Cloud Bastion Host

Getting Started

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1 Buying and Logging In to a Bastion Host

CBH is a unified security management and control platform. It provides accounting, authorization, authentication, and auditing management services that enable you to centrally manage cloud computing resources.

You can buy a CBH instance and use the **admin** account to add resources and policies to implement resource O&M and audit. In addition, you can use the **admin** account to create roles for permission management.

This topic walks you through how to buy a standard single-node instance with 50 assets, as well as how to quickly perform operations and audit on Linux host resources.

- Edition you buy: Standard
- Specifications: 50 assets
- Instance Type: Single node
- Managed resource type: Linux host resources

Procedure

This document describes how to quickly buy and configure a CBH instance.

Figure 1-1 Process of quickly purchasing and configuring a CBH instance

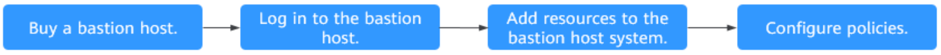

Buy a bastion host.
Log in to the bastion host.
Add resources to the bastion host system.
Configure policies.

Table 1-1 Process of buying and configuring a CBH instance

Step	Description
Preparations	Before using cloud services, sign up for a HUAWEI ID, enable Huawei Cloud services, complete real-name authentication, and top up your account. **NOTE** Real-name authentication is required only when you buy or use cloud services provisioned in the Chinese mainland.

Step	Description
Step 1: Buy a Bastion Host	On the CBH console, buy a standard single-node bastion host with 50 assets.
Step 2: Log In to the Bastion Host	After you buy a bastion host, the default **admin** account is used to log in to the bastion host.
Step 3: Add Resources to the Bastion Host System	Log in the bastion host as user **admin** and add Linux resources you want to manage to the bastion host so that resources can be accessed through the bastion host. You can use the **admin** account to create system users with different roles to implement refined permission management.
Step 4: Add an Access Control Policy	Log in to the bastion host as user **admin** and associate management roles with resources. You can configure the login time range, operation permissions, and access blacklist and whitelist, and create access control policies for resources.

Preparations

Before buying a CBH instance, you need to sign up for a HUAWEI ID, enable Huawei Cloud services, complete real-name authentication, and top up your account. Ensure that your account has sufficient balance or has a valid payment method configured.

Step 1: Buy a Bastion Host

Step 1 Log in to the CBH console.

Step 2 Click 📍 in the upper left corner on the displayed page and select a region.

Step 3 Click **Buy CBH Instance** to go to the **Buy CBH Instance** page.

Step 4 Select **CBH Instance** for **Service Type** and specify other parameters as required. For more information, see Table 1-2.

Table 1-2 Parameters for buying a bastion host instance

Parameter	Example Value	Description
Billing Mode	**Yearly/ Monthly**	The billing mode of the instance. Select **Yearly/Monthly**. Yearly/Monthly is a prepaid billing mode in which a CBH instance is billed based on the service duration. This cost-effective mode is ideal when the duration of CBH instance usage is predictable.

Parameter	Example Value	Description
Region	**AP-Singapore**	Select the region where the bastion host is used. You are advised to select the region where you deploy ECSs and RDS database instances you want to manage. This can reduce network latency and improve access speed.
Instance Type	**Single-node**	Select a single-node or primary/standby instance type based on your service requirements. ● **Single-node**: Only one bastion host is available after the purchase. ● **Primary/Standby**: After the purchase request is submitted, two bastion hosts will be delivered and deployed in different AZs to form a two-node cluster. If the primary bastion host becomes unavailable, the standby host will take over the job. **NOTE** If you buy a primary/standby instance, do not disable HA, or logins will fail.
AZ	**Retain the default value.**	An AZ is the location where the purchased bastion host is deployed. **NOTE** Primary and standby hosts can be deployed in the same AZ or different AZs.
Instance Name	**CBH-default-001**	Name of the CBH instance.
Specifications	**50 Assets**	Specifications of your CBH instance. CBH specifications: 50, 100, 200, 500, 1,000, 2,000, and 5,000 assets. Asset quantity indicates the maximum number of resources the CBH instance you buy can manage and the maximum number of concurrent requests your CBH instance supports. The vCPUs and the size of data and system disks vary depending on the asset quantity. For details about the asset specifications, see **Edition Differences**. For example, if you select 100 assets, the number of resources your instance can manage and the maximum number of concurrent connections your instance supports are both 100.
Edition	**Standard**	CBH provides two editions: **Standard** and **Professional**. The Professional edition supports database resource management. For details about the differences between editions, see **Edition Differences**.

