Tencent Cloud Enterprise

Cloud Virtual Machine

User Manual

Tencent TCE

Document Contents

I What is CVM

Cloud Virtual Machine (CVM) is a secure, reliable, and elastic computing service that frees you from estimation of resource usage and upfront investment which is inevitable with traditional servers. With the service, you can quickly launch any number (depending on physical resources) of CVM instances and deploy applications on them instantly.

CVM instances allow you to customize all resources, including CPU, memory, disk, network, and security resources. They also allow you to easily adjust the resources in response to any requirement changes such as access and load changes. Instance is the core concept of CVM. Instances provide specific computing capabilities to meet diversified computing requirements. With instances, you can expand or reduce computing resources in real time according to business requirement changes. You can perform a series of operations on instances in the CVM console. Other services, including the configuration of resources, such as images, snapshots, and security groups, also depend on instances.

I Quick Start

This chapter helps you get started with CVM:

- CVM Management

  This feature allows you to view the CVM instance resources of all tenants and initiate cold migration and hot migration of tenant CVM instances. You can also adjust the private network bandwidth limit of a certain CVM instance to achieve CVM QoS. In addition, you can manage the lifecycles of CVM instances in the operations console. For example, you can create, start up, shut down, and reinstall CVM instances.

- Host Management

  This feature allows you to view, activate, deactivate, and perform other management operations on physical host resources. It also provides the CVM failover capability.

  If a host fails, automatic migration will be triggered for CVM instances on the host, and notifications will be sent to OPS personnel. With the feature, OPS personnel can view failure events and migration records and manually retry migration tasks that failed due to resource causes.

- Image Management

  This feature allows you to view the details of public images and custom images in the operations console and delete custom images.

- Model Configuration

  This feature allows you to configure purchasable host items such as CPU, memory, disk capacity, and instance type, and add and copy model configurations.

- Exceptional Task Management

  This feature allows you to view and retry exceptional tasks.

- Linkage Log

  This feature allows you to view the full-link logs of the CVM service, from API to compute logs.

- Virtualization Platform Status

  This feature allows you to check the running conditions of the virtualized scheduling system VStation.

  The **Platform Status** page displays the health status of each component on the platform and collects statistics once every few minutes. The **Exceptional Task** page displays recent tasks where scheduling was interrupted unexpectedly and allows you to retry them. The **Task Query** page displays the scheduling execution conditions of all tasks.

- Operations Tool Market

I Log In CVM Console

1. Prerequisites

Access the **Platform Management** -> **Users and Permissions** page to obtain CAM authorization. Only authorized users can access the CVM console.

2. Directions

1. Open a browser.
2. Enter the address of the TCE operations console in the address bar and press **Enter**.

   The URL is http://cmgt.yf-1.tcepoc.fsphere.cn.
3. Enter the correct username and password, and click **Log In**.
4. Choose **Product Operation** > **Computing and Networking** > **Cloud Virtual Machine** to access the CVM service homepage.

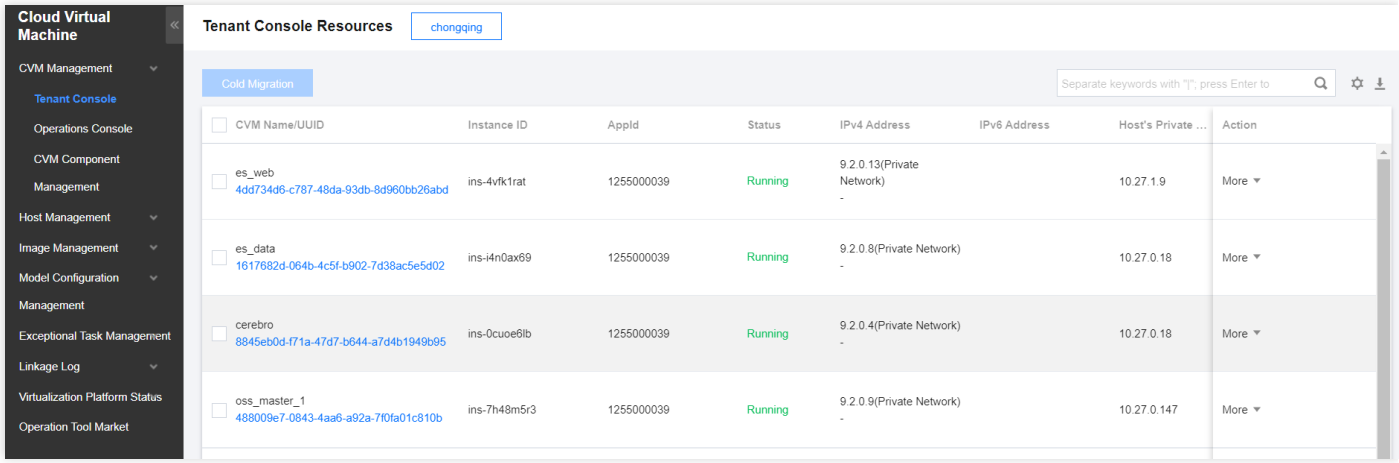
   Users can use the CVM service only after their accounts are bound to the CVM access policy. For specific operations, see the "Policy Management" section in **Documentation** > **Basic Platform** > **Users and Permissions** > **User Manual**.

I CVM Management

1. Tenant Console Resources

1.1 Viewing the list of CVM instances of all tenants

1. Log in to the CVM console.
2. In the left sidebar, choose **CVM Management** > **Tenant Console** to view the list of CVM instances of all tenants.



The fields in the list are described as follows:

- **CVM Name**: you can set an alias for a CVM instance to distinguish it from other instances.
- **UUID**: unique ID of the CVM instance.
- **Instance ID**: unique ID of each instance. You can search resources by instance ID.
- **AppId**: app ID of the cloud platform account.
- **Status**: running, shutdown, starting, terminating, and more.
- **IPv4 Address**: IPv4 address of the CVM instance.

- **IPv6 Address**: IPv6 address of the CVM instance.
- **Host's Private Network IP**: IP address of the master where the CVM instance resides.
- **AZ**: used to identify the physical location of the CVM instance in the data center.
- **Network**: network type of the CVM instance.
- **Configuration**: configuration of the CVM instance.
- **NodeQuota**: number of cores available per node.
- **Created At**: time when the CVM instance is created.
- **Action**: you can perform private network bandwidth adjustment, cold migration, and hot migration for a CVM instance.

You can filter tenant CVM instances in the following ways:

- Click the **AZ** field, select availability zones as needed, and click **OK**.

  The system displays all tenant CVM instances of the availability zone.

- In the search box above the instance list, enter resource properties such as **AppID**, **UUID**, **Instance ID**, **IPv4 Address**, **IPv6 Address**, and **Host's Private Network IP**, and click  .

  All eligible CVM instances are listed in the tenant resource list.

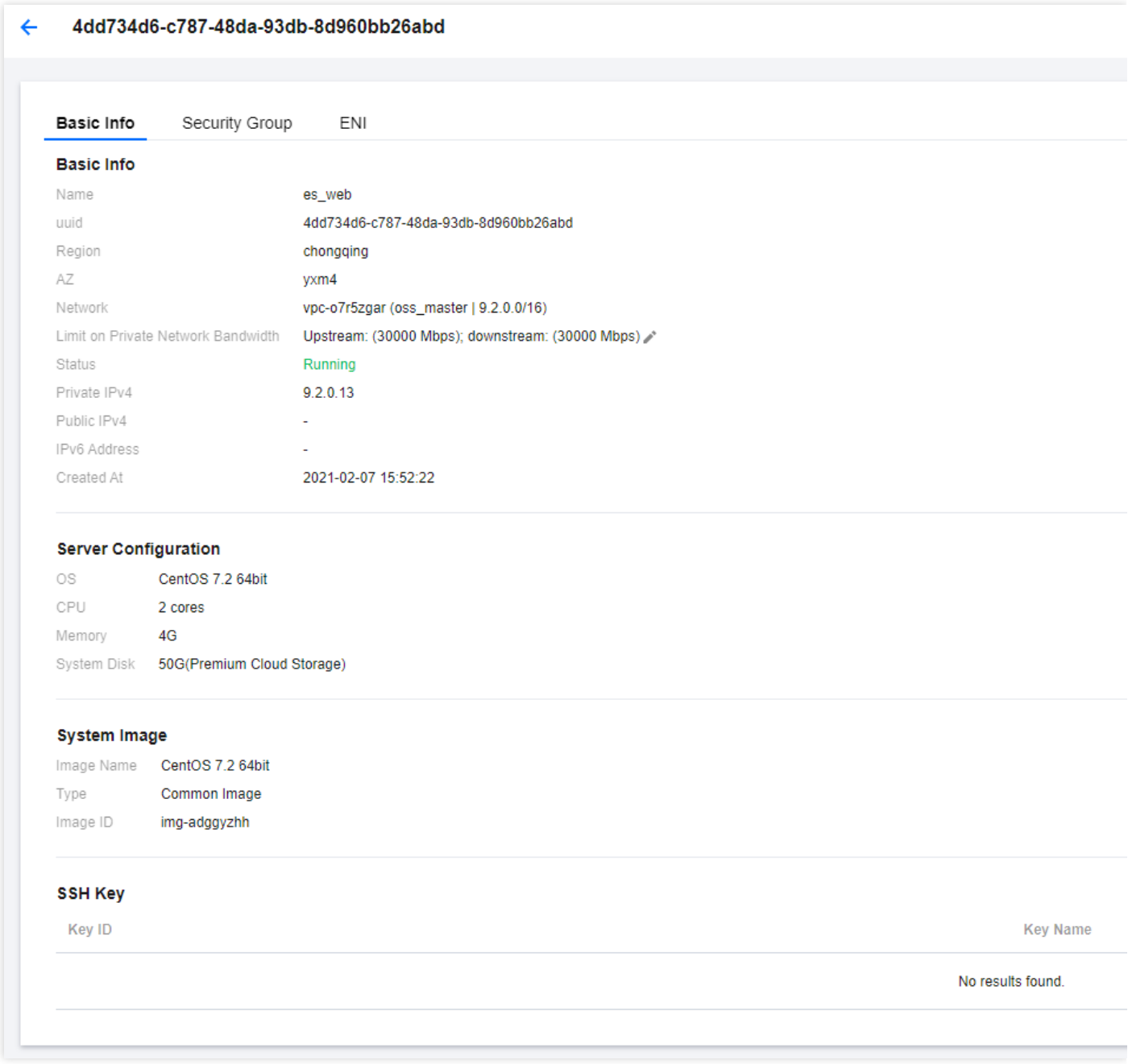
- Click  to set fields that can be displayed in the list.

  The system can display fields such as **CVM Name/UUID**, **Instance ID**, **AppID**, **Status**, **IPv4 Address**, **IPv6 Address**, **Host's Private Network IP**, **AZ**, **Network**, **Configuration**, **NodeQuota**, **Created At**, and **Action**.

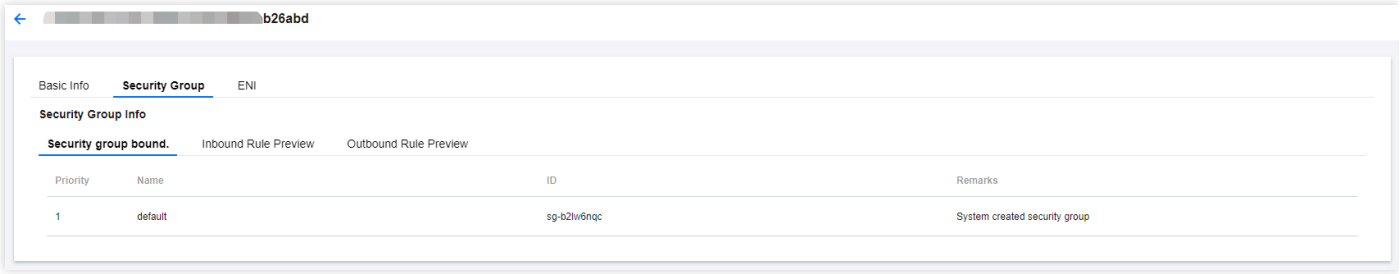
1.2 Viewing tenant CVM instance information

1. On the **Tenant Console Resources** page, click the **UUID** link of a CVM instance.

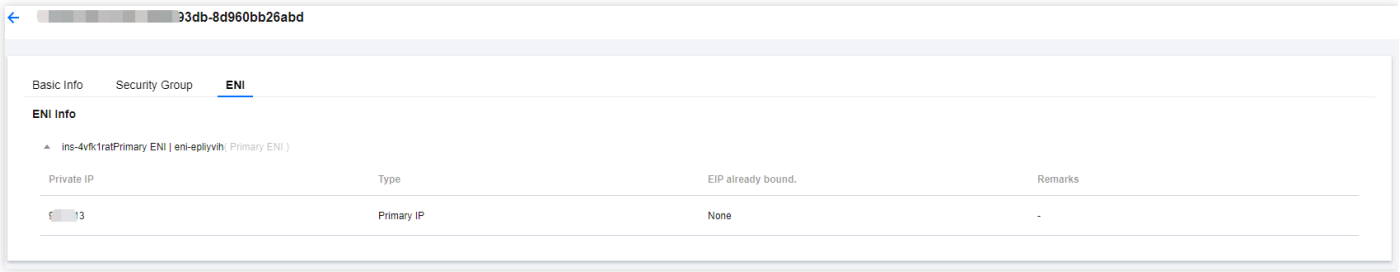
   The system displays the **Basic Info** tab page of the CVM instance. On the tab page, you can view the instance information such as **Basic Info**, **Server Configuration**, **System Image**, and **SSH Key**.



