Notice: If the weight is set to 0, the server no longer receives new requests. |
|  Note | A note indicates supplemental instructions, best practices, tips, and other content. |  Note: You can use Ctrl + A to select all files. |
| > | Closing angle brackets are used to indicate a multi-level menu cascade. | Click Settings> Network> Set network type . |
| Bold | Bold formatting is used for buttons, menus, page names, and other UI elements. | Click OK . |
| Courier font | Courier font is used for commands | Run the <code>cd /d C:/window</code> command to enter the Windows system folder. |
| <i>Italic</i> | Italic formatting is used for parameters and variables. | <code>bae log list --instanceid</code> <i>Instance_ID</i> |
| [] or [a b] | This format is used for an optional value, where only one item can be selected. | <code>ipconfig [-all -t]</code> |
| { } or {a b} | This format is used for a required value, where only one item can be selected. | <code>switch {active stand}</code> |

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1. What is Resource Management?

Alibaba Cloud Resource Management provides a collection of resource management services that support enterprise IT administration. The services include Resource Directory and Resource Group. Resource Management enables you to build an organizational structure for resources based on your business needs. You can use a resource directory, folders, accounts, and resource groups to hierarchically organize and manage resources.

Resource Directory

Alibaba Cloud provides resource directories for enterprise customers to manage the relationships among multiple levels of resources (accounts).

A resource directory enables you to establish an organizational structure for resources used by your enterprise applications. This way, you can plan, build, and manage the resources in a centralized manner by using only one resource directory.

After you create a resource directory, you can consolidate the multiple accounts of your enterprise into it to form multi-level relationships for accounts and resources. This meets your financial, audit, security, and compliance requirements.

Applications such as billing, settlement, operation tracking, and compliance audits are interconnected with Resource Directory. This enables Resource Directory to provide an increasing number of business-based data services.

Resource Directory can be used in the following ways:

- Resource Management console
- API
- SDK

Resource Group

You can sort resources owned by your Alibaba Cloud account into various resource groups. This simplifies resource and permission management under your Alibaba Cloud account. Resource Group enables you to:

- Create resource groups to manage resources in multiple regions under an Alibaba Cloud account.
- Set an administrator for each resource group. Each administrator manages access permissions on the resources in the resource group for which they are responsible.
- View billing statements by resource group.

2.Features

This topic describes the features provided by Resource Directory and Resource Group.

Resource Directory

- Business-based creation of an organizational structure
 - In the era of globalization, enterprises establish branches or departments across regions. Resource Directory allows enterprises to address their business needs, usage of cloud resources, and purchase and regulatory requirements in various regions.
 - Enterprises need to start a large number of projects in diversified business environments. Resource Directory ensures reasonable investment, unified and controllable financial supervision, and optimized asset allocation for each project.
 - Resource Directory enables market segmentation. An enterprise can manage its business in groups based on its market and customer demands. Each customer corresponds to a node in the resource directory of the enterprise. Resource Directory isolates the business and unifies settlement.

- Unified management of all Alibaba Cloud accounts and resources

If your enterprise has multiple Alibaba Cloud accounts, you can enable a resource directory and place the accounts in preset locations in the resource directory. This allows you to manage the accounts and the resources under them in a centralized manner.

- Unified management of enterprise bills and invoices
 - After your enterprise accounts are placed in preset locations in a resource directory, you can use one of the accounts as the payment account to unify settlement. You can also grant permissions to certain users to meet financial management requirements.
 - Resource Directory defines the financial units of an enterprise. This way, the enterprise can issue bills with different titles for resources in different groups based on its own financial requirements.
- Integration with Resource Access Management (RAM) and other Alibaba Cloud applications
 - Resource Directory is integrated with the RAM service to implement finer-grained access control on a specific resource or resource group of an enterprise. RAM users in a resource directory can only access authorized resources.
 - A number of Alibaba Cloud applications collaborate with each other to provide standard and consistent services and reduce costs for enterprises. This depends on the output of the API used by Resource Directory.

Resource Group

- An Alibaba Cloud account contains one default resource group and multiple custom resource groups.
- A cloud resource can belong to only one resource group. A resource group cannot contain another resource group.
- A resource group can contain cloud resources created in different regions.
- Cloud resources in different resource groups under the same Alibaba Cloud account can be connected to the same Virtual Private Cloud (VPC). For example, an ECS instance in resource group 1 can be connected to a VPC in resource group 2.

- You can move resources under the same Alibaba Cloud account between resource groups.
- You can authorize a RAM user or user group to access a specific resource group.

3.Scenarios

This topic describes the typical scenarios of Resource Management.