Parameter	Example Value	Description
Storage Package	**0**	If the number of assets exceeds the storage specifications, you can expand the storage capacity.
VPC	**vpc-default(192.168.x.x/xx)**	The Virtual Private Cloud (VPC) where your instance is located. Select a VPC in the current region. If no VPC is available in the current region, click **View VPC** and create one. **NOTE** ● By default, networks in VPCs in different regions or even in the same region are not connected. Different networks are isolated from each other. This is not the case for different AZs in the same VPC. Two networks on the same VPC should be able to communicate with each other even if they are in different AZs. ● CBH can directly access and manage resources, such as ECSs, in the same VPC in the same region. To manage resources such as ECSs in different VPCs in the same region, establish a VPC peering connection, use a VPN, or use other methods to connect networks. For details, see **Creating a VPC Peering Connection**. Managing ECSs across regions is not recommended. For more details, see **VPC Planning**.
Assign IPv4 Address	**Auto**	Select **Auto** or **Manual**. If you select **Manual**, you can view the used IP addresses.

Parameter	Example Value	Description
Security Group	**Sys-default**	The security group for your CBH instance. The default security group is **Sys-default** in the current region. If no security group is available, click **Manage Security Groups** to create a security group or configure a new one. **NOTE** ● A security group provides access rules for the CBH instances and resources that have the same security protection requirements and are mutually trusted in the same VPC. CBH instances are protected by these access rules after being added to the security group. For details, see **Security Group Overview**. ● CBH instances and ECSs can be added to the same security groups. They do not affect each other when implementing security group rules. ● Before creating HA instances, ensure that the security group allows inbound traffic from ports 22, 31036, 31679, and 31873. ● When a bastion host instance is created, ports 80, 8080, 443, and 2222 are automatically enabled. If you do not need to use them, disable them immediately after the instance is created. ● During cross-version upgrade, ports 22, 31036, 31679, and 31873 are automatically enabled for the instance. After the upgrade, keep port 31679 enabled and disable other ports immediately if you do not need to use them. For more details about security groups, see **How Do I Configure a Security Group for a CBH Instance?**
EIP	**100.x.x.x**	The EIP in the current region for your CBH instance. If no EIP is available in the current region, click **Buy EIP** to create one. **NOTE** If you need a publicly accessible CBH instance, you need to bind an EIP to it. While no EIPs are required if you log in to the CBH instance over a private network, such as VPN or Direct Connect connections.
Enterprise Project	**default**	Select the enterprise project the CBH instance you are buying belongs to. The **default** enterprise project is selected by default.

Parameter	Example Value	Description
Password	**Cbh@default.001**	User-defined password of the **admin** user. **NOTE** ● The password must: – Contain 8 to 32 characters. – Contain at least three of the following types of characters: uppercase letters (A to Z), lowercase letters (a to z), digits (0 to 9), and following special characters: !@$%^-_=+[{}]:,./?~#* – Cannot contain the username or the username spelled backwards. – Cannot contain more than two consecutive identical characters. ● Enter the same password in the **Password** and **Confirm Password** text boxes. ● The CBH system cannot obtain the password of system administrator **admin**. Keep your account information secure. ● When you log in to your CBH system as **admin** for the first time, change the password and configure mobile phone number as prompted. Otherwise, you cannot log in to the CBH system. ● If you forget the password of user **admin** after buying a CBH instance, reset the password by referring to **Resetting the Password**.
Required Duration	**1 month**	Required duration of the instance. You can buy a CBH instance on a monthly or yearly basis.

Step 5 Confirm details in the **Current Configuration** area and click **Next**.

NOTE

When receiving a network restriction notification, click **Enable** to eliminate the network restrictions so that the instance can be issued after purchase.

