Identity and Access Management

Getting Started

Issue 09

Date 2025-04-28

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1 Creating a User Group and Assigning Permissions

Scenarios

If you do not want to create an account for every person in your enterprise, you can use Identity and Access Management (IAM). Only the enterprise's administrator needs to create an account. The account can be used to create user groups and assign permissions. Then, the IAM users created for the enterprise personnel can be added to different user groups based on their job responsibilities. For the definitions of an account and IAM user, see **Basic Concepts**.

The following shows how an enterprise administrator uses IAM to create user groups and assign permissions.

Procedure

Step	Description
Preparations	Sign up for a HUAWEI ID and complete real-name authentication.
Step 1: Create a User Group	Create a user group, which is the minimum authorization unit.
Step 2: Assign Permissions to the User Group	Assign permissions defined by roles or policies to the user group. Users added to this group can inherit the assigned permissions from it.

Preparations

If you already have an account, go to **Step 1: Create a User Group**. If you do not have an account, perform the following operations to create one:

1. Visit **https://www.huaweicloud.com/intl/en-us/** and click **Sign Up**.
2. **Sign up for a HUAWEI ID and enable Huawei Cloud services**.

   After the HUAWEI ID is created, the system redirects you to your personal information page.

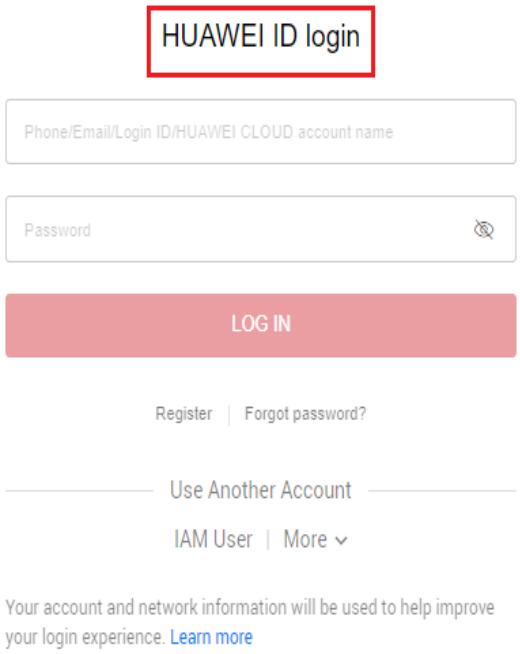
3. NOTE

   IAM is a free service. You do not need to pay for it.

Step 1: Create a User Group

Step 1 Log in to Huawei Cloud using your account.