Deploy resources and accounts by business


A resource directory enables you to create a folder hierarchy that matches your business needs and place your accounts and resources in the most suitable locations.

If your enterprise has multiple accounts and a large number of cloud resources on Alibaba Cloud, you can use a resource directory to manage the resources and accounts in a unified manner. This helps you:

- Manage and control resources for safe production management based on the organizational structure for the branches and departments of your enterprise, such as resource configuration, access permission management, and operation tracking.
- Manage and control projects based on your business needs, such as unified settlement, unified billing, and project auditing.

Define a hierarchical model for cloud resources

There are big differences in the sizes of the IT business market and the software R&D modes of various enterprises (from entrepreneurial enterprises to multinational enterprises). Flexible management models are required for cloud resources to meet the various requirements of conventional and agile IT business.

 **Note** Enterprises must design management models for their accounts and resources based on their business needs.

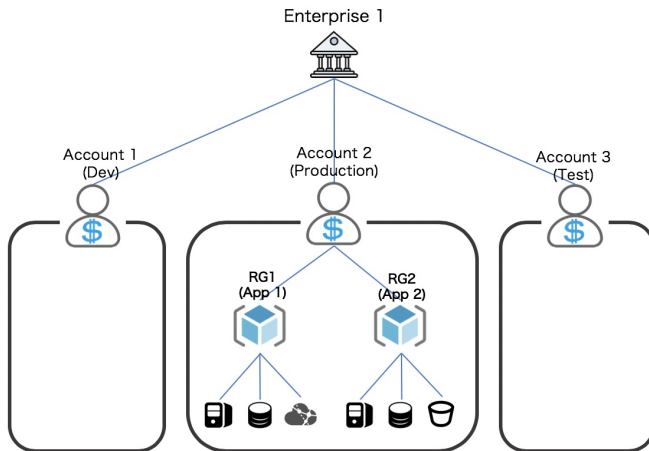
In most cases, an enterprise has one or more Alibaba cloud accounts. Alibaba Cloud accounts are the basic units for Resource Management. The accounts are the owners of cloud resources and are charged based on their resource usage. As containers for resources, Alibaba Cloud accounts are used to isolate resources.

- With multiple Alibaba Cloud accounts: You can isolate different application projects, business systems, or IT environments such as development and production environments.
- With one Alibaba Cloud account:
 - You can create multiple resource groups and authorize an administrator for each resource group. Administrators can then manage users, permissions, and cloud resources in their authorized resource groups.
 - You can view billing statements by resource group.

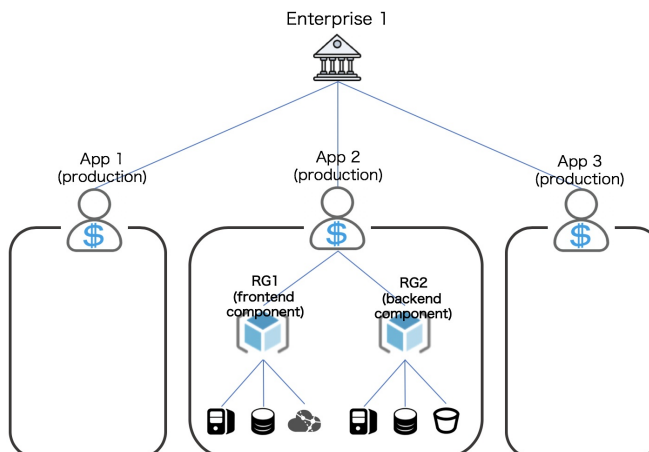
Plan a management structure for Alibaba Cloud accounts and resources

- When you migrate your enterprise data to the cloud, you can use resource groups to design a simple management structure for your Alibaba Cloud accounts and resources.

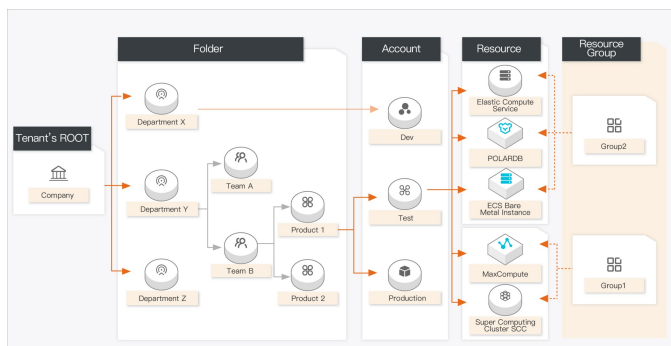
- Scenario 1: Use Alibaba Cloud accounts to isolate IT environments and use resource groups to isolate the resources used by various applications.