You can view the rules in the security group and firewall ACL and ensure that:

- Access to port 9443 is allowed in the outbound direction of the security group to which your CBH instance belongs.
- The subnet where the instance locates is not associated with the firewall ACL, or the ACL rule of the associated firewall allows the instance to access port 9443 in the outbound direction.

Step 6 On the **Confirm** page, confirm the details, read the privacy statement, select **Privacy Statement**, and click **Submit**.

Step 7 Return to the CBH instance list and check the new CBH instance you buy.

After a CBH instance is purchased, the corresponding CBH system is automatically created for you, which takes about 10 minutes.

📖 NOTE

Do not unbind an EIP from a CBH instance before the mapped CBH system is created. If you unbind an EIP from an instance before its status changes to **Running**, the mapped CBH system may fail to be created.

----End

Step 2: Log In to the Bastion Host

You need to log in to the instance to perform operations such as bastion host management, O&M, and audit.

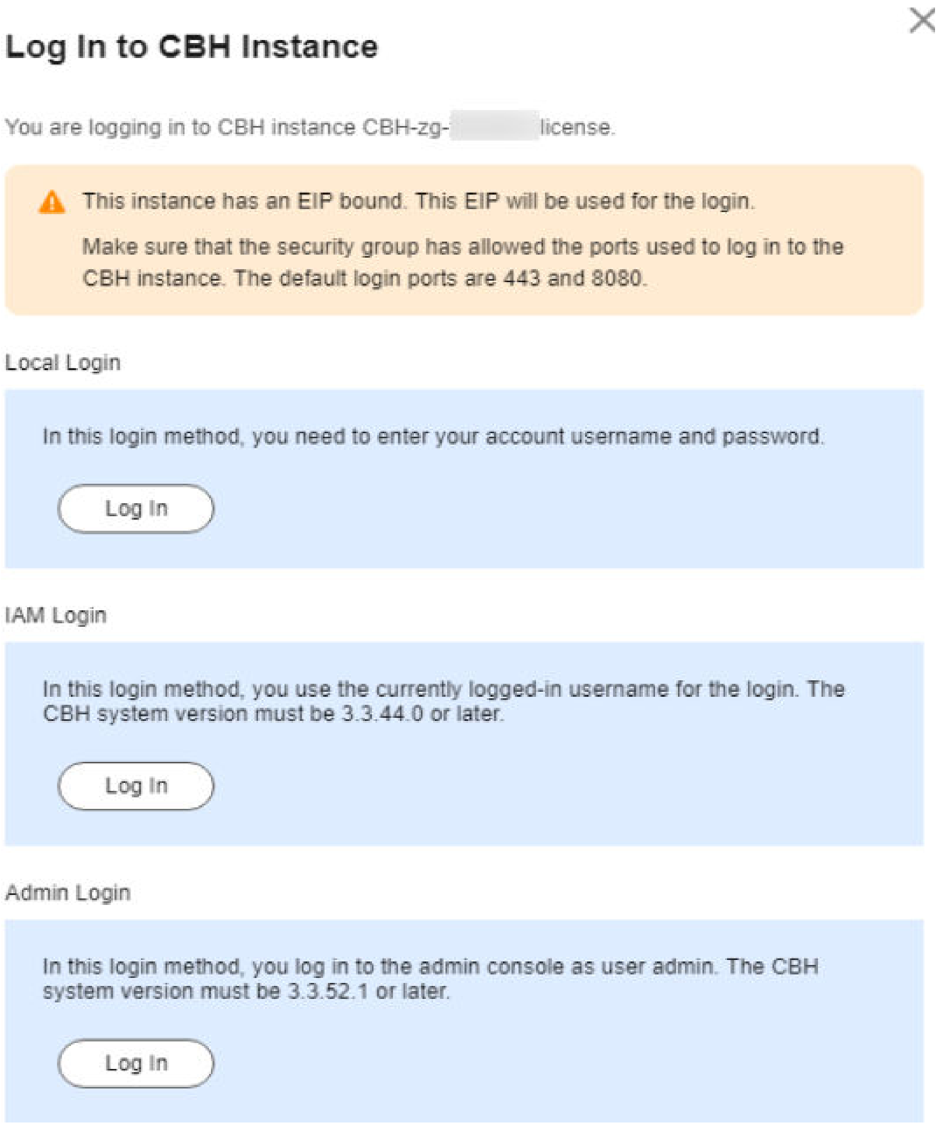
Step 1 Return to the CBH instance list page and check whether the status of the purchased CBH instance is **Running**.