2. Click the **Security Group** tab to view the security group information of the CVM instance, including **Bound Security Group**, **Inbound Rule Preview**, and **Outbound Rule Preview**.

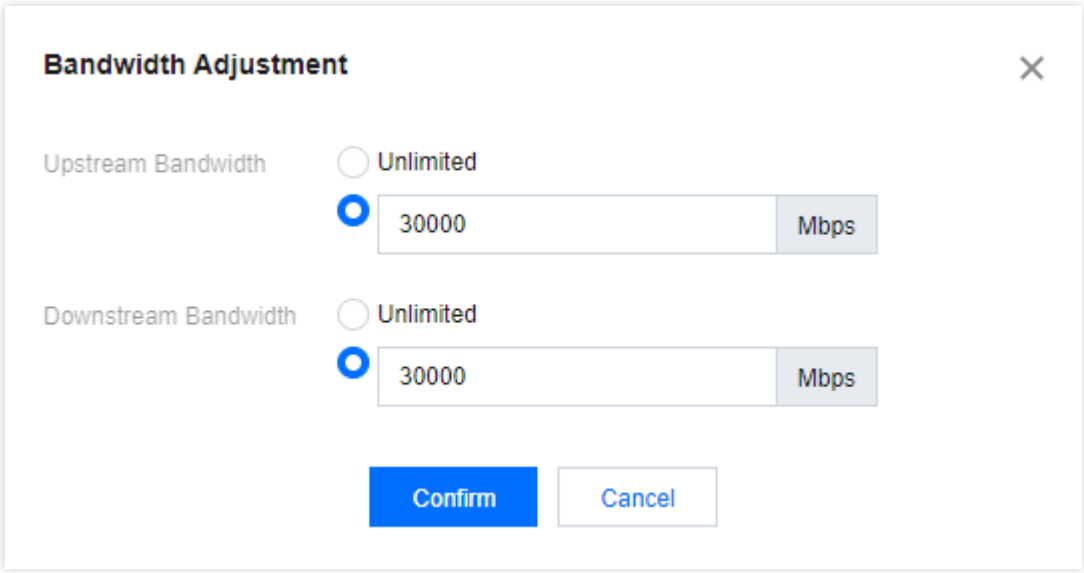


3. Click the **ENI** tab to view the ENI information of the CVM instance, including the **Private IP**, **Type**, **Bound EIP**, and **Remarks**.



1.3 Adjusting the private network bandwidth of tenant CVM instances

1. On the **Tenant Console Resources** page, select a target CVM instance and choose **More** > **Adjust Private Network Bandwidth** in the **Action** column. The **Bandwidth Adjustment** dialog box pops up.



2. Set **Upstream Bandwidth** and **Downstream Bandwidth** and click **Confirm**.

1.4 Cold migration of a tenant CVM instance

Prerequisites

You can perform cold migration only on shutdown CVM instances.

Directions

1. On the **Tenant Console Resources** page, select the target CVM instance and click **Cold Migration**; or choose **More** > **Cold Migration** in the **Action** column of the target CVM instance.

2. In the pop-up dialog box, set the **Timeout Duration** and **Bandwidth Cap**, and click **Next**.

3. Set the host selection mode and click **OK**.

   There are 2 host selection methods:

   - Automatically Select Host: the system automatically selects an eligible host.
   - Manually Select Host: manually specify a host.

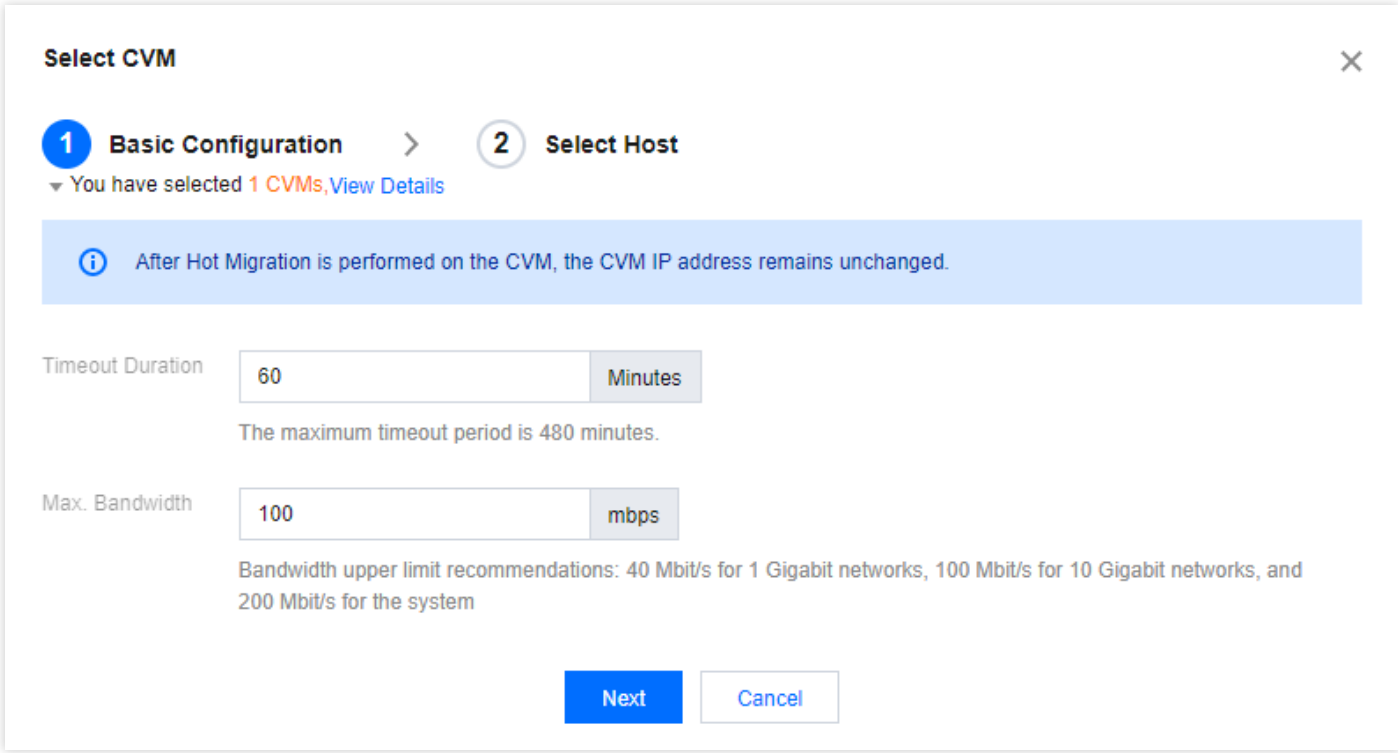
1.5 Hot migration of a tenant CVM instance

Prerequisites

You can perform hot migration only on running CVM instances.

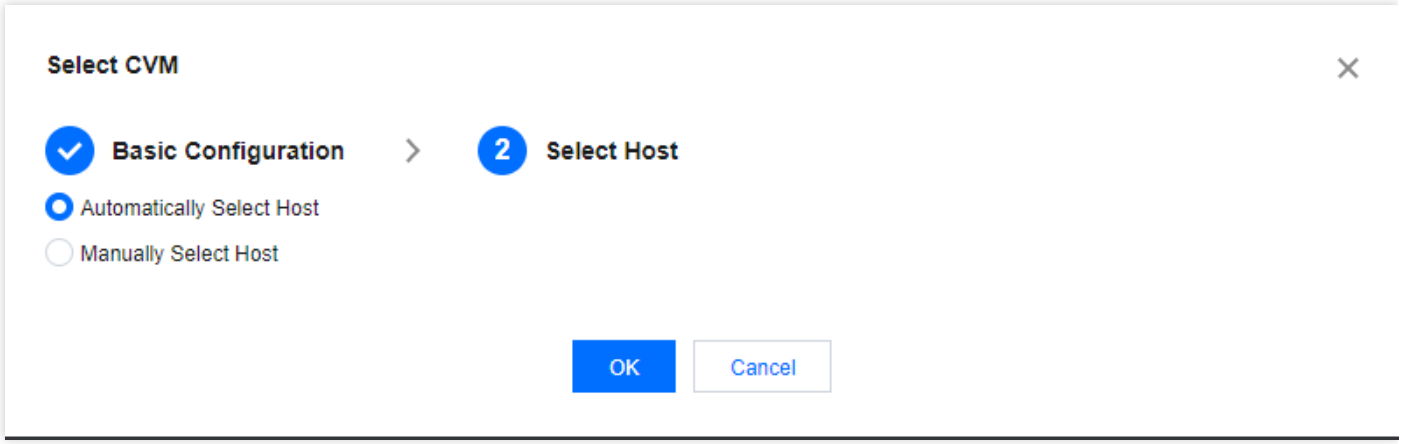
Directions

1. On the **Tenant Console Resources** page, choose **More** > **Hot Migration** in the **Action** column of the target CVM instance.



2. Set the timeout period and upper bandwidth limit, and click **Next**.

3. Set the host selection mode and click **OK**.



There are 2 host selection methods:

- Automatically Select Host: the system automatically selects an eligible host.
- Manually Select Host: manually specify a host.

1.6 Exporting the tenant CVM instance list

1. On the **Tenant Console Resources** page, click  in the upper-right corner of the page. The **Export CVM List** dialog box pops up.

2. After the export succeeds, click **OK** in the dialog box.

2. Operations Resources

2.1 Viewing the list of operations CVM instances

1. Log in to the CVM console.

2. In the left sidebar, choose **CVM Management** > **Operations Console**. The list of operations CVM instances appears.

   - Select a region. The system displays all the operations CVM instances of the region.
   - Click **Status** and **AZ** to filter the CVM instance list.
   - In the search box above the instance list, enter resource properties such as the **CVM Name**, **UUID**, **IP**, **Host's Private Network IP**, and **Uplink Network Device**, and click  .

     The system lists all eligible CVM instances.

   - Click  to set fields that can be displayed in the list.