Figure 1-1 Logging in to Huawei Cloud

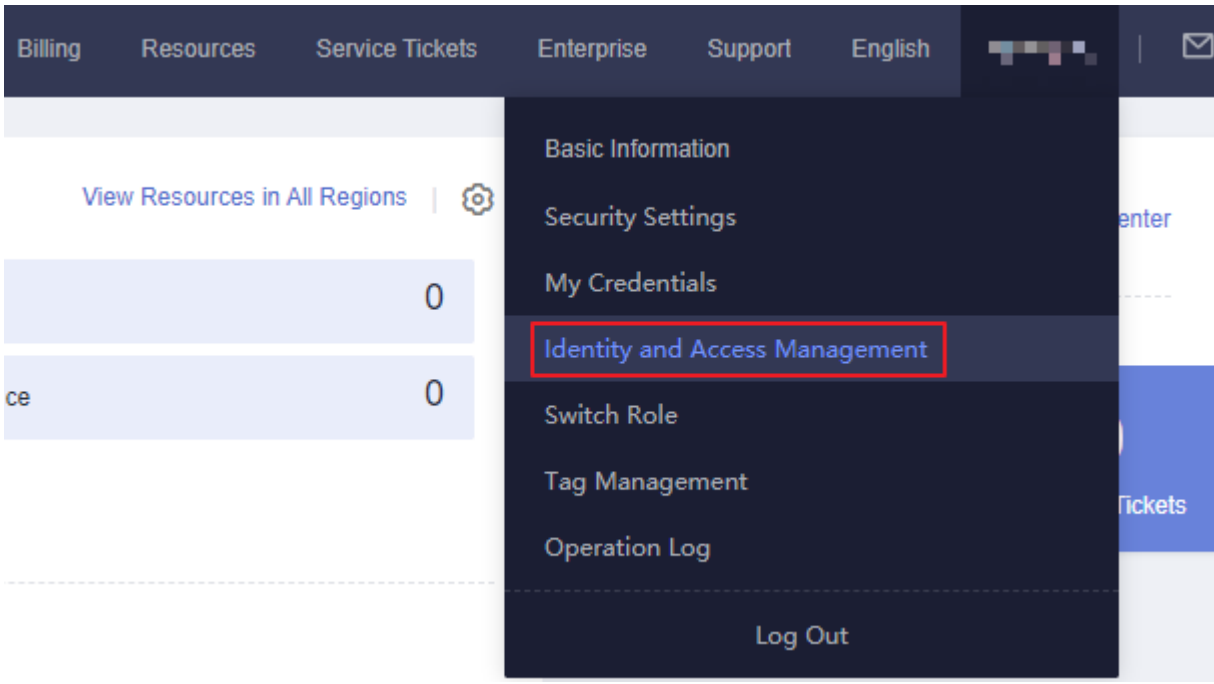


Step 2 Access the Huawei Cloud management console.

Figure 1-2 Logging in to the management console

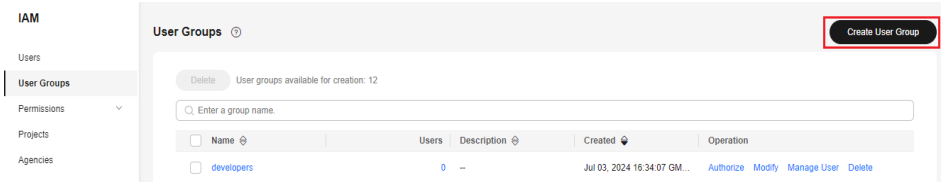
Step 3 On the management console, hover the mouse pointer over the username in the upper right corner, and choose **Identity and Access Management** from the drop-down list.

Figure 1-3 Accessing the IAM console



Step 4 On the IAM console, choose **User Groups** and click **Create User Group**.

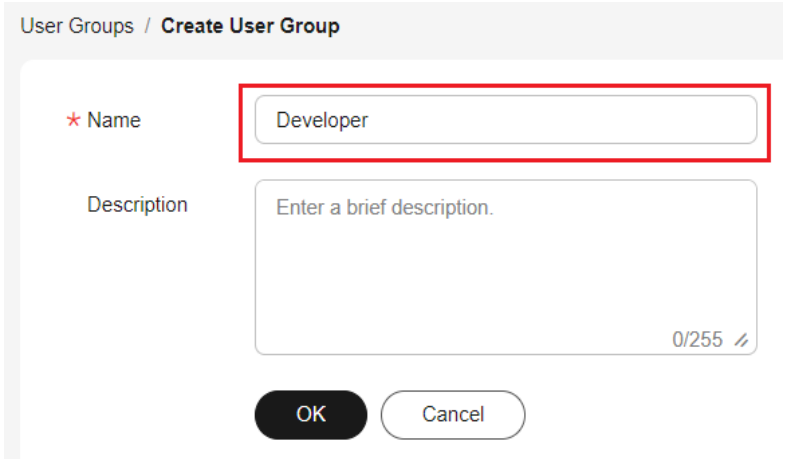
Figure 1-4 Creating a user group



Step 5 In the displayed dialog box, enter a name for the developer user group.

Only letters (case-sensitive), digits, spaces, hyphens (-), and underscores (_) are allowed.

Figure 1-5 Setting user group details



Step 6 Click **OK** to create a developer user group.

You will be redirected to the user group list and the created developer user group is displayed in the list.

----End

Step 2: Assign Permissions to the User Group

Assume that developers in the enterprise need to use ECS and OBS, so the administrator needs to perform the following operations to assign the required permissions to the developer user group to enable access to these services. For details about the permissions of all cloud services, see **System-defined Permissions**.

Step 1 Determine the permissions required by the users in the user group.

Table 1-1 lists the required permissions. You can determine which permissions are required by referring to **System-defined Permissions**. The application scope is determined by geographic areas where services are deployed.