Step 2 Click **Remote Login** in the **Operation** column. In the displayed dialog box, click **Log In** in the **Admin Login** bar to automatically log in to the bastion host.

📖 NOTE

You need to change the initial password of the **admin** user upon the first login to access the bastion host instance.

Figure 1-2 Login to a bastion host



Log In to CBH Instance

You are logging in to CBH instance CBH-zg-[redacted] license.

⚠ This instance has an EIP bound. This EIP will be used for the login.

Make sure that the security group has allowed the ports used to log in to the CBH instance. The default login ports are 443 and 8080.

Local Login

In this login method, you need to enter your account username and password.

IAM Login

In this login method, you use the currently logged-in username for the login. The CBH system version must be 3.3.44.0 or later.

Admin Login

In this login method, you log in to the admin console as user admin. The CBH system version must be 3.3.52.1 or later.

----End

Step 3: Add Resources to the Bastion Host System

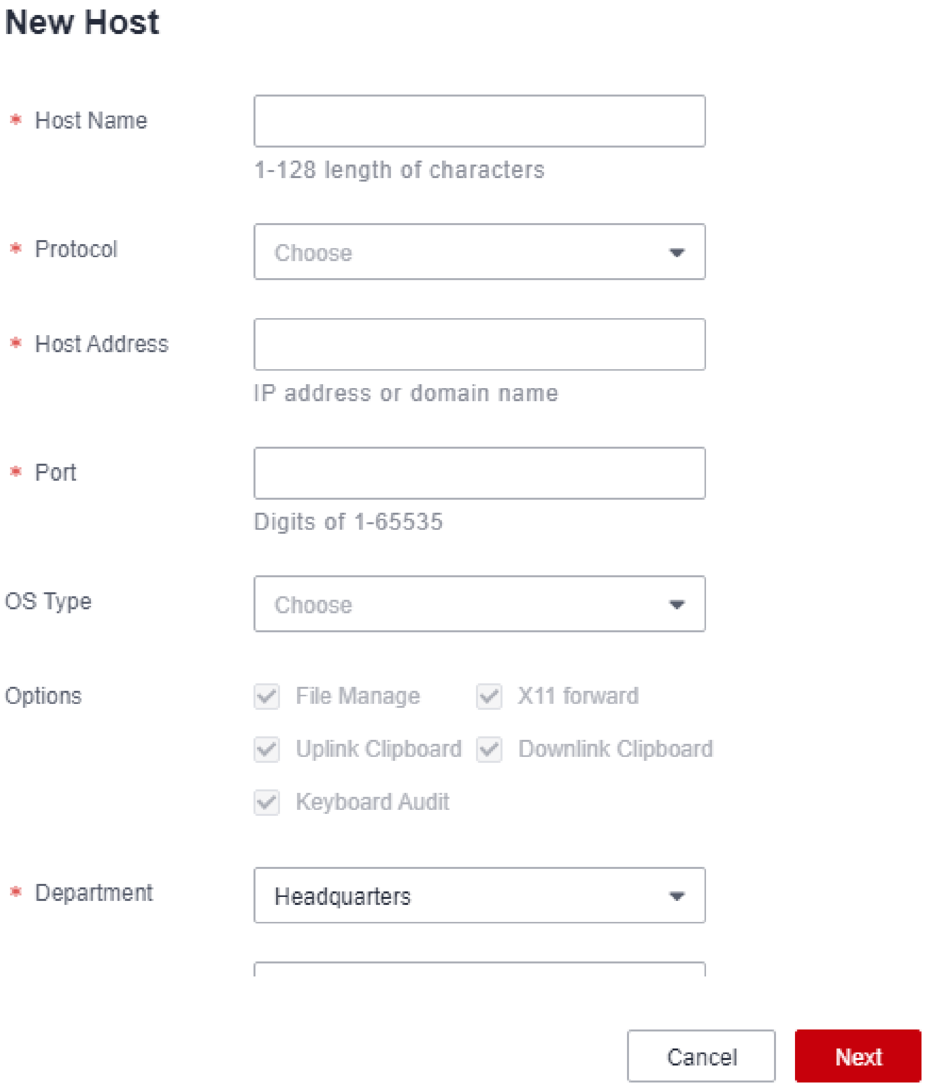
To use the bastion host to audit or maintain resources, you need to add resources to the bastion host first.