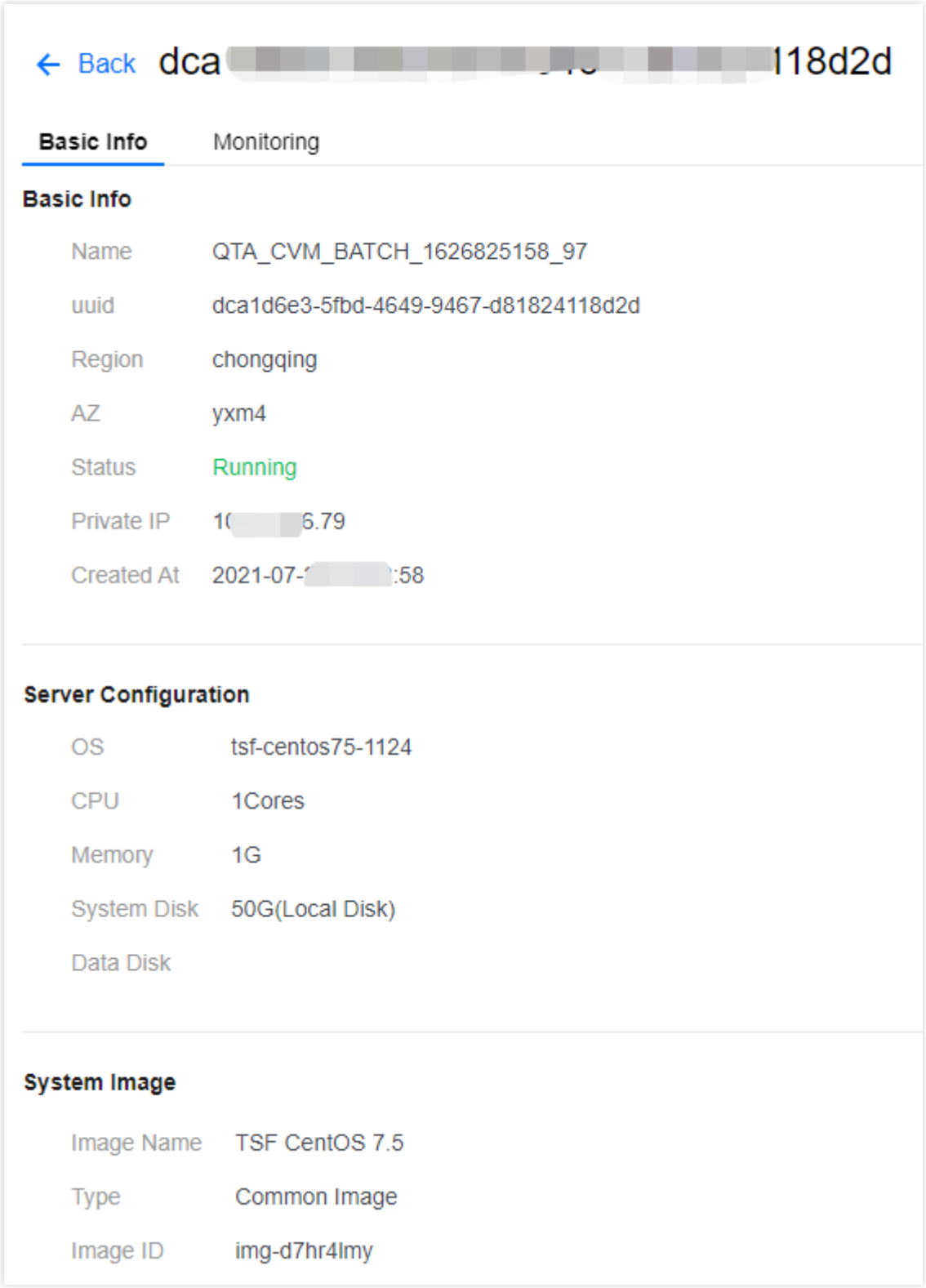
     The system can display fields such as **CVM Name/UUID**, **Monitoring**, **Status**, **AZ**, **IP**, **Host's Private Network IP**, **Uplink Network Device**, **Configuration**, **NodeQuota**, **Created At**, and **Action**.

   - Click  to export the list of operations CVM instances.

2.2 Viewing the details of an operations CVM instance

1. On the **Operations Console Resources** page, click the UUID link of a CVM instance. The system displays the **Basic Information** tab page of the CVM instance.

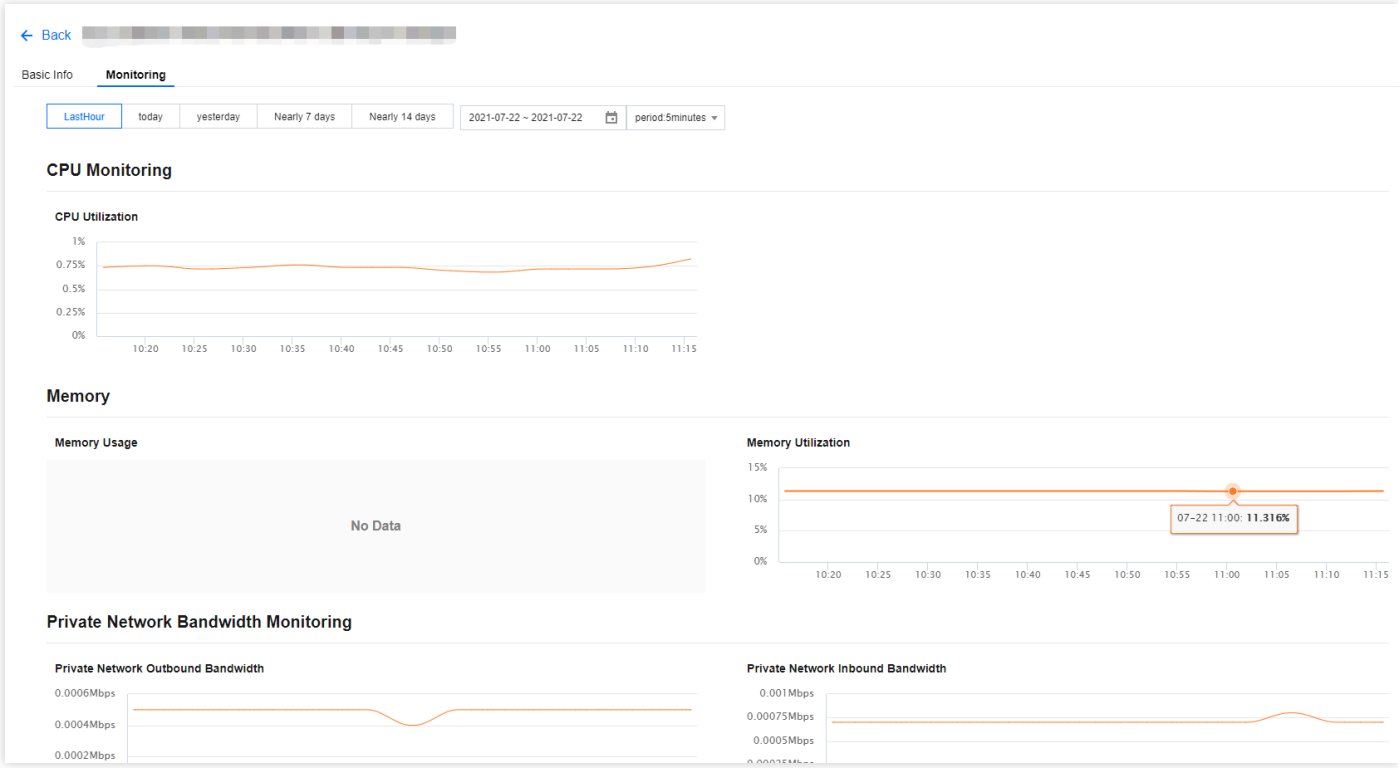
   On the tab page, you can view the instance information such as **Basic Information**, **Server Configuration**, and **System Image**.



2. Click the **Monitoring** tab. The system displays the monitoring information of the CVM instance.

You can view the monitoring data of the last hour, today, yesterday, last 7 days, last 14 days, or a specified time period in the last month. The monitoring data you can view includes **CPU Monitoring**, **Memory**, **Private**

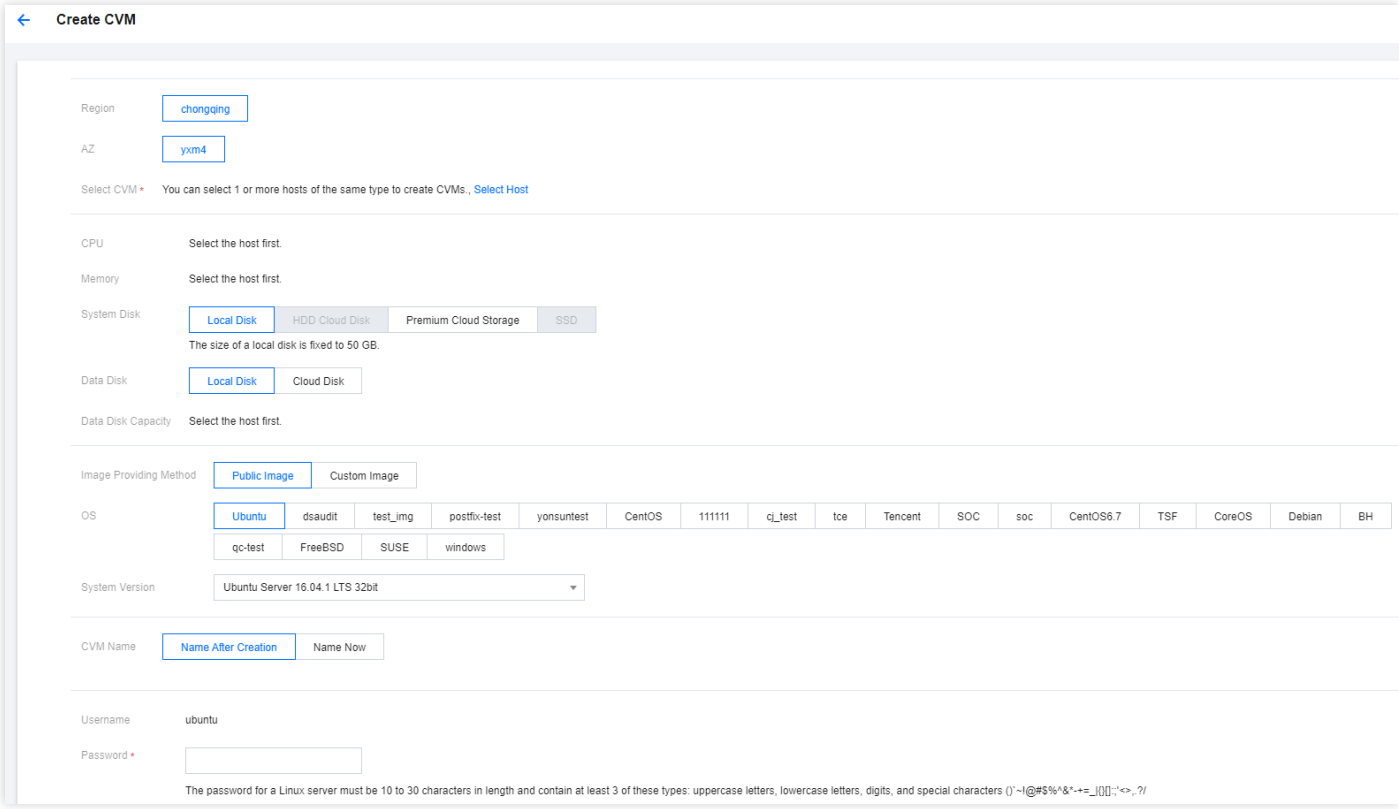
Network Bandwidth Monitoring, and **Disk Monitoring**.



2.3 Creating an operations CVM instance

1. On the **Operations Console Resources** page, click **Create**. The system displays the **Create CVM** page.

2. Set parameters as needed and click **Confirm Creation**.



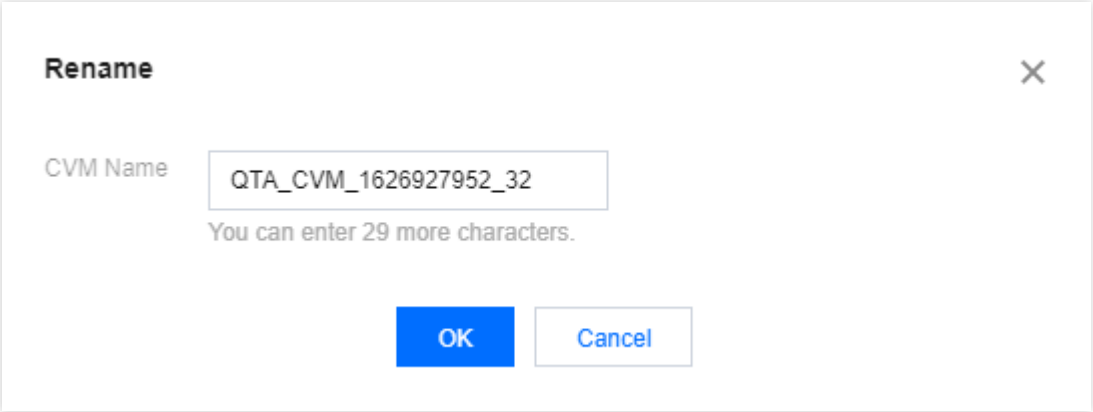
The parameters are described as follows:

- **Select CVM**: select a host for creating the CVM instance.
- **CPU**: number of cores ranges from 1 to the number of remaining available CPU cores of the host.
- **Memory**: ranges from 1 GiB to the remaining available memory size of the host.
- **System Disk**: select a local disk, HDD cloud disk, premium cloud click, or SSD cloud disk as needed, and set the disk capacity.
- **Data Disk**: select a local disk, HDD cloud disk, premium cloud click, or SSD cloud disk as needed. If the system disk is not a local disk, you can choose up to 10 disks of 10 GB to 16,000 GB in size. When instances are created, this amount of disk capacity should be deducted according to the number of instances.
- **Image Providing Method**: a public image is a standard image provided by the cloud platform, while a custom image is an image created by users through CVM.
- **OS**: select an appropriate OS based on your actual needs.
- **System Version**: select an appropriate OS version based on your actual needs.
- **CVM Name**: you can choose to set the instance name immediately or after the instance creation.
- **Username**: account name of the CVM admin, which cannot be changed.
- **Password**: password of the CVM admin. The password for a Linux server must be 10 to 30 characters in length and contain at least 3 of these types: uppercase letters, lowercase letters, digits, and special characters ()`~!@#$%^&*-+=_|{}[]:;'<>,.?/

- **Number of Servers**: maximum number of instances created. If the creation partially fails, you will need to recreate the instances that failed to be created.