- Scenario 2: Use Alibaba Cloud accounts to isolate the resources used by various applications, and use resource groups to isolate resources between the modules within an application.

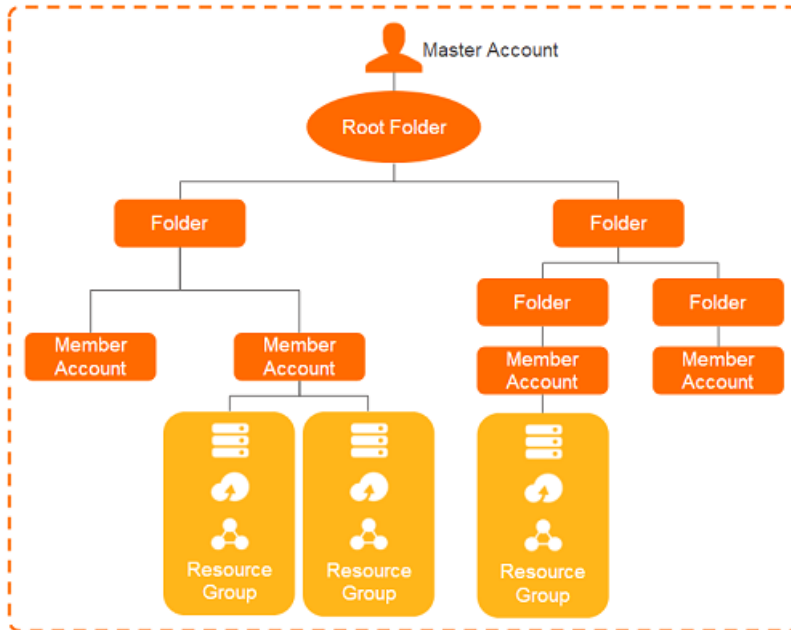


- For a large enterprise with complex organizational relationships, create a resource directory to build an organizational structure for the resources of the enterprise. This helps manage accounts, enhance O&M, meet strict industry requirements, and improve security.





4. Terms

This topic describes the terms related to Resource Management.



Resource directory

| Term | Description |
|--------------------|--|
| resource directory | <p>Alibaba Cloud provides resource directories for enterprises to manage the relationship of a number of accounts.</p> <p>A resource directory enables you to quickly establish an organizational structure based on your business requirements. Then, you can consolidate the accounts of your enterprise into this structure to form a hierarchy for resources. This way, you can manage accounts and resources in a centralized manner. The resource directory can meet your management requirements for network deployment, settlement, user permissions, security compliance, and log auditing.</p> |
| folder | <p>A folder is an organizational unit in a resource directory. A folder may indicate a branch, line of business, or project of an enterprise. Each folder can contain member accounts and child folders, which forms a tree-shaped organizational structure.</p> |
| Root folder | <p>The Root folder is the parent folder of all the other folders in a resource directory. These folders are organized in a hierarchy that starts from the Root folder.</p> |

| Term | Description |
|----------------|--|
| master account | <p>A master account is the account that is used to enable a resource directory and is the super administrator of the resource directory. The master account has all administrative permissions on the resource directory and the member accounts in the resource directory. Only an Alibaba Cloud account that has passed the enterprise real-name verification can be used as a master account. Each resource directory has only one master account.</p> <p>To ensure the security of the master account, we recommend that you create an Alibaba Cloud account and use this account as the master account.</p> <div><p> Note A master account does not belong to any resource directory and is not limited by the control policies of any resource directory.</p></div> |
| member account | <p>A member account is an Alibaba Cloud account. It serves as a container for resources and is also an organizational unit in a resource directory. A member account indicates a project or application. The resources under different member accounts are isolated.</p> <p>The following types of member accounts are supported:</p> <ul style="list-style-type: none">• Resource account <p>We recommend that you use resource accounts in a resource directory. By default, root permissions are not granted to resource accounts. Therefore, resource accounts are secure. You can use a master account to authorize RAM users, user groups, or roles to access the resources under resource accounts.</p> <ul style="list-style-type: none">• Cloud account <p>A cloud account has all the features of an Alibaba Cloud account, including root permissions. When you create a cloud account in a resource directory, you must use a new email address as the logon name of the cloud account. For more information, see Create a member account. You can use a master account to authorize RAM users, user groups, or roles to access the resources under cloud accounts.</p> <div><p> Note</p><p>If you want to use a created cloud account to log on to Alibaba Cloud, you must first reset the account password.</p></div> |

| Term | Description |
|-----------------------|--|
| Alibaba Cloud account | <p>An Alibaba Cloud account serves as a unique ID for you to access, purchase, and manage resources on Alibaba Cloud. The account is also a resource container and a capital account. It identifies a user and represents an identity.</p> <p>Essentially, the master account and member accounts of a resource directory are Alibaba Cloud accounts. However, the member accounts are Alibaba Cloud accounts that only serve as resource containers. After you consolidate the accounts of your enterprise into a resource directory, you can also manage the users and funds under these accounts in a centralized manner.</p> |

Resource group

You can sort resources owned by your Alibaba Cloud account into various resource groups. This simplifies resource and permission management under your Alibaba Cloud account.