Step 1 On the CBH instance page, choose **Resource** > **Host**.

To add application resources, choose **Resource** > **Application**. For details, see **Using a Bastion Host to Manage Application Servers**.

Step 2 Click **New**. In the displayed dialog box, configure network parameters and basic information about the host.

Figure 1-3 New Host



New Host

* Host Name
1-128 length of characters

* Protocol
Choose

* Host Address
IP address or domain name

* Port
Digits of 1-65535

OS Type
Choose

Options
☑ File Manage ☑ X11 forward
☑ Uplink Clipboard ☑ Downlink Clipboard
☑ Keyboard Audit

* Department
Headquarters

Cancel
Next

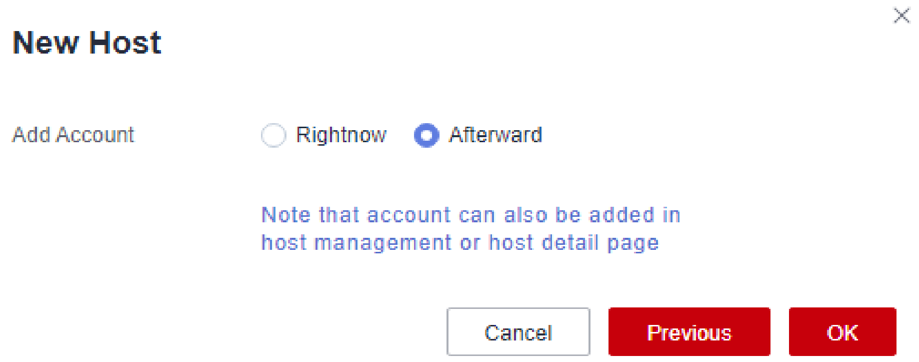
Table 1-3 Host resource network parameters

Parameter	Example Value	Description
Host Name	**host-test-01**	Custom name of the host resource. A host name must be unique in a bastion host.
Protocol	**SSH**	Select a protocol based on the protocol type of the host you are adding.
Host Address	**100.x.x.x**	Host IP address that can be used to establish connection with your bastion host.

Parameter	Example Value	Description
Port	**22**	Enter the port number that can be used to access the host.
OS Type	**Linux**	(Optional) Type of the host OS or device OS. ● The default value is empty. You need to select an OS type based on the type of the added resources. ● 14 OS types are supported, including Linux, Windows, Cisco, Huawei, H3C, DPtech, Ruijie, Sugon, Digital China sm-s-g 10-600, Digital China sm-d-d 10-600, ZTE, ZTE5950-52tm, Surfilter, and ChangAn. ● In addition, system administrator **admin** can customize OS types.
Encode	**UTF-8**	If you select **SSH** or **TELNET** for Protocol, the Chinese character can be used on the O&M page. The options are **UTF-8**, **Big5**, and **GB18030**.
Terminal Type	**Linux**	If you select **SSH** or **TELNET** for Protocol, you can specify the O&M terminal you want. The options are **Linux** and **Xterm**.
Options	**Retain the default value.**	(Optional) Select **File Manage**, **X11 forward**, **Uplink Clipboard**, **Keyboard Audit**, and/or **Downlink Clipboard**. ● **File Manage**: This option is supported only by SSH, RDP, and VNC hosts. ● **Clipboard**: This option is supported only by SSH, RDP, and Telnet hosts. ● **X11 forward**: This option is supported only by SSH hosts. ● **Keyboard Audit**: Only RDP, VNC, and protocol hosts can be configured.
Department Name	**HQ**	Department to which the host resource belongs.

Step 3 Click **Next** to add an account for the managed host. Select **Afterward**.

Figure 1-4 Adding an account



New Host

Add Account ○ Rightnow ● Afterward

Note that account can also be added in host management or host detail page

Step 4 Click **OK**. After the account is verified, you can then view the new host resource under the **Host** tab.

