Alibaba Cloud
Resource Access Management

RAM User Group Management

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Generic conventions

Table -1: Style conventions

Style	Description	Example
⛔	This warning information 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.
⚠	This warning information 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 restore business.
📋	This indicates warning information, supplementary instructions, and other content that the user must understand.	ⓘ Notice: Take the necessary precautions to save exported data containing sensitive information.
	This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.	📋 Note: You can use Ctrl + A to select all files.
>	Multi-level menu cascade.	Settings > Network > Set network type
Bold	It is used for buttons, menus , page names, and other UI elements.	Click OK.
`Courier font`	It is used for commands.	Run the `cd / d C :/ windows` command to enter the Windows system folder.
Italics	It is used for parameters and variables.	`bae log list --instanceid` *Instance_ID*
[] or [a|b]	It indicates that it is a optional value, and only one item can be selected.	`ipconfig` *[-all|-t]*

Style	Description	Example
{} or {a|b}	It indicates that it is a required value, and only one item can be selected.	`swich` *{stand | slave}*

Contents

1 Overview of a RAM user group

A RAM user group is a type of identity in RAM. You can create RAM user groups to classify and organize RAM users under your Alibaba Cloud account. By classifying and organizing your RAM users, you can effectively manage permissions in the RAM console.

- If the responsibilities of a RAM user change, you only need to move the user to a RAM user group with the appropriate permissions. This action does not affect other RAM users.

  For information about how to create a RAM user group, see #unique_4.
- If the responsibilities of a RAM user group change, you only need to modify the policy attached to the user group. Changes to the policy apply to all RAM users in the group.

  For information about how to grant permission to a RAM user group, see #unique_5.

2 Create a RAM user group

This topic describes how to create a RAM user group. If you have multiple RAM users under your Alibaba Cloud account, you can create RAM user groups to classify and organize these RAM users for easier user and permission management.

Procedure

1. Log on to the RAM console.
2. Choose Identities > Groups.
3. Click Create Group, and enter the group name, display name, and description.
4. Click OK.

What's next

You can attach one or more policies to the RAM user group. For more information, see #unique_5.

3 Add RAM users to a group

This topic describes how to add RAM users to a RAM user group. After a RAM user is added to a group, the user shares the permissions of the group.

Procedure

1. Log on to the RAM console.
2. Choose Identities > Groups.
3. In the Group Name/Display Name column, find the target RAM user group and click Add Group Members.
4. In the Name column, select the target RAM users and click OK.

   Note:

   You can click X to revoke your selection.

4 Remove a RAM user from a group

This topic describes how to remove a RAM user from a RAM user group. You must remove a user from the specific RAM user group when the user leaves your organization or when permissions of the user change.

Procedure

1. Log on to the RAM console.
2. Choose Identities > Groups.
3. In the Group Name/Display Name column, click the name of the target RAM user group.
4. In the User Logon Name/Display Name column, find the target RAM user and click Remove from Group.
5. Click OK.

5 View basic information about a RAM user group

This topic describes how to view basic information about a RAM user group, such as the group name and the display name.

Procedure

1. Log on to the RAM console.
2. Choose Identities > Groups.
3. In the Group Name/Display Name column, click the name of the target RAM user group.
4. In the Group Basic Information section, view the group information.

6 Modify basic information about a RAM user group

This topic describes how to modify basic information about a RAM user group, such as the group name and the display name.

Procedure

1. Log on to the RAM console.
2. Choose Identities > Groups.
3. In the Group Name/Display Name column, click the name of the target RAM user group.
4. In the Group Basic Information section, click Modify Basic Information.
5. Click OK.

7 Grant permission to a RAM user group

This topic describes how to grant permission to a RAM user group. After you grant permission to a RAM user group, all users in this group share the permissions of the group.

Procedure

1. Log on to the RAM console.
2. Choose Permissions > Grants.
3. Click Grant Permission.
4. In the Principal field, enter the group name and click the target RAM user group.
5. In the Policy Name column, select the target policy and click OK.

> Note:
>
> You can click X to revoke your selection.

8 Remove permission from a RAM user group

This topic describes how to remove permission from a RAM user group.

Procedure

1. Log on to the RAM console.
2. Choose Permissions > Grants.
3. In the Principal column, find the target RAM user group and click Revoke Permission.
4. Click OK.

9 Delete a RAM user group

This topic describes how to delete a RAM user group. If a RAM user group is deleted, all users in the group and policies attached to the group are also deleted.

Procedure

1. Log on to the RAM console.
2. Choose Identities > Groups.
3. In the Group Name/Display Name column, select target RAM user group and click Delete.
4. Click OK.

10 Best practices

10.1 Use RAM to maintain security of your Alibaba Cloud resources

This topic describes how to use RAM to apply access and security settings to your Alibaba Cloud resources so that you can better manage access permissions with fine-grained access control.

Prerequisites

An Alibaba Cloud account is created. If not, create one before proceeding. To create an Alibaba Cloud account, click Create a new Alibaba Cloud account.