Tag

| Term | Description |
|----------------|---|
| key-value pair | <p>A tag consists of a key-value pair. Limits:</p> <ul style="list-style-type: none"> A tag key can contain a maximum of 128 characters and cannot contain <code>http://</code> or <code>https://</code>. It cannot start with <code>acs:</code> or <code>aliyun</code>. A tag value can contain a maximum of 128 characters and cannot contain <code>http://</code> or <code>https://</code>. It cannot start with <code>acs:</code> or <code>aliyun</code>. Each tag key of a resource can have only one tag value. If you create a tag that has the same key as an existing tag, the value of the existing tag is overwritten. <p>For example, the <code>city:shanghai</code> tag is bound to a resource. If you bind the <code>city:newyork</code> tag to the resource, the <code>city:shanghai</code> tag is automatically unbound from the resource.</p> |
| custom tag | A custom tag is created by a user. For more information, see Create and bind a tag . |
| system tag | A system tag is defined by the system. You can only query system tags. |

5.Limits

This topic describes the limits of Resource Management. This includes the limits on resource groups, resource directories, and tags.

Limits on resource groups

| Item | Upper limit | Adjustable |
|--|----------------------------|------------------|
| Number of resource groups | 30 | Apply for quotas |
| Number of characters in the ID of a resource group | 12 (The lower limit is 3.) | N/A |
| Number of characters in the name of a resource group | 12 | N/A |

Limits on resource directories

| Item | Upper limit | Adjustable | Remarks |
|---|-------------|------------------|--|
| Number of resource directories that you can create by using one account | 1 | N/A | Member accounts of a resource directory cannot be used to create resource directories. |
| Number of root folders in a resource directory | 1 | N/A | None. |
| Number of folders in a resource directory | 100 | Apply for quotas | The root folder is not included. |
| Number of folder levels under the root folder | 5 | N/A | None. |
| Number of member accounts in a resource directory | 20 | Apply for quotas | None. |
| Number of valid invitations per day | 20 | Apply for quotas | Accepted invitations are not included. |
| Duration for account creation confirmation | 24 hours | N/A | None. |
| Duration for account upgrade confirmation | 24 hours | N/A | None. |
| Duration for invitation expiration | 14 days | N/A | None. |

Limits on tags

- A maximum of 20 tags can be bound to a single cloud resource.
- Tag information is not shared across regions. For example, tags created in the China (Hangzhou) region are not visible to the China (Shanghai) region.

 **Note**

6. Alibaba Cloud services that support resource groups

This topic lists cloud services that support resource groups.

The cloud services include:

- Elastic Compute Service
- ApsaraDB RDS for SQL Server
- ApsaraDB RDS for PostgreSQL
- ApsaraDB RDS for PPAS
- ApsaraDB RDS for MySQL
- Server Load Balancer
- Virtual Private Cloud
- Elastic IP Address
- EIP Bandwidth Plan
- Alibaba Cloud DNS PrivateZone
- Alibaba Cloud CDN
- Anti-DDoS Pro
- SSL Certificates Service
- Elasticsearch
- Global Traffic Manager
- Elastic GPU Service
- NAT Gateway
- Web Application Firewall
- ApsaraDB for Redis
- PolarDB
- Alibaba Cloud Container Service for Kubernetes
- E-MapReduce

7. Alibaba Cloud services that support tags

This topic describes cloud services that support tags, the support status of consoles and service APIs for tags, and common API operations.