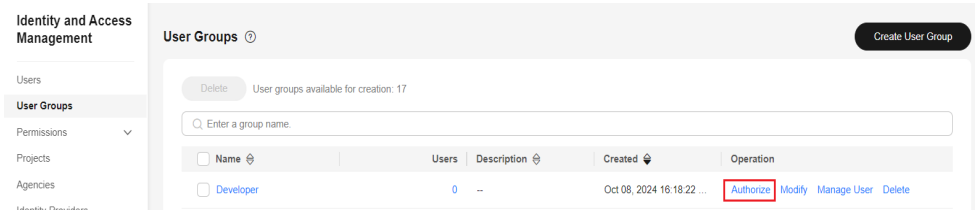
- Region-specific project-level services: If permissions are assigned for a region-specific project, the permissions are only applied in that project. For example, if you assign permissions only for **CN-Hong Kong**, IAM users have no permissions to access resources in other projects.
- Global services: Global services are deployed in all regions. You do not need to switch regions when accessing global services. For example, if you grant OBS permissions to an IAM user, the user can access OBS resources in all region-specific projects.

Table 1-1 Required permissions

Cloud Service	Application Scope	Permissions
ECS	Region-specific projects	ECS FullAccess
OBS	Global regions	OBS OperateAccess

Step 2 In the user group list, click **Authorize** in the row containing the developer user group.

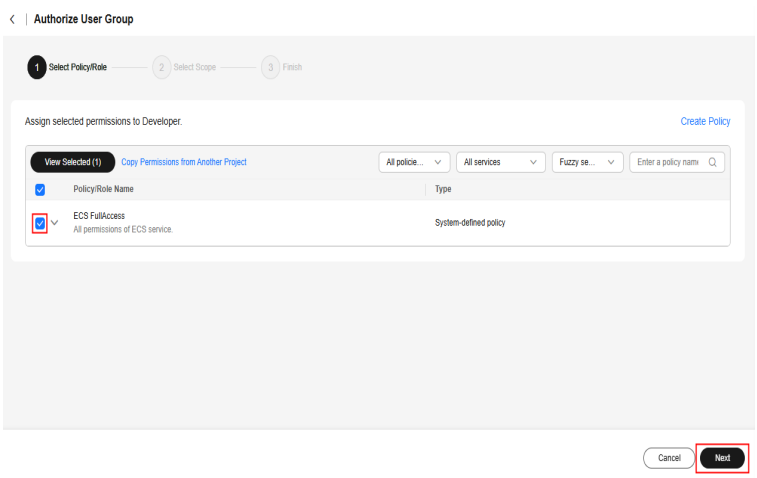
Figure 1-6 Authorizing a user group



Step 3 Assign permissions to the user group for region-specific projects.

1. As shown in **Table 1-1**, ECS is a region-specific project-level service. Select desired permissions for the project-level service and click **Next**.

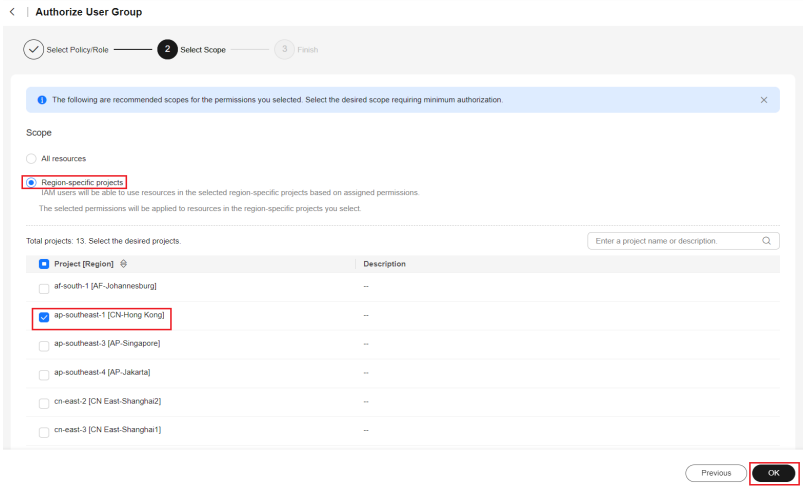
Figure 1-7 Selecting required permissions



2. Select **Region-specific projects** for **Scope**, select **CN-Hong Kong**, and click **OK**.

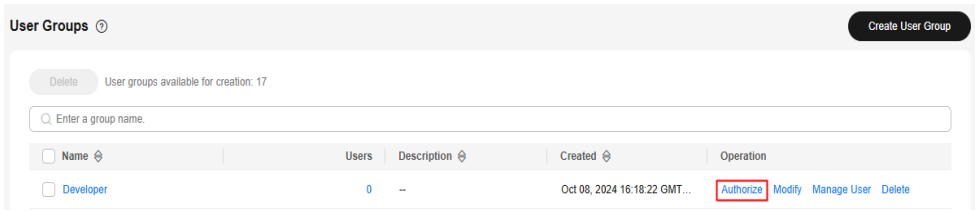
   Then users in the developer user group can only access resources in **CN-Hong Kong**.