2.4 Renaming an operations CVM instance

1. On the **Operations Console Resources** page, hover over the name or UUID of a target CVM instance, and click . The **Rename** dialog box pops up.



2. Enter the new CVM instance name and click **OK**.

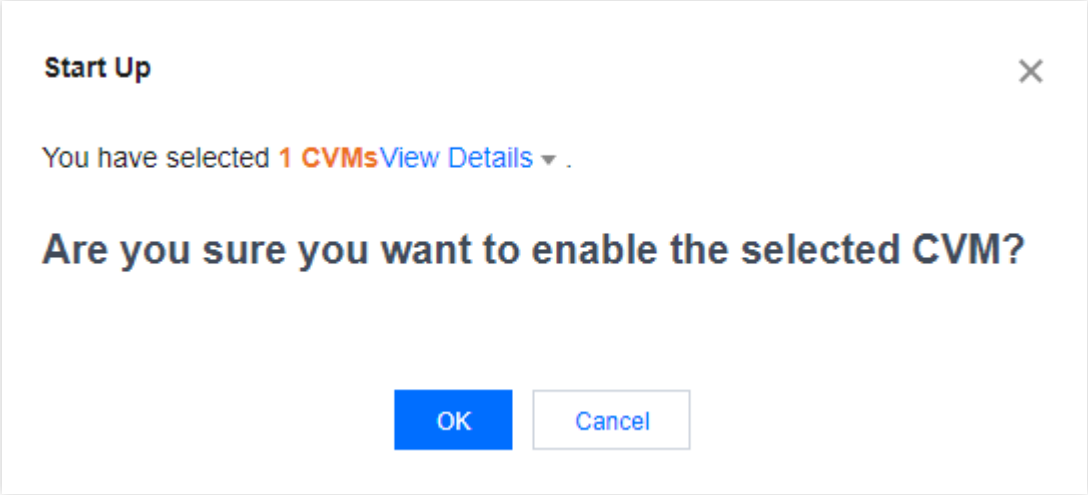
2.5 Starting up an operations CVM instance

Prerequisites

The target CVM instance is shut down.

Directions

1. On the **Operations Console Resources** page, select a target CVM instance and click **Start Up** or choose **More** > **Start Up** in the **Action** column of the target CVM instance. The **Start Up** dialog box pops up.



2. Click **OK**.

2.6 Shutting down an operations CVM instance

Prerequisites

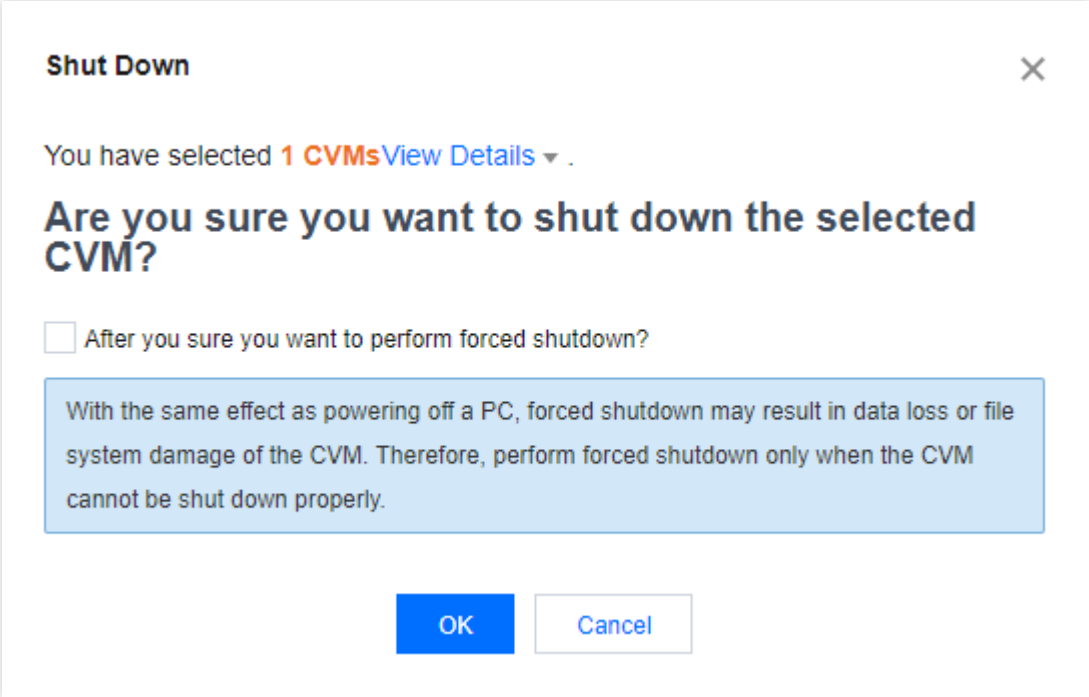
The target CVM instance is started up.

Context

A CVM instance in the shutdown state will not receive alarms. Only for a shutdown CVM instance, you can reset its password, create a custom image, adjust its configuration, or perform cold migration on it.

Directions

1. On the **Operations Console Resources** page, select a target CVM instance and click **Shut Down** or choose **More** > **Shut Down** in the **Action** column of the target CVM instance. The **Shut Down** dialog box pops up.



2. Specify whether to perform forced shutdown and click **OK**.

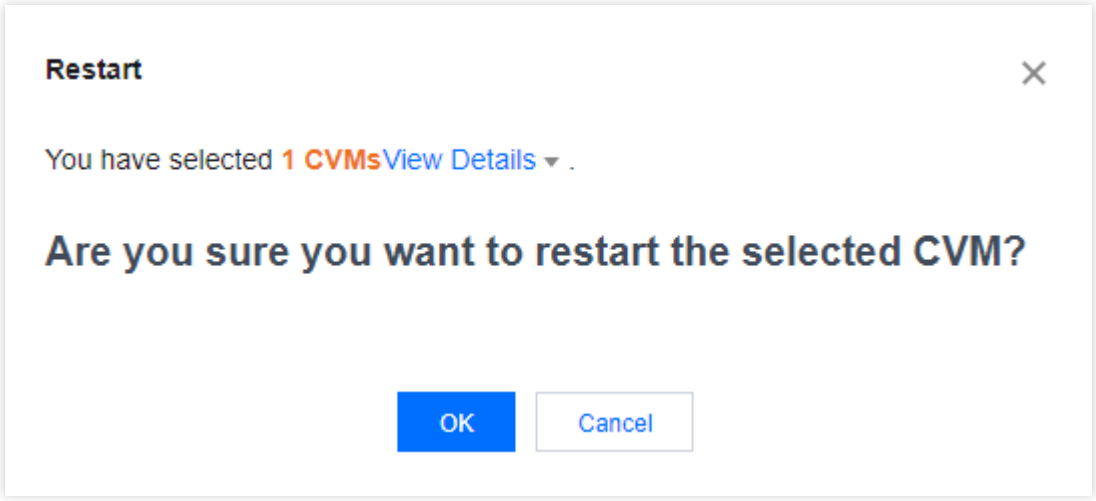
2.7 Restarting an operations CVM instance

Prerequisites

The target CVM instance is started up.

Directions

1. On the **Operations Console Resources** page, select a target CVM instance and click **Restart** or click **Restart** in the **Action** column of the target CVM instance. The **Restart** dialog box pops up.

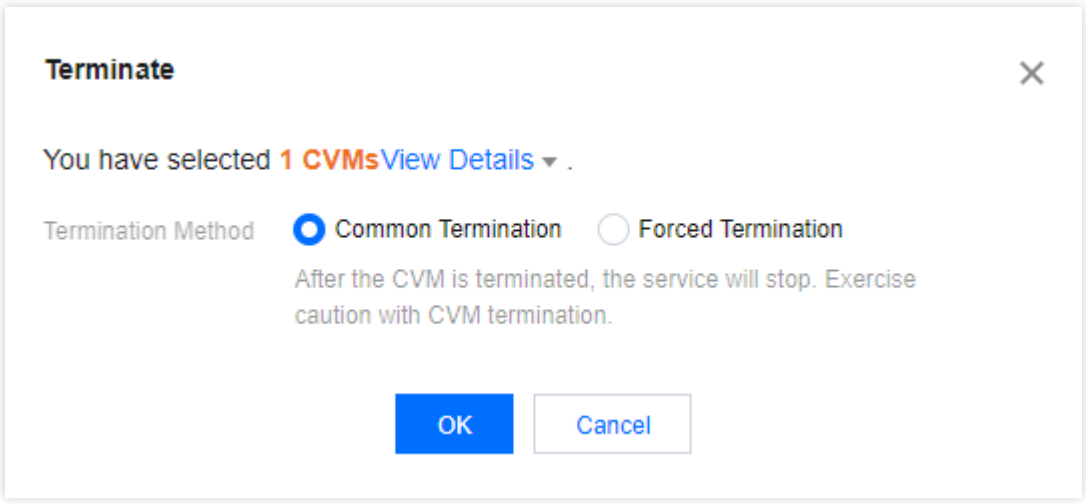


2. Click **OK**.

2.8 Terminating an operations CVM instance

> Note: The forced termination option can be used only if it is confirmed that the host is faulty and normal termination failed. In this mode, the host can be removed directly for termination.

1. On the **Operations Console Resources** page, select a target CVM instance and click **Terminate** or choose **More** > **Terminate** in the **Action** column of the target CVM instance. The **Terminate** dialog box pops up.



2. Select the termination mode and click **OK**.

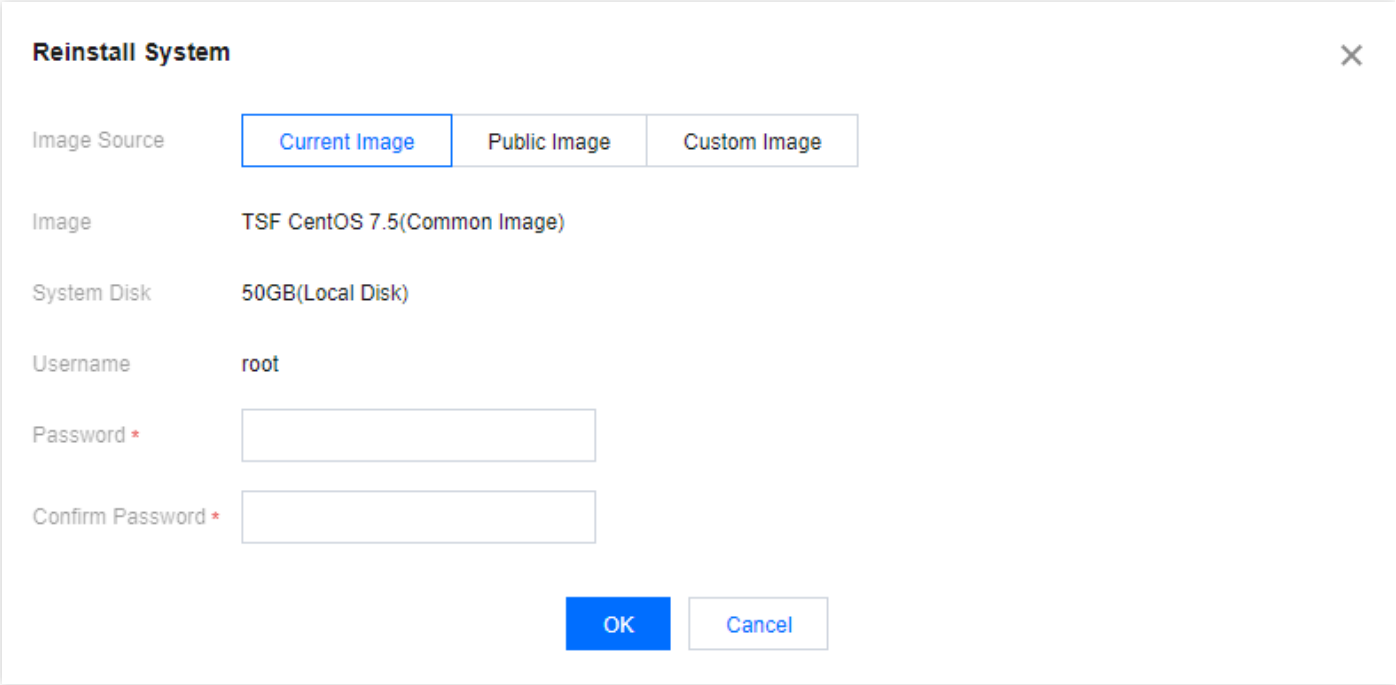
2.9 Reinstalling the system

Context

The system can be reinstalled based on the current instance, a public image, or a custom image. The rules of the password for system reinstallation are the same as those for CVM creation. Data disks will be retained but not terminated.

