Resource Access Management

Quick Start

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Procedure

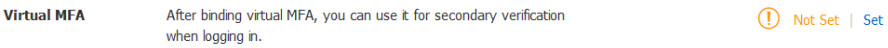
Activate multi-factor authentication (two-step authentication) for primary accounts

Your Alibaba Cloud account has full control permissions for all of the resources under it. If the logon password or access key of the primary account is disclosed, the security of all of the assets under the primary account is greatly threatened. To reduce this risk, we strongly recommend that you bind multi-factor authentication (MFA) to your primary account.

Go to account security settings

Log on to www.aliyun.com, and then move the mouse pointer to your account displayed on the upper-right corner of the page and click **Security Settings**.

On the **Security Settings** page, click **Set** next to **Virtual MFA** to enable the VMFA device binding process.

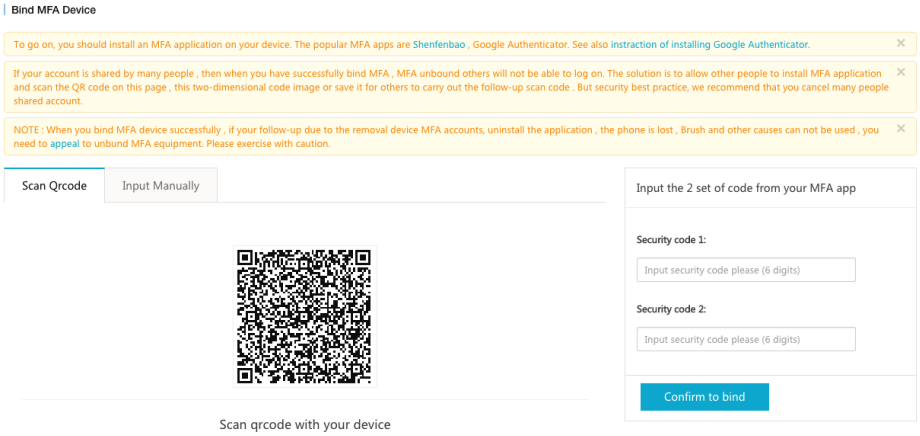


3. Enter your verification code sent either to your mobile phone or your email to verify your identity.

Enable VMFA device binding process (start two-step authentication)

Go to the **Bind MFA Device** page to bind your MFA device.

To perform this operation, you must install an MFA application on your mobile phone. Alibaba Cloud ID Sec and Google Authenticator are two popular MFA applications. To install Google Authenticator, refer to Google Authenticator Installation and Use Guide.



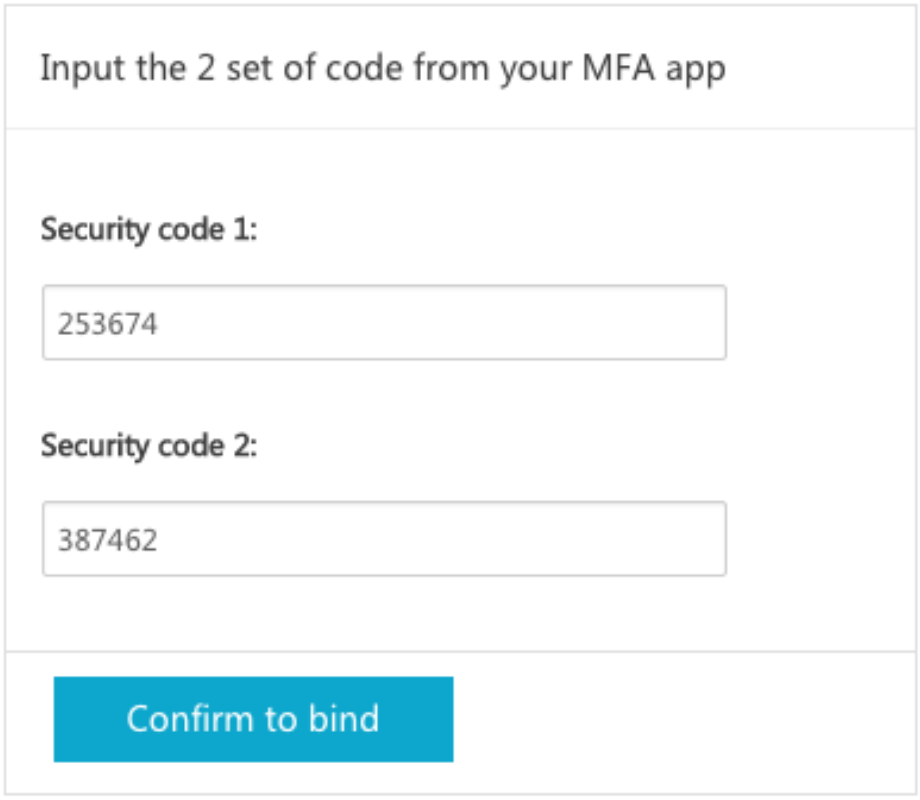
Add a user in your MFA application.