Figure 1-8 Specifying the permission scope



Step 4 In the user group list, click **Authorize** in the row containing the developer user group.

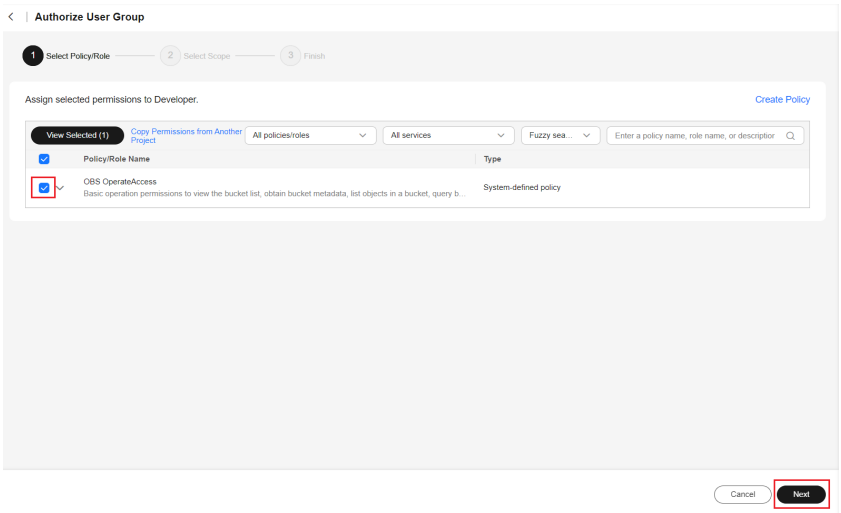
Figure 1-9 Authorizing a user group



Step 5 Assign permissions to the user group for global services.

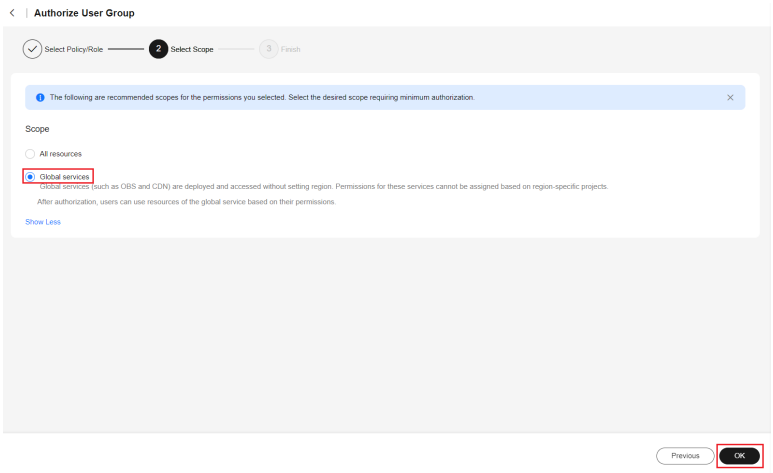
1. Select **OBS OperateAccess** and click **Next**.

Figure 1-10 Selecting OBS OperateAccess



2. Select **Global services** for **Scope** and click **OK**.

Figure 1-11 Specifying the permission scope



After the permissions are assigned, click the name of the developer user group to view the assigned permissions on the **Permissions** tab of the user details page.

NOTE

OBS permissions will be applied about 15 to 30 minutes after the authorization is complete.

----End

2 Creating an IAM User and Logging In

Scenarios

The account created in the previous section can be used to create an IAM user and add the IAM user to the developer user group. The IAM user has their own username and password. They can log in to Huawei Cloud and use resources based on assigned permissions.

Procedure

Step	Description
Step 1: Create an IAM User	Create an IAM user and add it to the user group to obtain permissions.
Step 2: Log In to the Console as an IAM User	Log in to the management console as an IAM user and use resources within the permissions scope.