Directions

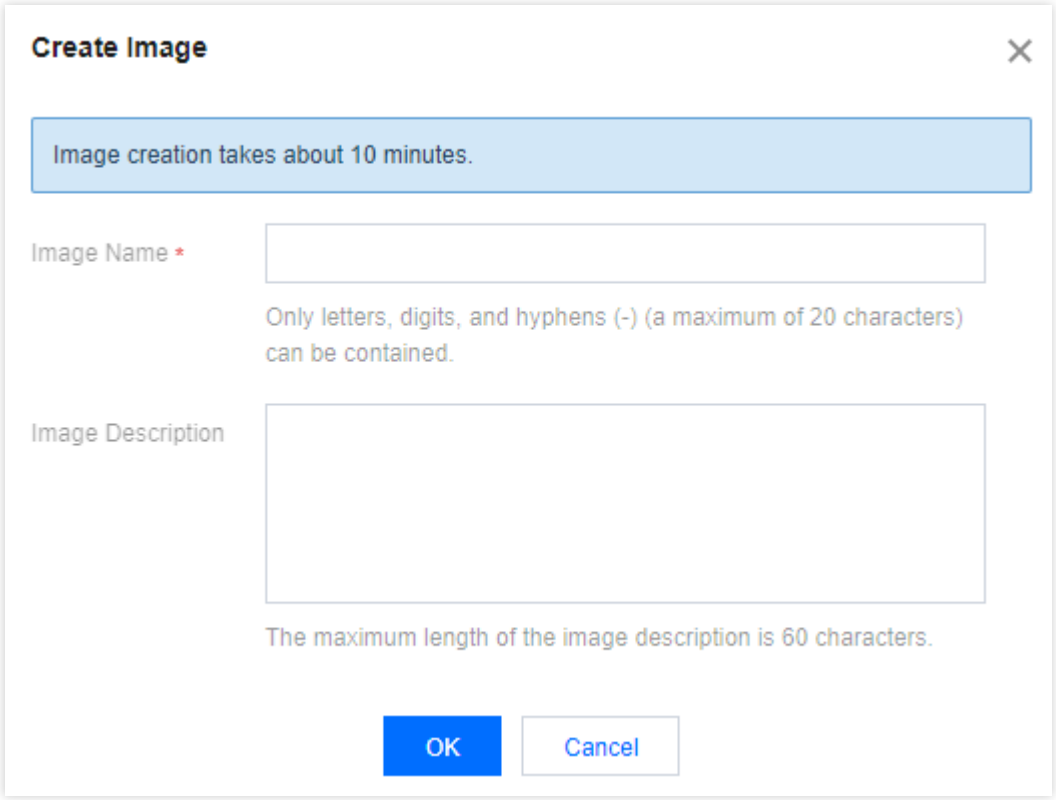
1. On the **Operations Console Resources** page, locate a shutdown CVM instance and choose **More** > **Reinstall System** in the **Action** column. The **Reinstall System** dialog box pops up.



2. Set parameters as needed and click **OK**.

2.10 Creating a custom image

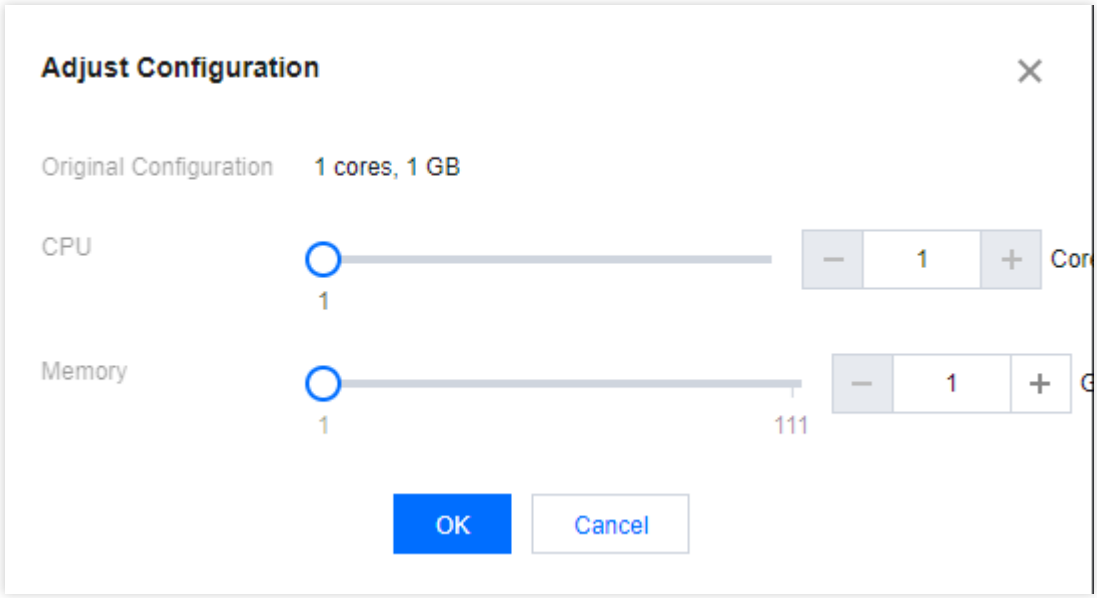
1. On the **Operations Console Resources** page, locate a shutdown CVM instance and choose **More** > **Create Custom Image** in the **Action** column. The **Create Custom Image** dialog box pops up.



2. Set parameters as needed and click **OK**.

2.11 Adjusting the configuration of an operations CVM instance

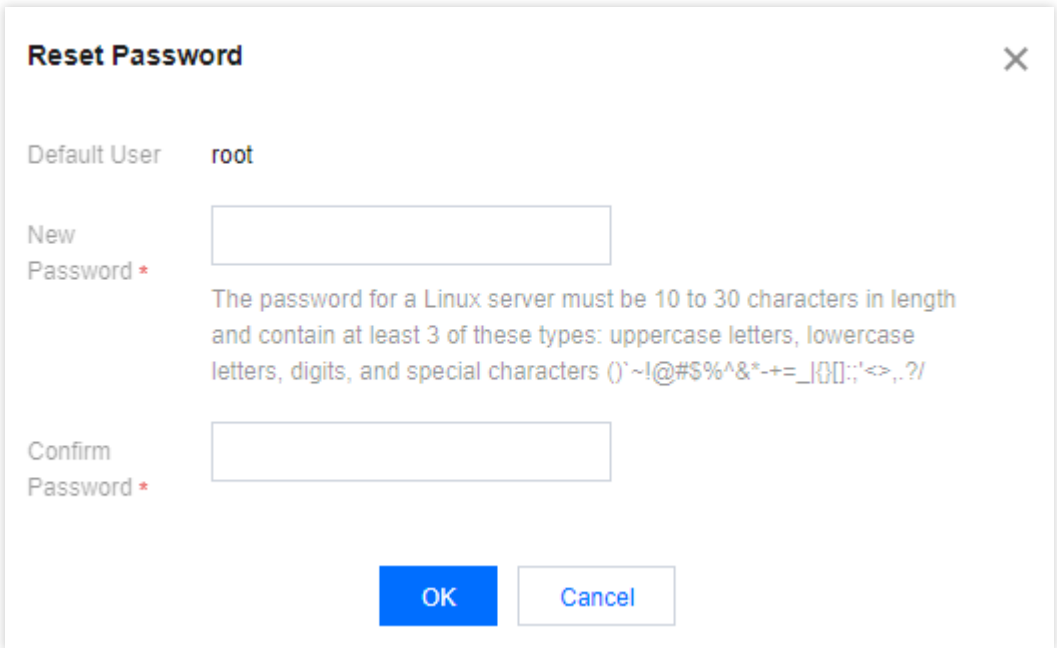
1. On the **Operations Console Resources** page, locate a shutdown CVM instance and choose **More** > **Adjust Configuration** in the **Action** column. The **Adjust Configuration** dialog box pops up.



2. Set parameters as needed and click **OK**.

2.12 Resetting the password of an operations CVM instance

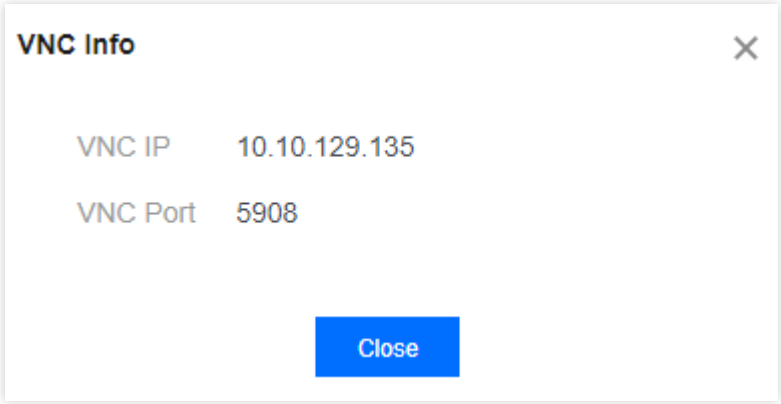
1. On the **Operations Console Resources** page, locate a shutdown CVM instance and choose **More** > **Reset Password** in the **Action** column. The **Reset Password** dialog box pops up.



2. Enter the new password and click **OK**.

2.13. Getting VNC Information

1. On the **Operations Console Resources** page, locate a running CVM instance and choose **More** > **Obtain VNC Information** in the **Action** column. The **VNC Information** dialog box pops up.



The system displays the VNC IP address and port information of the CVM instance.

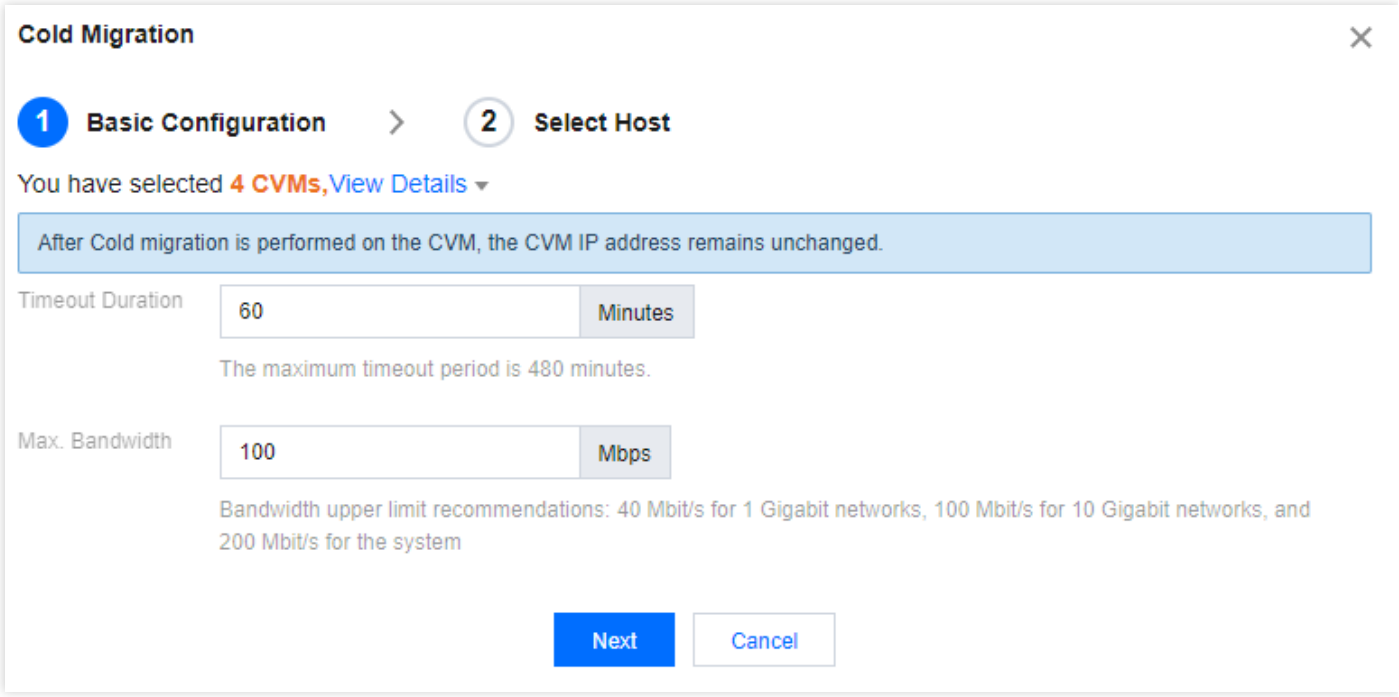
2.14 Performing cold migration on an operations CVM instance

Prerequisites

You can perform cold migration only on shutdown CVM instances.