----End

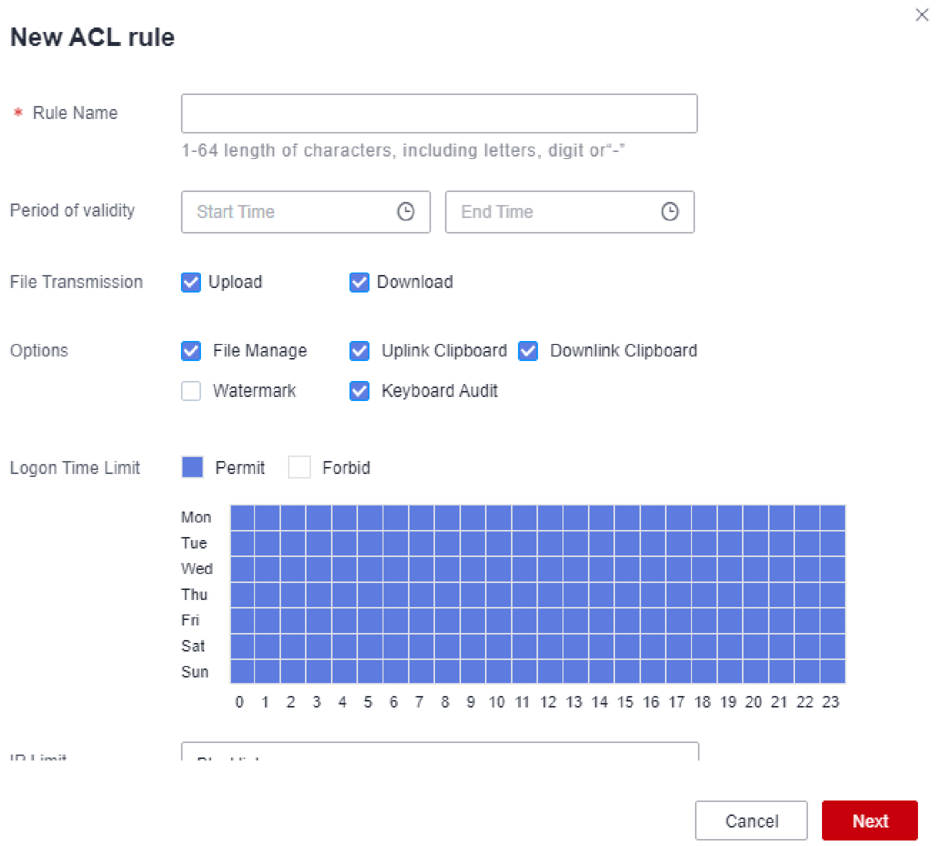
Step 4: Add an Access Control Policy

After a resource is added, you need to bind an account or IP address to the resource to ensure resource access security.

Step 1 Log in to the bastion host instance and choose **Policy** > **ACL Rules** to enter the ACL rule list page.

Step 2 Click **New**. In the dialog box displayed, configure basic policy information.

Figure 1-5 ACL Rules



New ACL rule

* Rule Name

1-64 length of characters, including letters, digit or"-"