Step 1: Create an IAM User

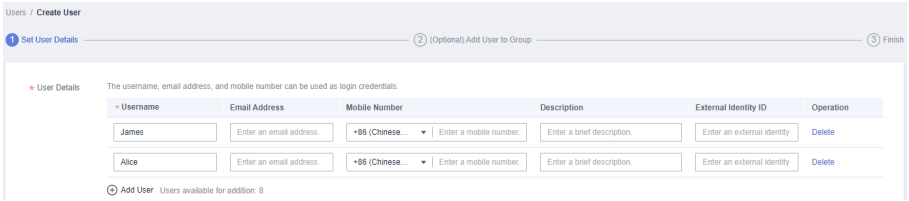
Step 1 Choose **Users** from the navigation pane, and click **Create User**.

Set mandatory IAM user parameters by referring to the following table. Retain the default settings for other parameters.

Step 2 Specify the user details and access type.

1. Enter a username.

Figure 2-1 Setting user details



NOTE

IAM users can log in to Huawei Cloud using their usernames, email addresses, or mobile numbers.

Table 2-1 User details

Parameter	Example	Description
Username	Alice	(Mandatory) Username used by an IAM user to log in to Huawei Cloud. Use only letters, digits, spaces, hyphens (-), underscores (_), and periods (.). Do not start with a digit or space.
Email Address	Skip	Email address of the IAM user that can be used as a login credential. IAM users can bind an email address after they are created. This parameter is mandatory if you select **Set by user** for **Credential Type**.
Mobile Number	Skip	(Optional) Mobile phone number of the IAM user that can be used as a login credential. IAM users can bind a mobile number after they are created.

2. Specify the access type.

Figure 2-2 Specifying the access type

Table 2-2 Access types

Access Type	Example	Description
Programmatic access	Select it.	This type allows access to cloud services using development tools, such as APIs, CLI, and SDKs, and requires an access key or password.
Management console access	Select it.	This type allows access to cloud services by using the management console and requires a password. If you select this parameter, **Password** must be selected for **Credential Type**.