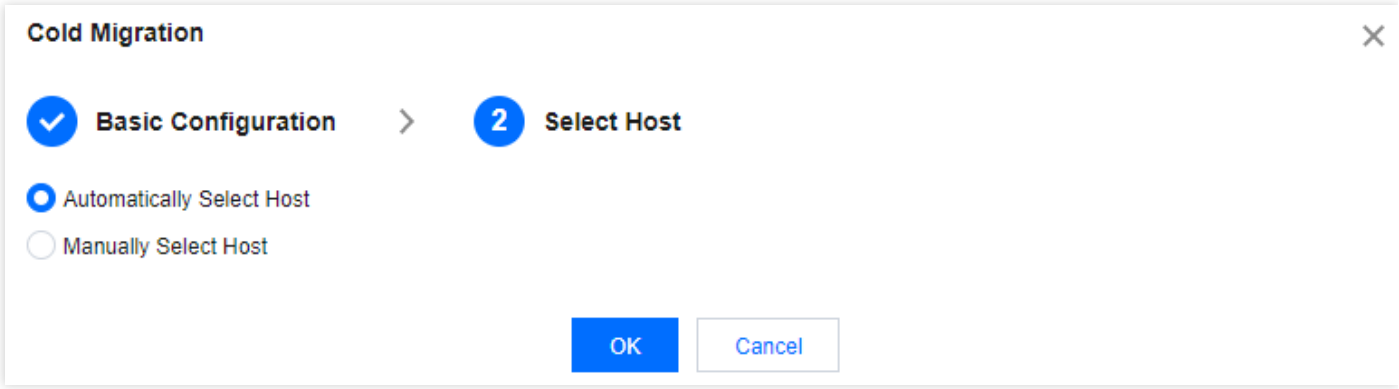
Directions

1. On the **Operations Console Resources** page, select a target CVM instance and click **Cold Migration** or choose **More** > **Cold Migration** in the **Action** column of the target CVM instance. The **Cold Migration** dialog box pops up.



2. In the pop-up dialog box, set the **Timeout Duration** and **Bandwidth Cap**, and click **Next**.

3. Set the host selection mode and click **OK**.



There are 2 host selection methods:

- Automatically Select Host: the system automatically selects an eligible host.
- Manually Select Host: manually specify a host.

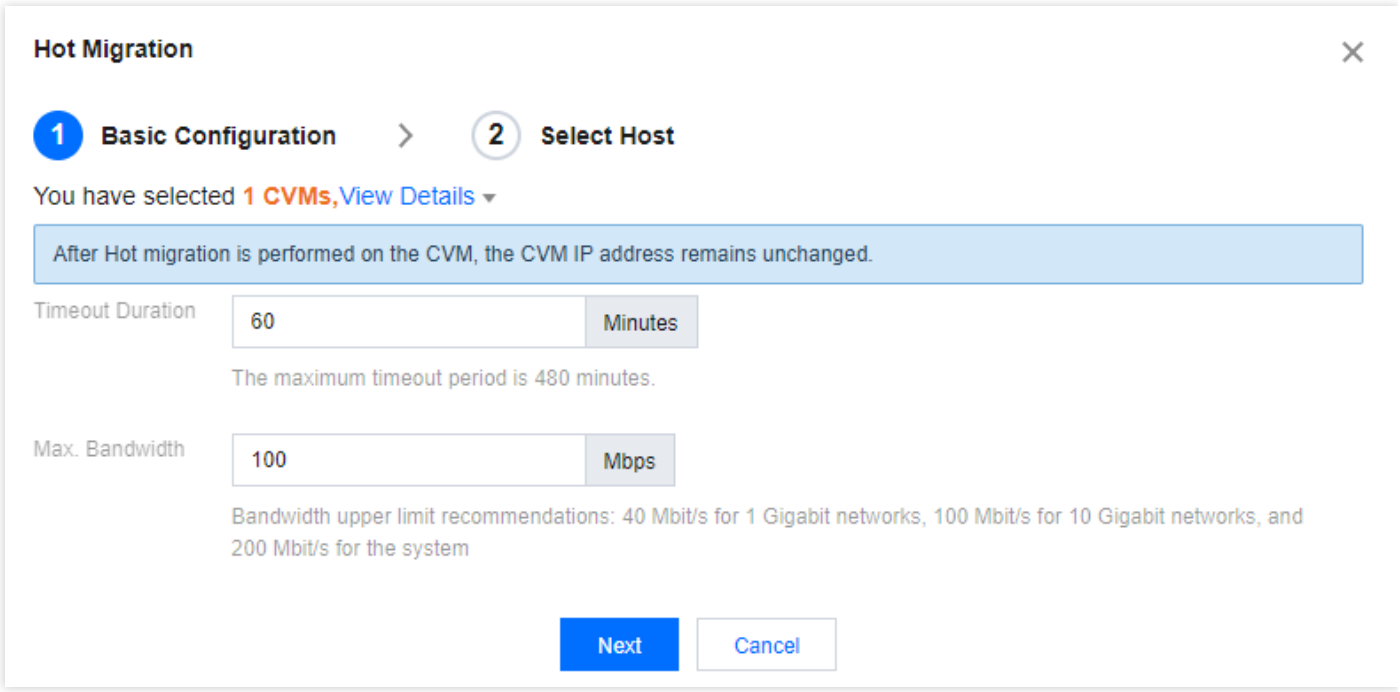
2.15 Performing hot migration on an operations CVM instance

Prerequisites

You can perform hot migration only on running CVM instances.

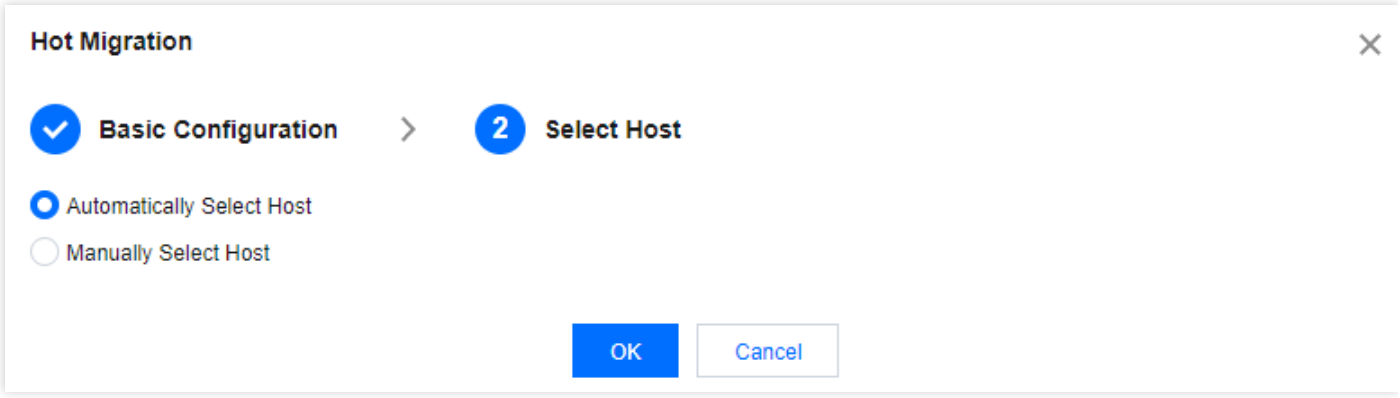
Directions

1. On the **Operations Console Resources** page, choose **More** > **Hot Migration** in the **Action** column of the target CVM instance. The **Hot Migration** dialog box pops up.



2. In the pop-up dialog box, set the **Timeout Duration** and **Bandwidth Cap**, and click **Next**.

3. Set the host selection mode and click **OK**.



There are 2 host selection methods:

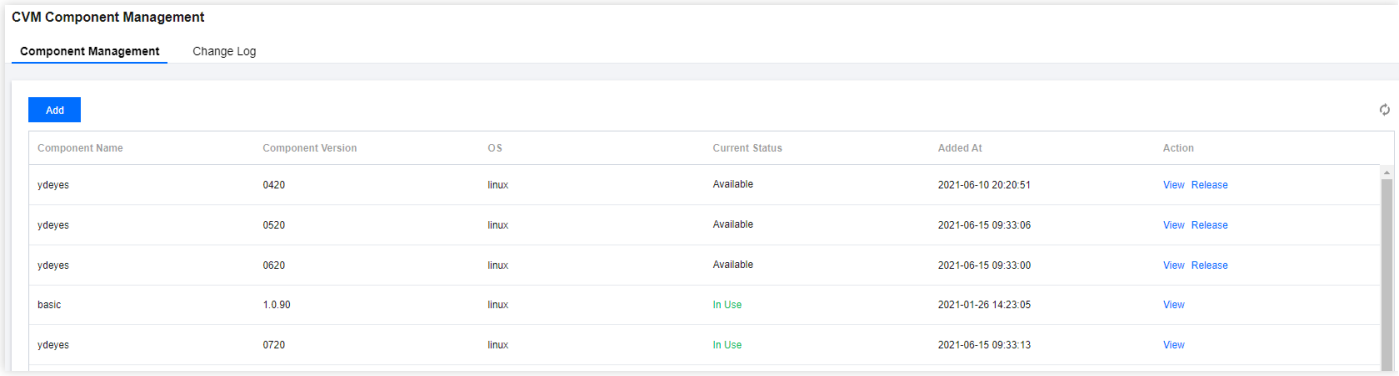
- Automatically Select Host: the system automatically selects an eligible host.
- Manually Select Host: manually specify a host.

3. CVM Component Management

3.1 Viewing the list of cvm components

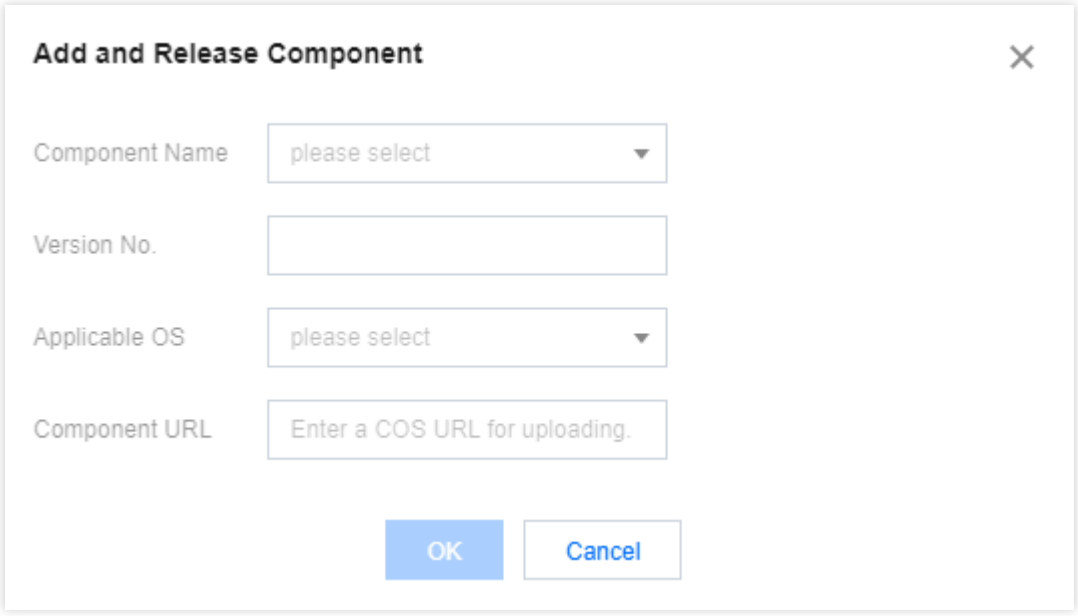
1. Log in to the CVM console.
2. In the left sidebar, choose **CVM Management** > **CVM Component Management**. The **CVM Component Management** page appears.

   The **Component Management** tab page displays component information such as the **Component Name**, **Component Version**, **OS**, **Current Status**, **Added At** and **Action**.