We use Google Authenticator as an example. Open **Authenticator**, click **+ (Add User)**, and then click **Scan Barcode** to scan the code. If your mobile phone does not support this feature, you can click **Input Manually** to enter the MFA key yourself.)

After you have scanned the code, the user is added automatically and your MFA application will display a dynamic password for the account. Note that the dynamic password is updated every 30 seconds.

Acquire two consecutive passwords.

On the **Enable Virtual MFA Device** page, enter the consecutive passwords displayed in the MFA application, and then click **Confirm to bind** button, as shown in the following figure:

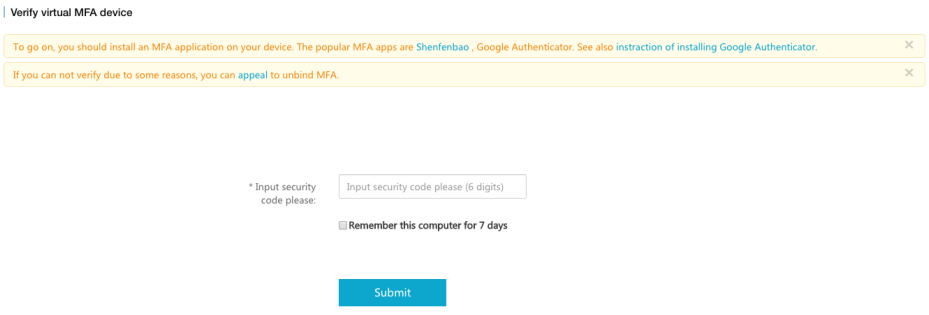


The MFA device is then successfully enabled.

Logon process with MFA enabled (two-step authentication process)

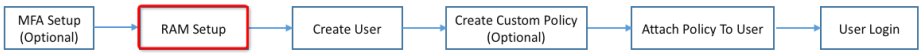
Log on to the console with your user name and password.

After the password is verified, you also need to provide a dynamic verification code from the VMFA device, as shown in the following figure:



After you pass the two-step verification, you successfully log on to Alibaba Cloud.

Procedure

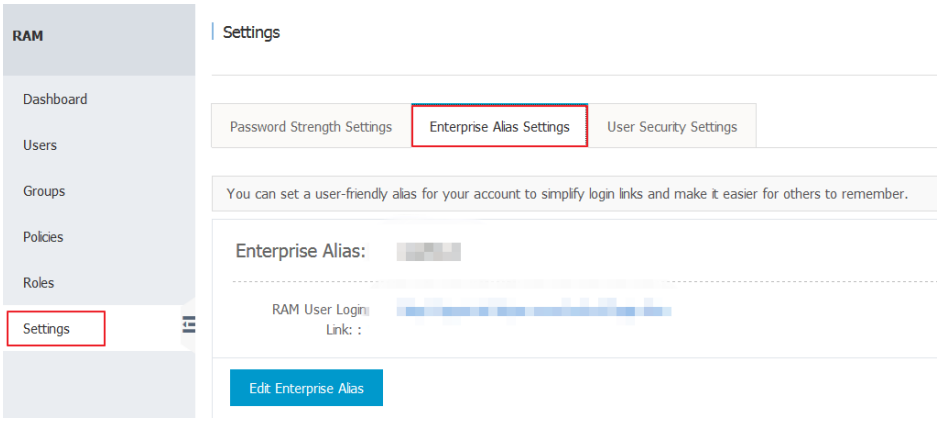


Initialize RAM Configuration

Log on to www.aliyun.com with your Alibaba Cloud account and activate the Resource Access Management (RAM) service. You can then log on to the RAM console to set your enterprise alias, RAM user logon password strength, and RAM user MFA logon configuration.