3. Configure the credential type.

Figure 2-3 Credential types

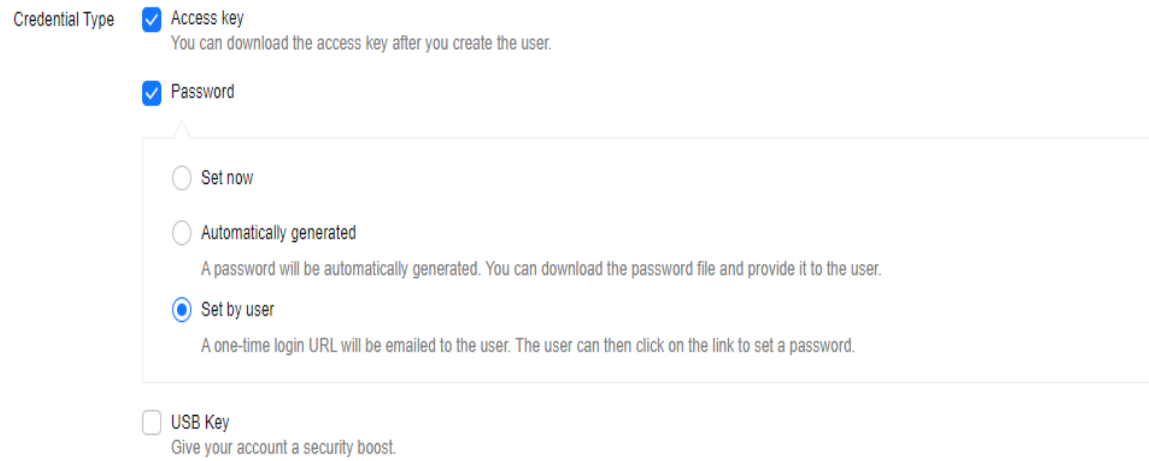


Table 2-3 Credential types

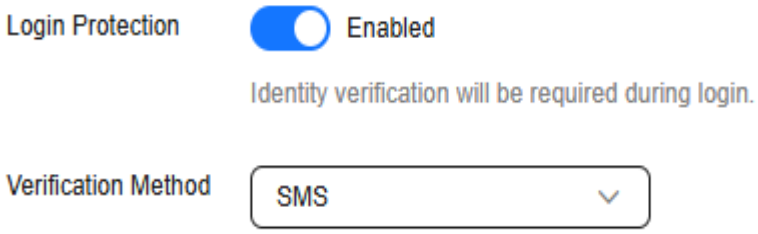
Credential Type		Example	Description
Access key		Select it.	An access key comprises an AK and SK, and is used as a long-term identity credential to **sign your requests for Huawei Cloud APIs**. After users are created, you can download the **access keys (AK/SK)** generated for these users.
Password	Set now	-	You need to set a password for the user and determine whether to require the user to reset the password at first login. If you will use the IAM user by yourself, you are advised to select this option, set a password, and deselect **Require password reset at first login**.
	Automatically generated	-	The system automatically generates a login password for the user. After the user is created, download the EXCEL password file and provide the password for the user. The user can then use this password for login. The password file must be downloaded upon the user creation. If you cancel the download, the password file cannot be obtained again. You can change the password of an IAM user by referring to **Changing the Password of an IAM User**. **This option is available only when you create a single user.**

Credential Type		Example	Description
	Set by user	Select it.	A one-time login URL will be emailed to the user. The user can click the link to log in to the console and set a password. If you do not use the IAM user, select this option and enter the email address and mobile number of the IAM user. The user can then set a password by clicking the one-time login URL sent over email. The login URL is valid for seven days.
USB Key		Deselect it.	A USB key is a device that stores user credentials. You can use a USB key, rather than a password to verify your identity. This option is more secure, as there is no password to be leaked. Once selected, the USB key is the only way for the IAM user to log in. The password will be invalidated and can no longer be used.

4. Enable or disable login protection. This function is available only when **Access Type** is **Management console access**. In this example, select **Enable**.
   - Login protection enabled: IAM users need to enter verification codes in addition to their usernames and passwords during console login. For the best possible security, this two-factor identity authentication is recommended.

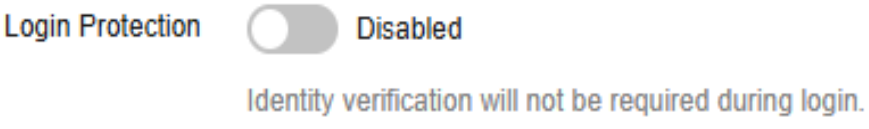
     You can choose from SMS-, email-, and virtual MFA–based login verification.

     Figure 2-4 Enable

   - Login protection disabled: If you need to enable it after user creation, see **Modifying IAM User Information**.

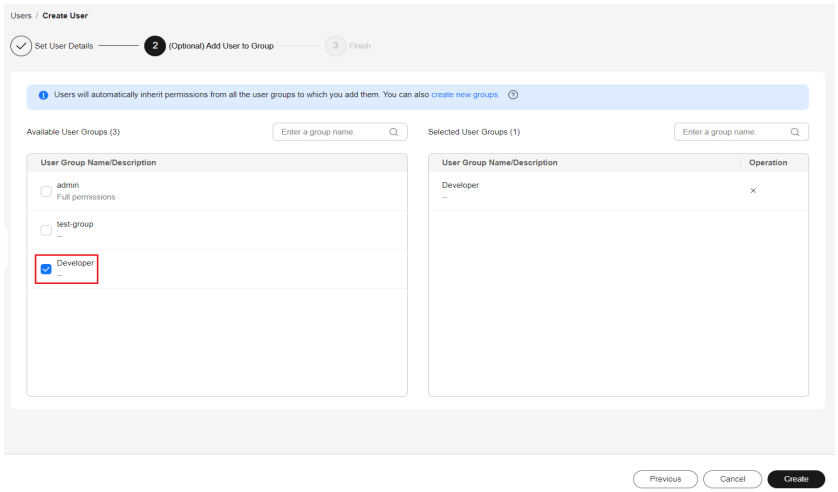
     Figure 2-5 Login protection disabled

5. Enable or disable API login protection. This function is available when only login protection is enabled and the verification mode is set to virtual MFA.
   - API login protection enabled: Both a password and a virtual MFA device are required to obtain an IAM user token. To obtain an IAM user token using both a password and a virtual MFA device, see **Obtaining a User Token Through Password and Virtual MFA Authentication**.
   - API login protection disabled: You can enable API login protection after user creation. Locate the target user, and click **Security Settings** in the **Operation** column. In the displayed tab, click next to **Verification Method** of the **Login Protection** function, enable this function, and select **Virtual MFA device**.

Step 3 Click **Next** and add the user to the developer user group.