3.2 Adding an cvm component

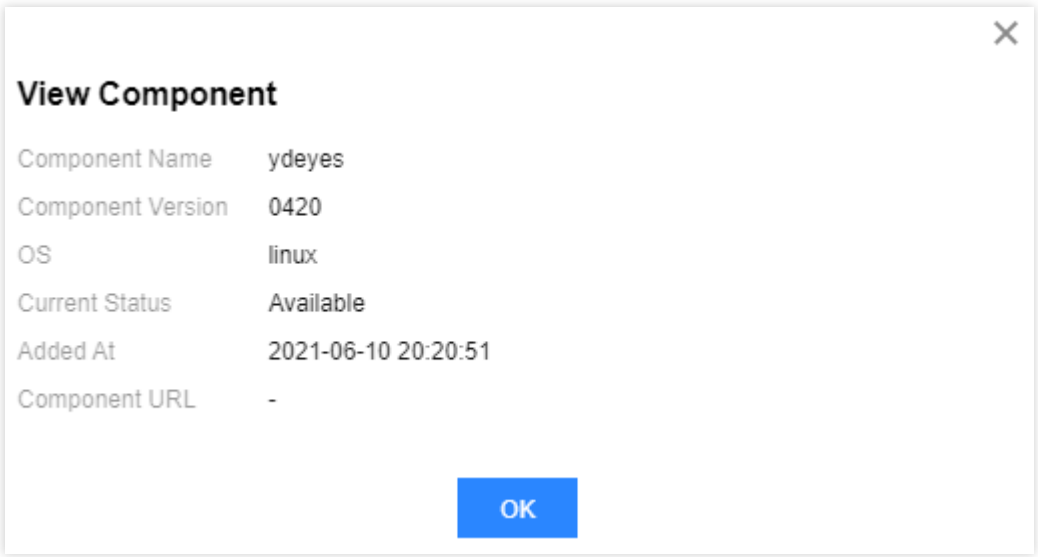
1. On the **CVM Component Management** page, click **Component Management**, and click **Add**. The **Add and Release Component** dialog box pops up.



2. Set parameters as needed and click **OK**.

3.3 Viewing an cvm component

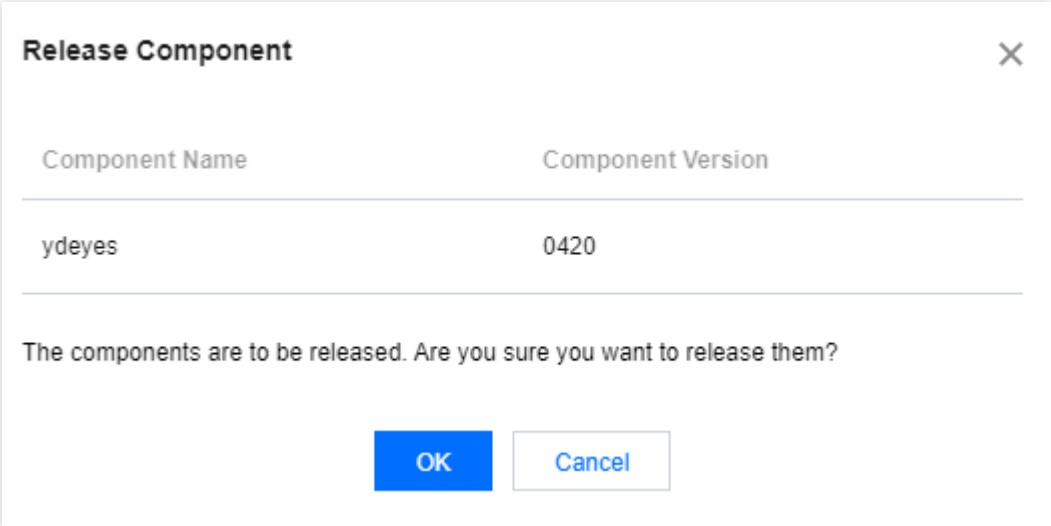
1. On the **CVM Component Management** page, click **View** in the **Action** column of a target component. The **View Component** dialog box pops up. The system displays the component information, including the component name, component version, OS, status, time when the component was added, and component URL.



2. Click **OK**.

3.4 Releasing an cvm

1. On the **CVM Component Management** page, click **Release** in the **Action** column of a target component. The **Release Component** dialog box pops up.



2. Click **OK**.

I Host Management

1. Host List

1.1 Viewing the host list

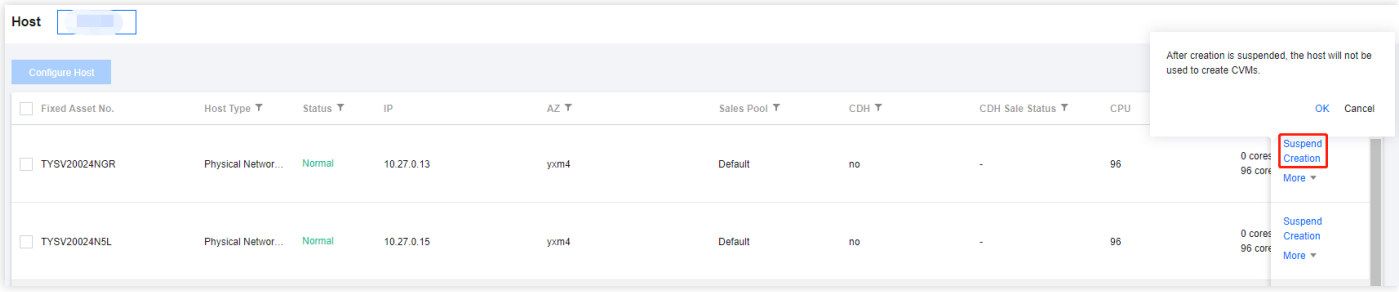
1. Log in to the CVM console.
2. In the left sidebar, choose **Host Management** > **Host List**.
   - You can filter hosts by fields including region, host type, status (such as normal, faulty, or creation suspended), and availability zone.
   - In the search box in the upper-right corner of the page, enter the fixed asset number or IP address of the host and click  .

     The system lists all eligible hosts.
   - Click  to export the host list.

1.2 Suspending creation on a host

> Note: Do not suspend creation arbitrarily as you may forget why the creation is suspended over time. If a host fails, you should forcibly terminate the CVM instances on it and deactivate the host in time.

1. Log in to the CVM console.
2. In the left sidebar, choose **Host Management** > **Host List**.
3. Click **Suspend Creation** in the **Action** column of the target host.



4. In the pop-up dialog box, click **OK** to suspend the creation on the host.

1.3 Resuming creation on a host

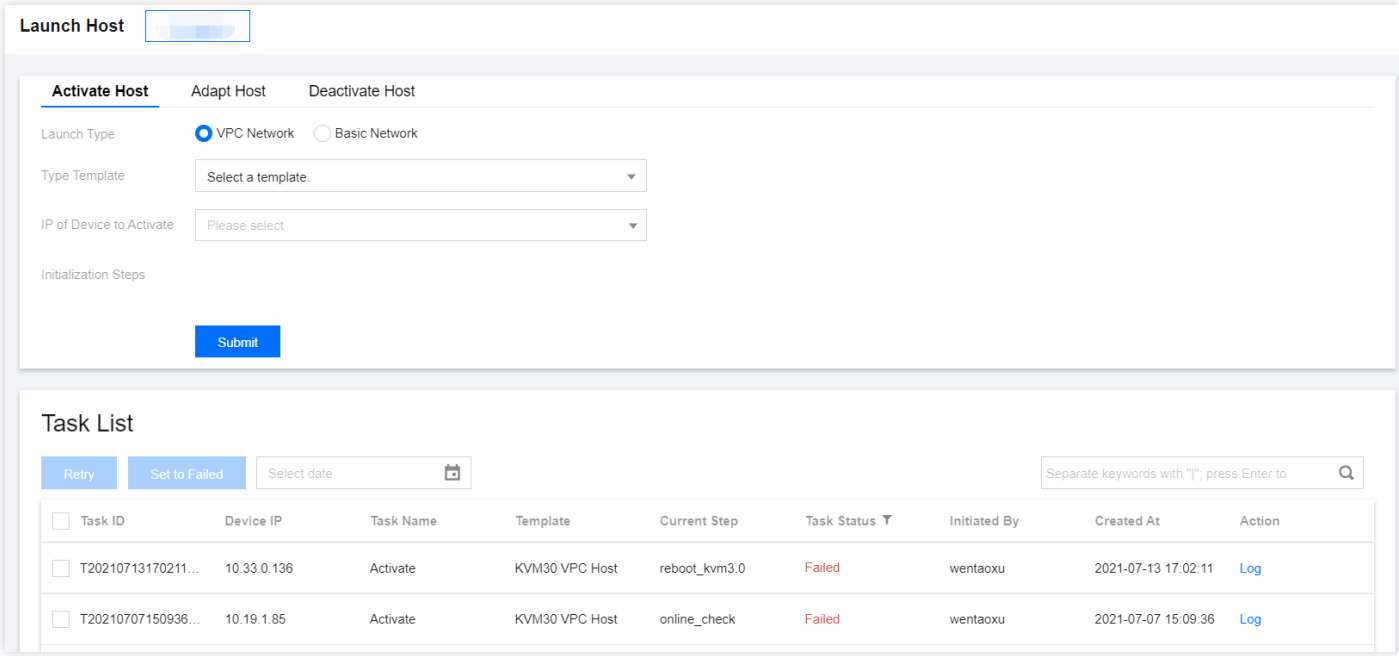
1. Log in to the CVM console.
2. In the left sidebar, choose **Host Management** > **Host List**.
3. Click **Resume Creation** in the **Action** column of the target host.
4. In the pop-up dialog box, click **OK** to resume the creation on the host.

2. Host Launching

2.1 Activating a host

1. Log in to the CVM console.
2. In the left sidebar, choose **Host Management** > **Launch Host**.

   The **Activate Host** page appears by default.



3. Select a region and a type template for the host device to activate, enter the device IP address, and click **Submit**.

   The initialization procedure varies according to the type template. Choose the type template with caution.

Templates	Use Cases
KVM 3.0_VPC master	CPU V5 machine
KVM 3.0_non-VPC master	CPU V5 machine
KVM 3.0_VPC gateway master dedicated	CPU V5 machine
KVM 3.0_4-port, dual-bonding, non-VPC master	CPU V5 machine
Non-VPC master	CPU V4 machine
VPC master	CPU V4 machine
KVM 3.0_25G_GPU_VPC master	25G GPU machine
KVM30 VPC Host for ARM(HuaweiTaishanV2)	Machines made in China
KVM30 Underlay Host for ARM(HuaweiTaishanV2)	Machines made in China
KVM 3.0_big data and non-VPC host with a directly accessible disk	Y0-BI01-10G
KVM 3.0_big data and VPC host with a directly accessible disk	Y0-BI01-10G

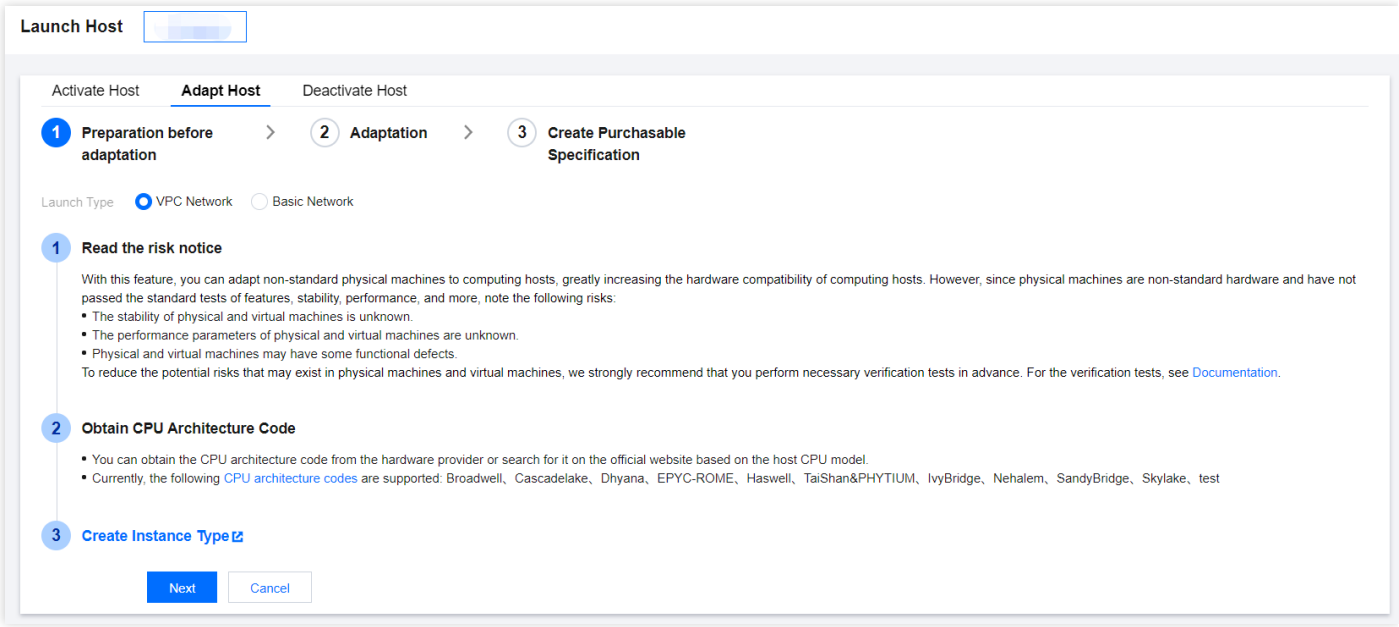
4. The task list at the lower part of the page shows the task details.