A series of core infrastructures in Alibaba Cloud support tags, such as Elastic Compute Service (ECS), ApsaraDB for RDS, Object Storage Service (OSS), Virtual Private Cloud (VPC), Server Load Balancer (SLB), and Alibaba Cloud Container Service for Kubernetes. Alibaba Cloud also constantly expands the support of other cloud services for tags. The following table lists the cloud services that support tags, the support status of consoles and service APIs for tags, and common API operations.

| Service | Supported by the console | Supported by the API | Common API operation |
|--------------------|--------------------------|----------------------|--|
| ECS | Yes | Yes | <ul style="list-style-type: none"> Bind a tag: TagResources Unbind a tag: UntagResources Query tags: ListTagResources |
| ApsaraDB for Redis | Yes | Yes | <ul style="list-style-type: none"> Bind a tag: TagResources Unbind a tag: UntagResources Query tags: ListTagResources |
| ApsaraDB for RDS | Yes | Yes | <ul style="list-style-type: none"> Bind a tag: Create tag Unbind a tag: Unbind tag Query tags: Query tags |

| Service | Supported by the console | Supported by the API | Common API operation |
|---|--------------------------|----------------------|--|
| OSS | Yes | Yes | <ul style="list-style-type: none"> • Add, modify, query, or delete tagging configurations for a bucket: bucket-tagging • Add or modify tags for a bucket: PutBucketTags • Query the tags of a bucket: GetBucketTags • Delete the tags of a bucket: DeleteBucketTags • Configure or update the tags of an object: PutObjectTagging • Query the tags of an object: GetObjectTagging • Delete the tags of an object: DeleteObjectTagging |
| Distributed Relational Database Service | Yes | Yes | None |
| ApsaraDB for MongoDB | Yes | Yes | <ul style="list-style-type: none"> • Bind a tag: TagResources • Query the tags of instances: ListTagResources • Query all tags in a specified region: DescribeTags • Unbind a tag: UntagResources |
| Server Load Balancer | Yes | Yes | <ul style="list-style-type: none"> • Bind a tag: TagResources • Unbind a tag: UntagResources • Query tags: ListTagResources |

| Service | Supported by the console | Supported by the API | Common API operation |
|--|--------------------------|----------------------|--|
| Virtual Private Cloud | No | Yes | <ul style="list-style-type: none"> Bind a tag: TagResources Unbind a tag: UntagResources Query tags: ListTagResources |
| Alibaba Cloud Container Service for Kubernetes | Yes | Yes | <ul style="list-style-type: none"> Create a cluster with tags: CreateCluster Modify the tags of a cluster: Modify the tags of a cluster Query tags: Query tags of resources |
| CDN | Yes | Yes | <ul style="list-style-type: none"> Bind a tag: TagResources Unbind a tag: UntagResources Query the tags of a user: DescribeUserTags Query the tags of a resource: DescribeTagResources |
| API Gateway | No | Yes | None |
| Elasticsearch | Yes | Yes | None |
| SSL Certificates Service | Yes | Yes | Use tags to query the details about a certificate order: DescribeOrderList |

| Service | Supported by the console | Supported by the API | Common API operation |
|---------------------------|--------------------------|----------------------|---|
| Cloud Security Scanner | Yes | Yes | <ul style="list-style-type: none"> • Create assets with tags: AddAssets • Use tags to query assets: DescribeAssetsByTags • Add a tag: AddAssetTags • Query the tags of the current user: DescribeUserTags |
| ApsaraDB for HBase | Yes | Yes | <ul style="list-style-type: none"> • Bind a tag: TagResources • Unbind a tag: UntagResources • Query tags: ListTagResources |
| PolarDB | Yes | Yes | <ul style="list-style-type: none"> • Bind a tag: TagResources • Unbind a tag: UntagResources • Query tags: DescribeDBClusters |
| DataWorks | No | Yes | None |
| DataV | No | Yes | None |
| AnalyticDB for PostgreSQL | Yes | Yes | Query tags: DescribeDBInstances |
| Cloud Storage Gateway | Yes | Yes | None |
| Image Search | Yes | Yes | None |

| Service | Supported by the console | Supported by the API | Common API operation |
|---------------------------------|--------------------------|----------------------|---|
| Elastic Container Instance | No | Yes | <ul style="list-style-type: none"> Bind a tag: CreateContainerGroup Update a tag: UpdateContainerGroup Query tags: DescribeContainerGroups |
| Operation Orchestration Service | Yes | Yes | <ul style="list-style-type: none"> Bind a tag: TagResources Unbind a tag: UntagResources Query tags: ListTagResources |
| Function Compute | Yes | Yes | None |
| ApsaraVideo Live | Yes | Yes | None |
| EIP Bandwidth Plan | No | Yes | None |
| Auto Scaling | Yes | Yes | None |
| Cloud Enterprise Network | No | Yes | <ul style="list-style-type: none"> Bind a tag: TagResources Unbind a tag: UntagResources Query tags: DescribeCens |
| Smart Access Gateway | Yes | Yes | Use tags to query Cloud Connect Network (CCN) instances: DescribeCloudConnectNetworks |
| BSS OpenAPI | Yes | Yes | Use tags to query the bills of instances: QueryInstanceBill |