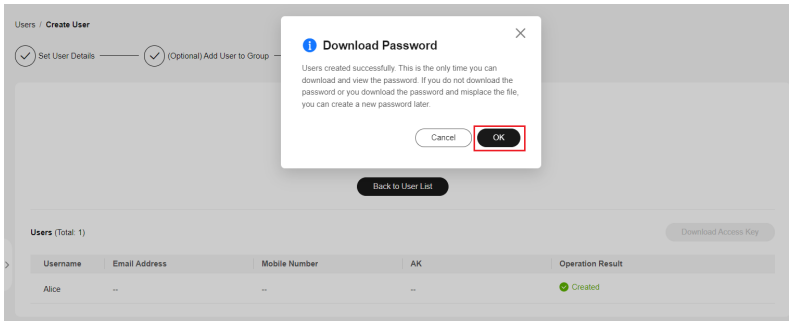
Figure 2-6 Adding the user to the user group



Step 4 Click **Create**. The created IAM user is displayed in the user list.

Step 5 In the displayed **Download Password** dialog box, click **OK** to download the initial password of the IAM user. Then, provide the account name, IAM username, and the IAM user's initial password for corresponding employees.

Figure 2-7 Downloading the password



----End

Step 2: Log In to the Console as an IAM User

After an IAM user is created, employees can log in to Huawei Cloud as the IAM user. If an IAM user fails to log in, they can contact the administrator to **reset their password**.

Step 1 Click **IAM User** on the login page, and then enter your **Tenant name or Huawei Cloud account name**, **IAM username or email address**, and **IAM userpassword**.

Figure 2-8 Logging in as an IAM user

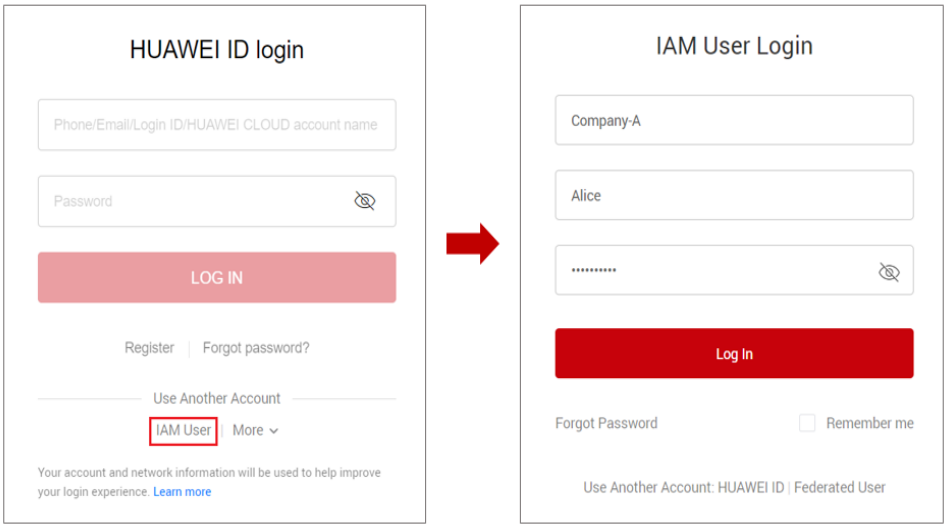


Table 2-4 Login parameters

Parameter	Example	Description
Tenant name or Huawei Cloud account name	Company-A	Account used to create the IAM user, for example, Company-A.
IAM username or email address	Alice	IAM username or email address entered during the user creation. You can obtain the IAM username and IAM user's initial password from the administrator.
IAM user password	********	Password of the IAM user, rather than the account. Enter the downloaded password.

Step 2 Click **Log In** to log in to Huawei Cloud as IAM user **Alice**.

Step 3 Verify the permissions of IAM user **Alice**.

1. Switch to **CN-Hong Kong**.
2. Choose **Elastic Cloud Server** from the service list to go to the ECS console. If the IAM user can perform all operations such as creating and managing ECSs, the ECS FullAccess permissions have been configured successfully.

3. Choose **Object Storage Service** from the service list. If the IAM user can view the bucket list and query bucket locations on the OBS console but cannot create OBS buckets, the OBS OperateAccess permissions have been configured successfully.
4. If the IAM user chooses any service other than ECS and OBS, and the system displays a message indicating insufficient permissions, the permissions have been configured successfully.
5. Switch to a region other than **CN-Hong Kong**. If the IAM user can only access the OBS homepage (cannot access ECS and other services), the permissions have been successfully assigned to the region-specific project.

----End