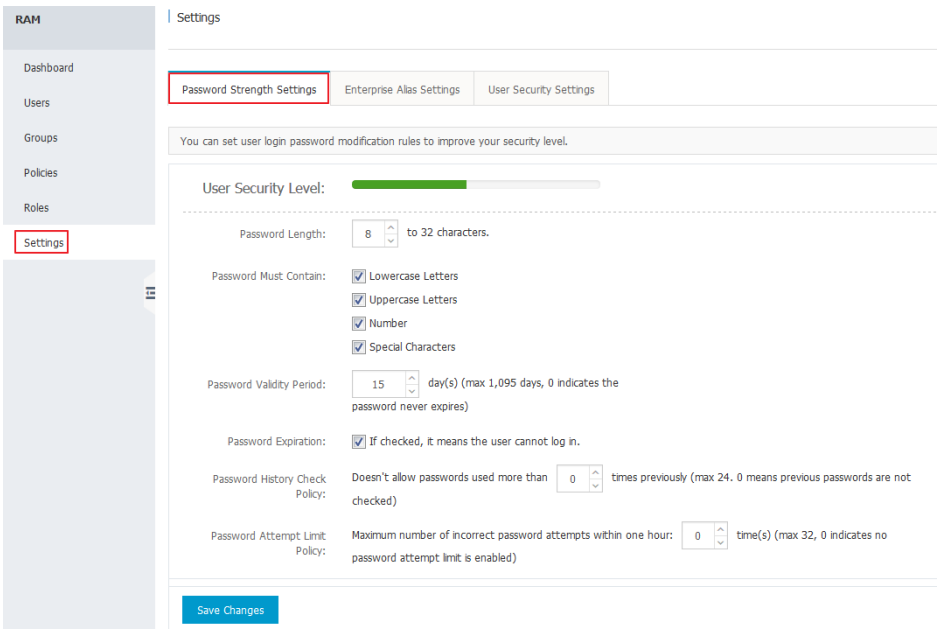
Set your enterprise alias

Setting an RAM enterprise alias for your Alibaba Cloud account makes it easier for RAM users to remember the logon portal. For security reasons, the RAM user logon portal is different from the primary account logon portal. When logging on to the RAM portal，RAM users must provide the enterprise alias of the primary account as well as their own usernames and passwords.



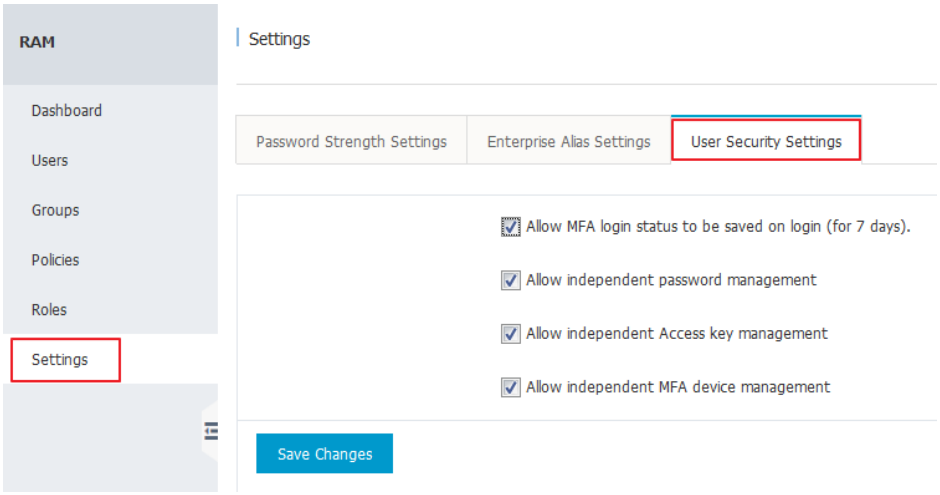
Set RAM user logon password strength

You can specify a minimum logon password strength for all RAM users. When any users reset their passwords, the new password cannot be weaker than this setting allows.



Set RAM user security settings

You can specify whether RAM users can reset their passwords, accesskeys or MFAs. You can also specify whether to store MFA logon status for 7 days on devices that are used for logon.



Procedure

Create a RAM user

Log on to the Alibaba Cloud console, and then click **Resource Access Management** from the left-side navigation bar to open the RAM console.

On the RAM console, click **Users**.

On the **User Management** page, click **New user**.

In the **Create User** window, enter a login name and fill in the other details, and then click **OK**.