Period of validity: Start Time, End Time

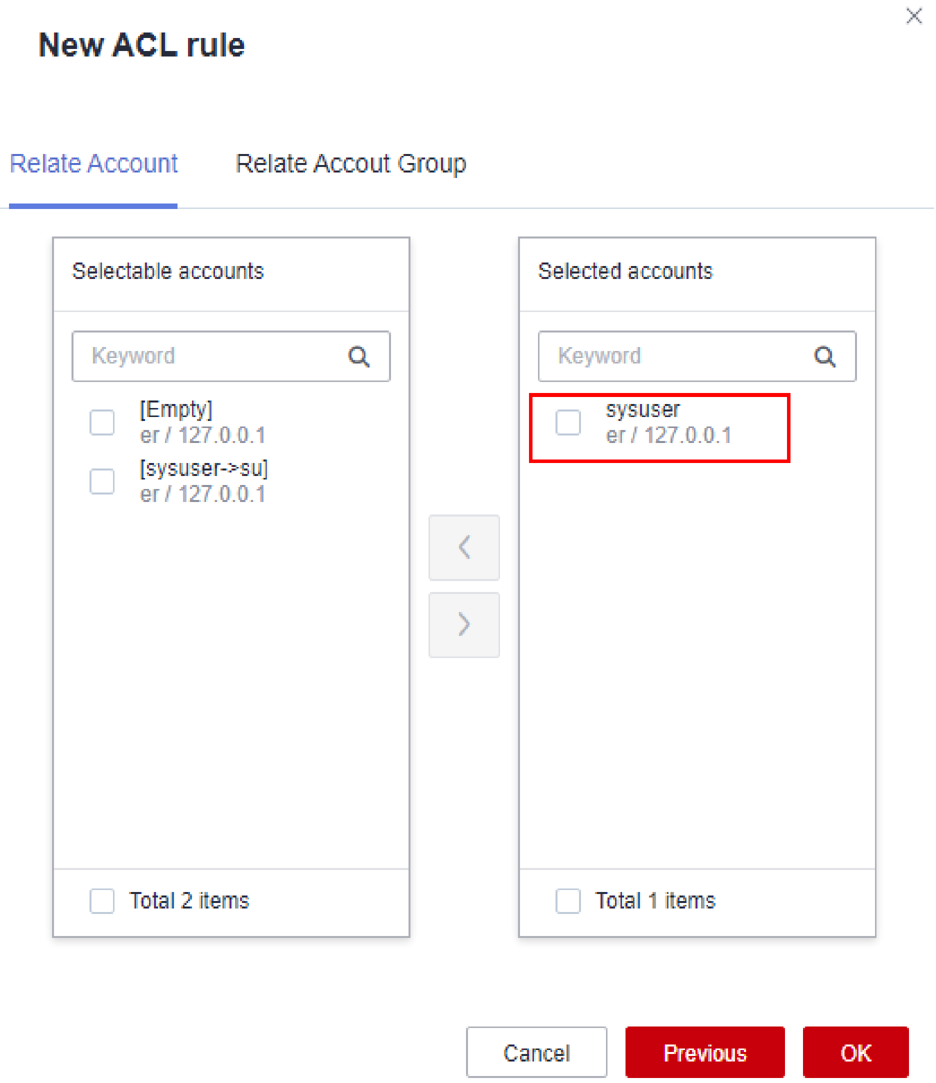
File Transmission: ☑ Upload ☑ Download

Options: ☑ File Manage ☑ Uplink Clipboard ☑ Downlink Clipboard ☐ Watermark ☑ Keyboard Audit

Logon Time Limit: 🟦 Permit ☐ Forbid

Step 3 Click **Next** and select the **admin** user.