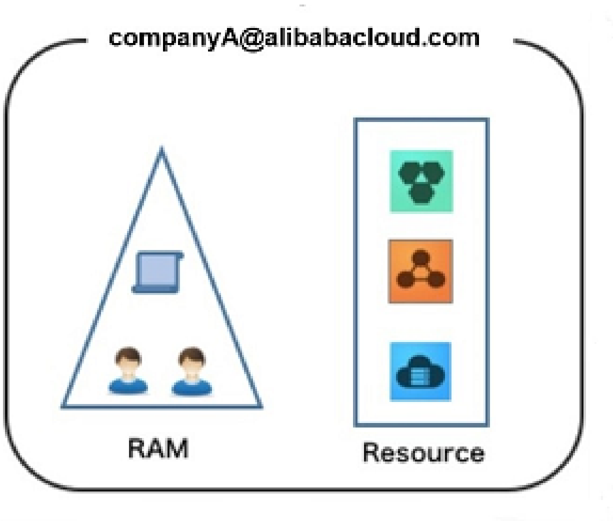
Scenario

When you migrate your business resources to the cloud, the traditional organizati onal structures and previous management methods of your resources may no longer meet your requirements. As a result, the migration of your resources may create higher security management issues as follows:

- The responsibilities of the RAM users are not clear.
- The Alibaba Cloud account owner does not want to share the access key with RAM users due to security risks involved.
- RAM users can access resources by using different methods, which is not unified and may mistakenly cause security risks.
- The resource access permissions of RAM users need to be frequently recalled when the users no longer require these permissions.

Solution

To resolve the preceding issues, you can use RAM to create RAM users and grant resource access permissions to RAM users. Specifically, you can use RAM to separate the access key of your Alibaba Cloud account from RAM users and grant minimum permissions to users as needed to maintain the security of your resources.



Security management solution

- Create independent RAM users.

  An enterprise needs only one Alibaba Cloud account. As a best practice, the Alibaba Cloud account is not used for daily tasks. However, multiple RAM users can be created under the account, and granted the necessary access permissions to resources as needed.

  For more information, see #unique_16.
- Separate console users from API users.

  We recommend that you do not create a logon password for console operations and an access key for API operations for a RAM user at the same time.

  - To allow an application to access cloud resources only through APIs, you only need to create an access key for the application.
  - To allow an employee to operate on cloud resources only through the console, you only need to set a logon password for the employee.

  For more information, see #unique_16.
- Create RAM users and group them.

  If your Alibaba Cloud account has multiple RAM users, you can group RAM users with same responsibilities and grant permissions to the group as needed.

  For more information, see #unique_4.
- Grant the minimum permissions to different RAM user groups.

  You can attach proper system policies to RAM users or user groups as needed. You can also create custom policies for fine-grained permission management. In this way, by granting the minimum permissions to different RAM users and user groups, you can better manage the RAM users' operations on the cloud resources.

For more information, see #unique_17.

- Configure strong password policies.

  You can configure password policies with custom conventions regarding the minimum length, mandatory characters, and validation period, for RAM users in the RAM console. If a RAM user is allowed to change their logon password, the user must create a strong logon password and rotate the password or access key on a regular basis.

  For more information, see #unique_18.

- Enable an MFA device for your Alibaba Cloud account.

  You can enable a multi-factor authentication (MFA) device for your Alibaba Cloud account to enhance the account security. When you log on to Alibaba Cloud with MFA enabled, the system requires the following two security factors:

  1. Your username and password
  2. Verification code provided by the MFA device

  For more information, see #unique_19.

- Enable SSO for RAM users.

  After Single Sign On (SSO) is enabled, all the internal accounts of your enterprise will be authenticated. Then, users can log on to Alibaba Cloud to access corresponding resources only by using an internal account.

  For more information, see #unique_20.

- Do not share the access key of your Alibaba Cloud account.

  Your Alibaba Cloud account has full control permissions over resources under it, and its access keys have the same permissions as logon passwords. However, access keys are used for programmatic access whereas logon passwords are used to log on to the console. Therefore, to avoid information leaks due to misuse of an access key, we recommend that you do not share or use the access key of your Alibaba Cloud account.

  Instead, create a RAM user and grant this user the relevant permissions.

  For more information, see #unique_21.

- Specify operation conditions to enhance security.

  You can specify the operational conditions that a RAM user must meet before they can use your cloud resources. For example, you can specify that the RAM user must use a secure channel (such as SSL), use a specified source IP address, or operate within a specified period of time.

  For more information, see #unique_22.

- Manage permissions of your cloud resources.

  By default, all your resources are under your Alibaba Cloud account. A RAM user can use the resources but do not own the resources. This allows you to easily manage the instances or data created by RAM users.

  - For an existing RAM user that you no long require, you can remove all of its corresponding permissions by simply removing the RAM user account.
  - For a RAM user that requires a permission, you need to first create the RAM user , set the logon password or access key for it, and then grant the RAM user the relevant permissions as needed.

  For more information, see #unique_23.

- Use STS to grant temporary permissions to RAM users.

  The Security Token Service (STS) is an extended authorization service of RAM. You can use STS to grant temporary permissions to RAM users and specify the permission and automatic expiration time of the tokens as needed.

  For more information, see #unique_24

Result

After migrating your services to the cloud, you can use the preceding solutions to ensure you manage your cloud-based resources effectively and keep your Alibaba Cloud account and all business assets secure.

What to do next

You can use RAM to categorize your O&M requirements and assign tasks to different engineers as needed. For more information, see #unique_25.