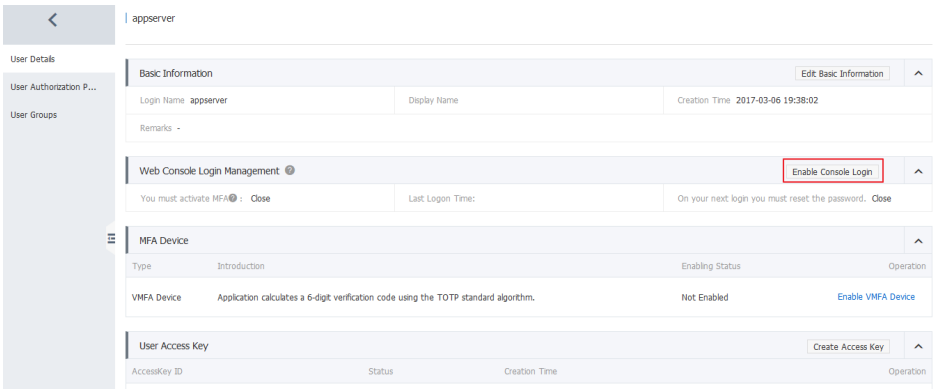
Set a logon password for the user (if required)

Log on to the Alibaba Cloud console, and then click **Resource Access Management** from the left-side navigation bar to open the RAM console.

On the RAM console, click **Users** to open the **User Management** page.

On the **User Management** page, click a user.

On the **User Details** page, click **Enable Console Login** and set an initial password for the selected user in the pop-up window. You can also specify that the user must change this password at his or her first logon.



Create AccessKeys for the user (if required)

Log on to the Alibaba Cloud console, and then click **Resource Access Management** from the left-side navigation bar to open the RAM console.

On the RAM console, click **Users** to open the **User Management** page.

On the **User Management** page, click a user.

On the **User Details** page, click **Create Access Key**.

In the pop-up window, click **Save Access Key Information** to save the access key.

Note:

1. An AccessKeySecret can only be viewed or downloaded during access key creation process. For security reasons, you cannot view or download it once the access key has been created. If an access key is lost, you must create a new one. The newly created access key represents the same user identity as the old one. Different access keys for the same RAM user are equivalent.
2. It is recommended that you change application access keys regularly to avoid any risk of access key disclosure.

For information on how to grant permissions to RAM users, refer to RAM User Authorization.

Procedure

Create a custom authorization policy

Access the RAM console and click **Policies**. Two policy options, **System Policy** and **Custom Policy**, are available on **Policy Management** page.

Alibaba Cloud currently provides multiple system authorization policies for user selection. These authorization policies only provide coarse-grained access control capabilities. For example, you can grant read-only permission or all permissions to specific cloud products. If you require finer-grained authorization, you can create custom authorization policies for access control. For example, you can grant the user B read-only permission for all of the objects in oss://sample_bucket/b/, and prevent access by IP addresses from outside your company network (your company network IP address can be acquired by searching “My IP” using the search engine).

Note:

Before creating custom authorization policies, you must understand the basic structure and syntax of the authorization policy language. For more details, refer to Authorization Policy

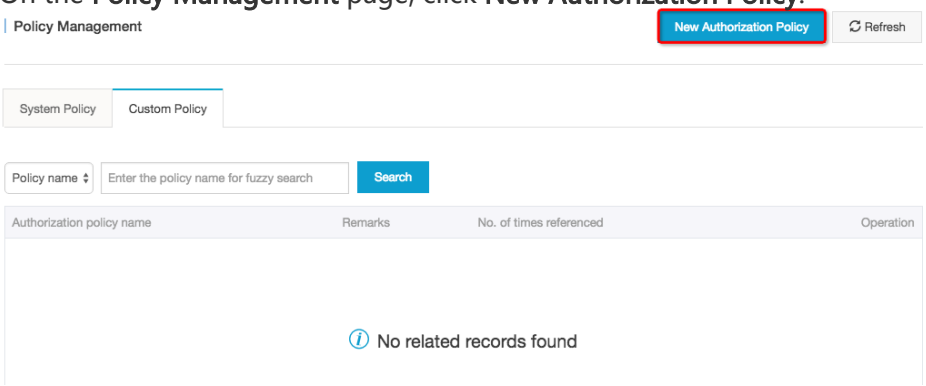
Language Description.

After learning the authorization policy language, you can easily create custom authorization policies on the RAM console. This process is as follows:

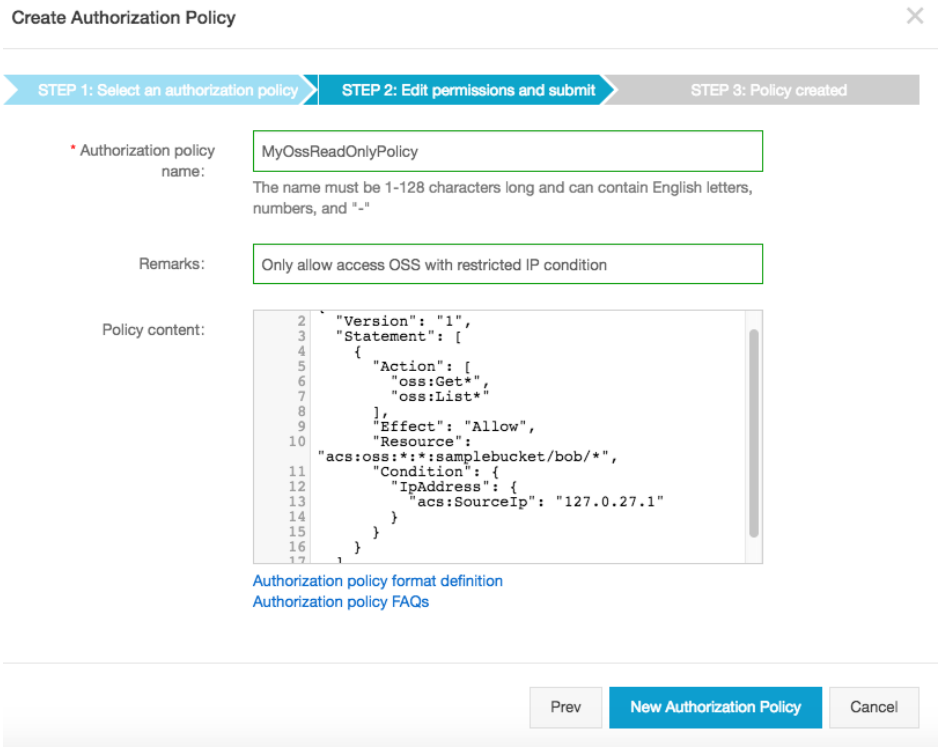
i. Log on to the Alibaba Cloud console, and then click **Resource Access Management** from the left-side navigation bar to open the RAM console.

On the RAM console, click **Policies**.

On the **Policy Management** page, click **New Authorization Policy**.



Select an authorization policy among the templates provided, which including a blank template, system templates and custom templates such as AliyunOSSReadOnlyAccess. You can then edit your policy based on the template, as shown in the following figure:



Custom policy example:

```
{
"Version": "1",
"Statement": [
{
"Effect": "Allow",
"Action": [
"oss:Get*",
"oss:List*"
],
"Resource": [
"acs:oss:*:*:samplebucket/bob/*"
]
"Condition": {
"IpAddress": {
"acs:SourceIp": "127.0.27.1"
}
}
}
]
}
```

Once finish all the settings, click **New Authorization Policy** to complete creating the custom authorization policy.

If you attach this custom authorization policy to the user B, B will have read-only permission for all of the objects in oss://samplebucket/bob/ as long as they access the objects from your company network (in this example, 121.0.27.1).

Procedure

RAM user authorization

Grant permissions to a RAM user directly (using AttachPolicyToUser)

Log on to the Alibaba Cloud console, and then click **Resource Access Management** from the left-side navigation bar to open the RAM console.

On the RAM console, click **Users**.

On the **User Management** page, click **Authorization** next to the user to whom you want to grant permissions.

In the **Edit Authorization Policy** window, click an authorization policy and move it to the selected authorization policy field.

Click **OK**.

Grant permissions to the group to which a user belongs (using AttachPolicyToGroup)

Create a user group (if you already have a group, go directly to step 2).

a. Go to the RAM console and click **Groups**.

b. Click **New Group**. In the pop-up window, specify a group name and remarks. Click **OK**.

c. Add a user to the user group. You can do this through user management or group management.

Attach an authorization policy to the group.

a. Go to the RAM console and click **Groups**.

b. On the **Group Management** page, click **Authorization** next to the group that you want to attach an authorization policy to.

c. In the pop-up window, select an authorization policy and move it from the selected policy field, and then click **OK**.

System authorization policies and custom authorization policies

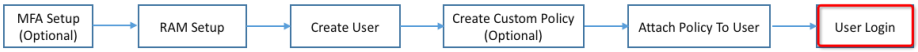
System authorization policies are a group of general authorization policies provided by RAM to meet your coarse-grained authorization needs. For example, you can use them to authorize a RAM user to manage orders (AliyunBSSFullAccess), ECS resources (AliyunECSFullAccess), or all sub-users and their permissions (AliyunRAMFullAccess).

In RAM Authorization Policy Management, you can view all the system authorization policies that are

supported by RAM.

If these authorization policies do not meet your needs, you can create custom authorization policies. For details, refer to Create a Customer Authorization Policy.

Procedure



RAM user login

The RAM user login endpoint URL is different from the primary account login endpoint URL. You can find your RAM user login URL in the dashboard tab of the RAM web console.