Figure 1-6 Selecting accounts

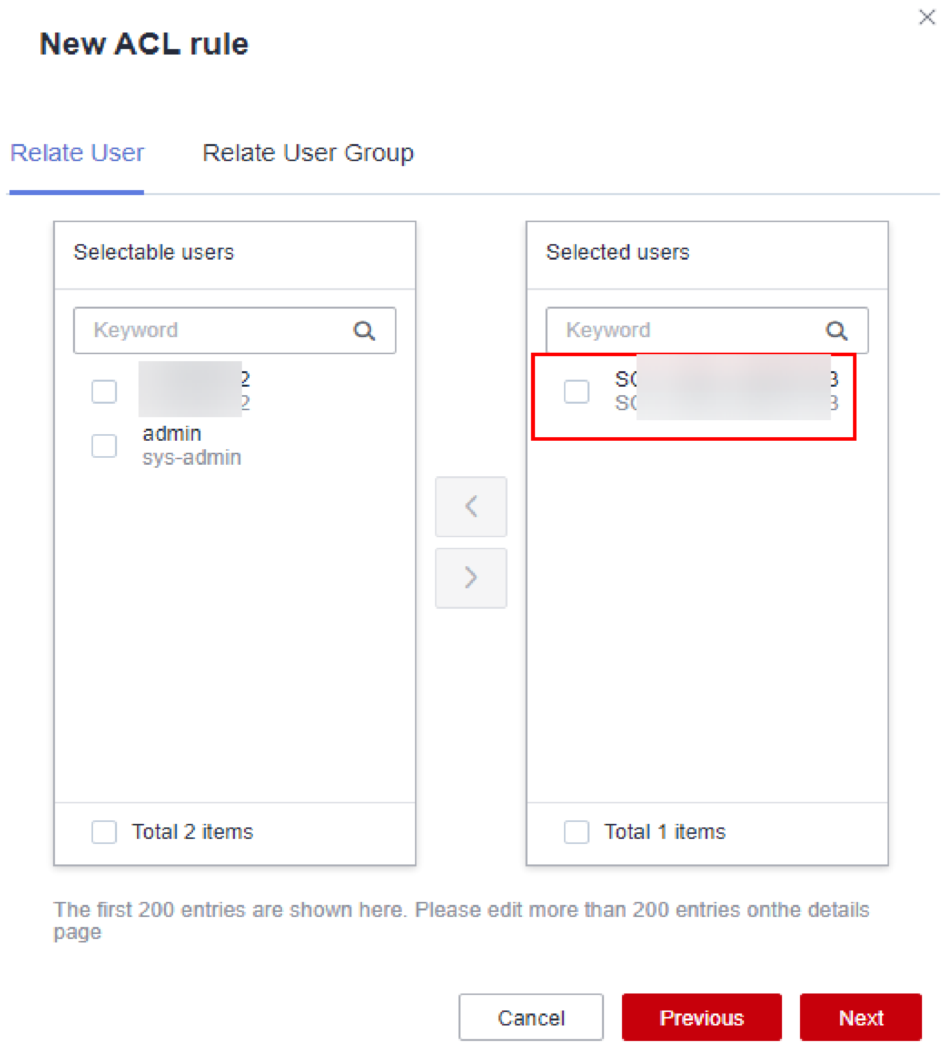


Step 4 Click **Next** and select the resource account.

NOTE

Resource account **Empty** is the account automatically created when a resource is added. It can be used to log in to resources.

Figure 1-7 Relate Account



The first 200 entries are shown here. Please edit more than 200 entries onthe details page

Step 5 Click **OK**. You can view the new policy in the policy list.

NOTE

After policies are configured, you can choose **Operation** > **Host Operations**, select the target host, and use the **Empty** account to log in to the host. After the login, you can perform O&M operations. Then, you can choose **Audit** > **System Log** and view the login logs and operation logs.

----End

Follow-up Operations

- If you need to distinguish management roles, log in to the bastion host as user **admin** and add different roles to the bastion host instance for refined permission management.
- If you need to customize settings for login, account, session, gateway, router, port, authentication, and alarm parameters, choose **System** > **System Config**.

2 Getting Started with Common Practices

This section introduces a series of common practices to help you quickly use CBH.

Table 2-1 Common practices

Practices		Description
Changing Specifications of a CBH Instance	**Changing Specifications of a CBH Instance**	You can change specifications of a CBH instance to meet your business needs.
System policies	**Enabling Secondary Authorization for High-Risk Database Operations**	With CBH, you can securely delete, modify, and view your database instances by running commands. To secure sensitive database information and prevent key information from being lost or disclosed, CBH gives you the ability to configure an approval process for high-risk database operations and monitor key information.

Practices		Description
System O&M	**Centralized O&M of Cloud and On-Premises Resources Across Clouds and VPCs**	If you have servers deployed across VPCs, in on-premises data centers, and across multiple clouds, CBH is always a good choice for centralized O&M. With CBH, you can manage scattered servers centrally without establishing dedicated lines, making O&M of all workloads efficiently and securely.
O&M audits	**Using CBH to Locate Incident Causes**	CBH can manage and control all operations and log all operations in detail. Audit logs of sessions can be viewed online, recorded and played online, and played offline after being downloaded. CBH allows you to audit operations performed over character protocols (SSH and TELNET), graphics protocol (RDP and VNC), file transfer protocols (FTP, SFTP, and SCP), and database protocols (DB2, MySQL, Oracle, and SQL Server), as well as application publishing. For operations over character and database protocols, their operation instructions can be parsed so that you can know what actions have been done. For file transfer actions, the name and destination path of a transferred file can be logged.