2.2 Adapting hosts

This feature is usually used when you add host types and configure an instance type such as S5 for creation. You can follow this procedure to import non-standard hosts.

1. In the left sidebar, choose **Host Management** > **Launch Host**. The **Launch Host** page appears.

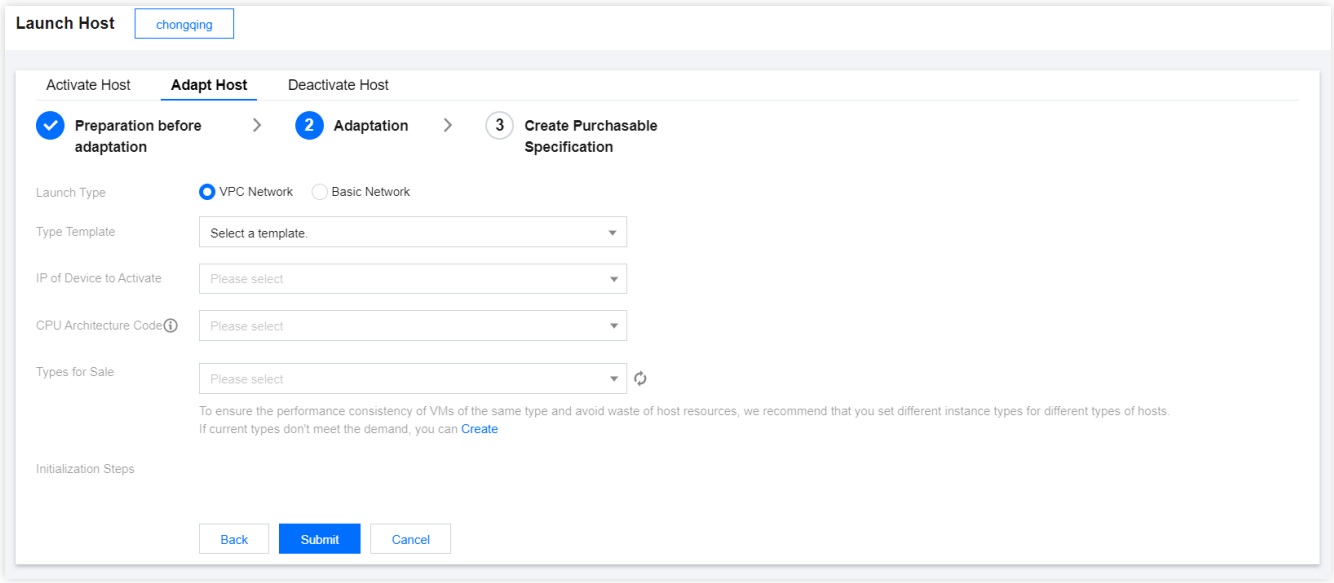
2. Click **Adapt Host**. The host adaption preparation page appears.



3. Set **Launch Type** to **VPC** or **Classic Network**. If you select **Classic Network**, click **Next** to go to step 8.

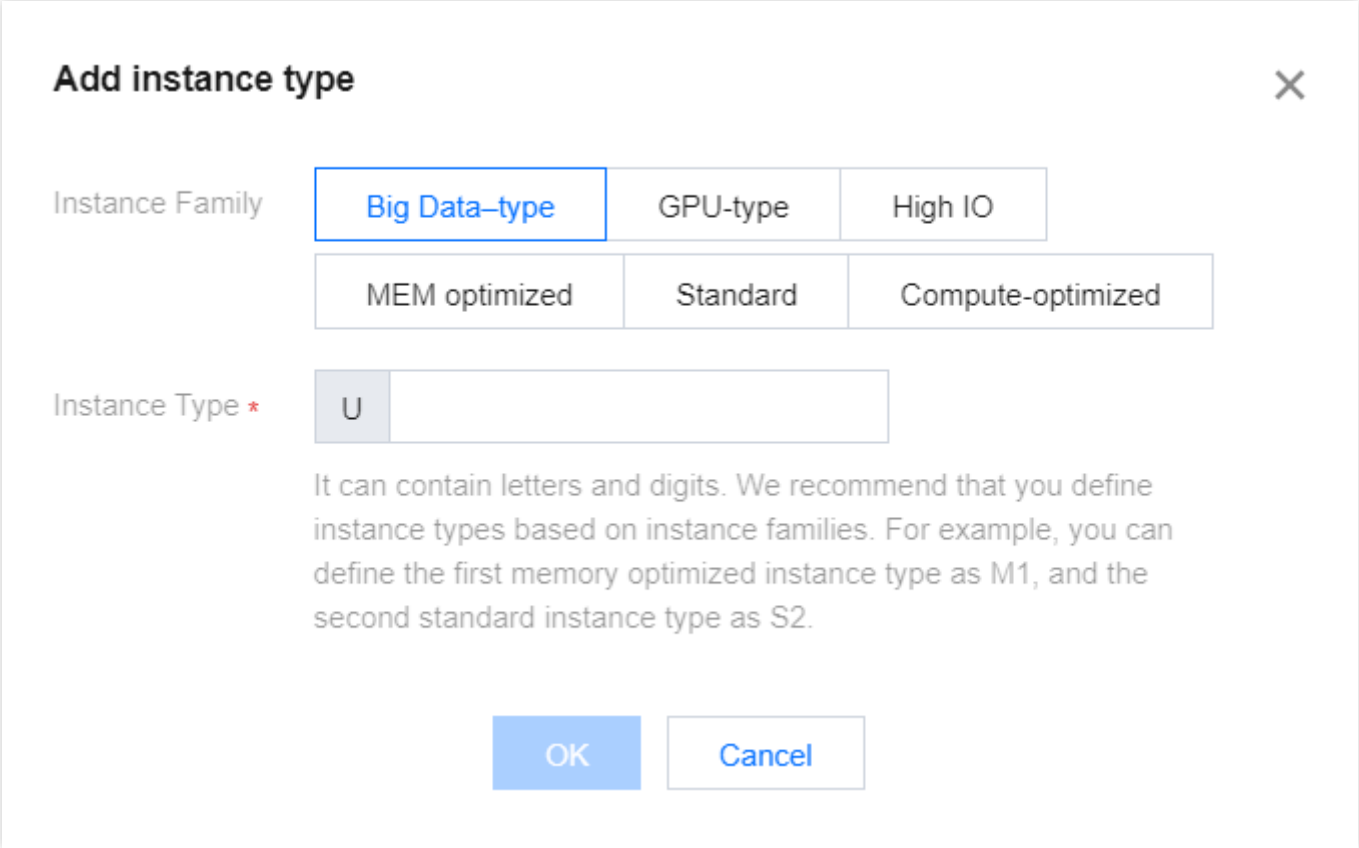
> **Note:** Currently supported CPU architecture codes are: Broadwell, Cascade Lake, Dhyana, Haswell, TaiShan & Phytium, Ivy Bridge, Nehalem, Sandy Bridge, Skylake, and test. For CPU architecture that is

> not in this scope, the launch may fail. For details, see the launch failure causes.



4. (Optional) To add an instance type for sale, click **Create**. You will be redirected to the **Add instance type** page. If an instance type is available for sale, click **Next** to go to step 8.

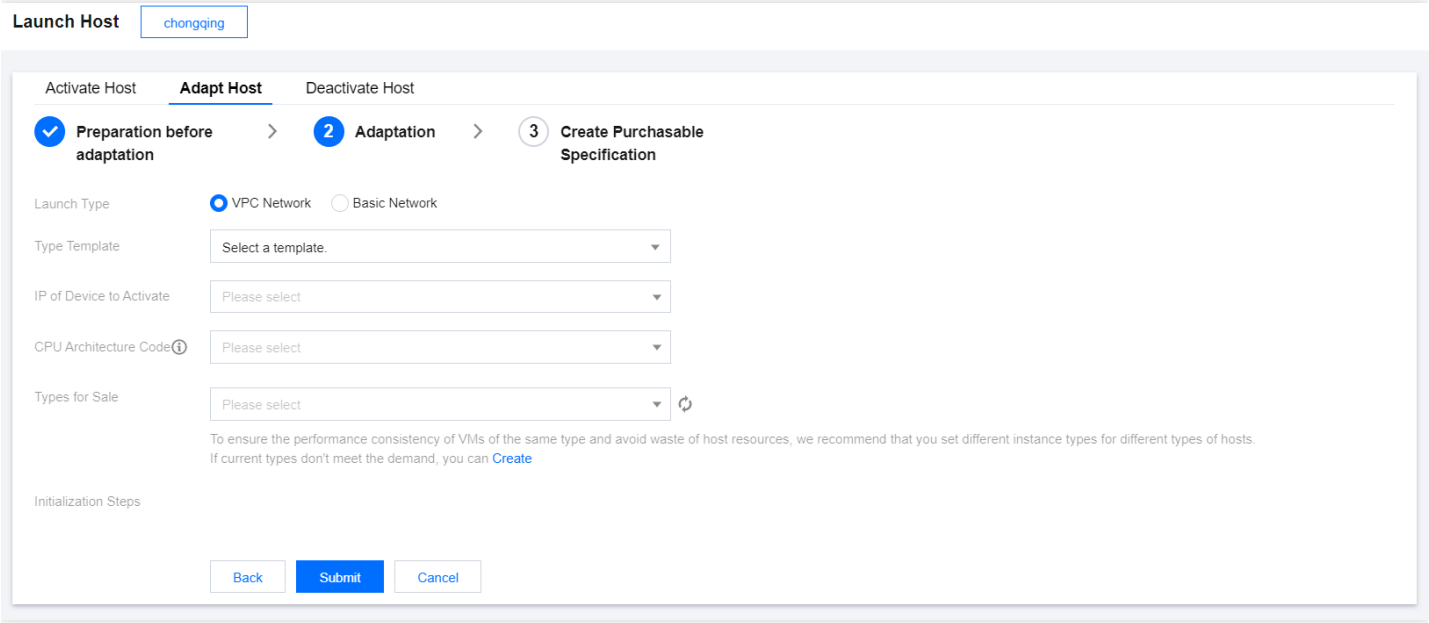
5. Select an **Instance Family** for the instance type to be added. Available types are big data, high I/O, standard, memory optimized, and GPU.



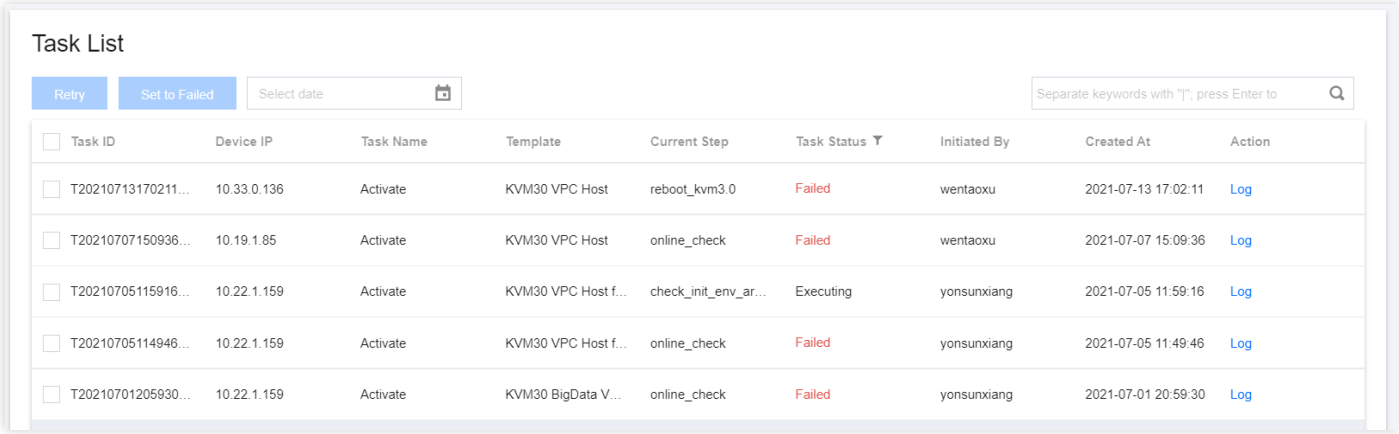
6. Set the **Instance Type**. The value can be up to 32 characters in length and contain letters and digits. We recommend defining instance types based on instance families. For example, you can define the first memory-optimized instance type as M1, and the second standard instance type as S2.

7. Click **OK**. The newly added instance type appears on the global specifications page.

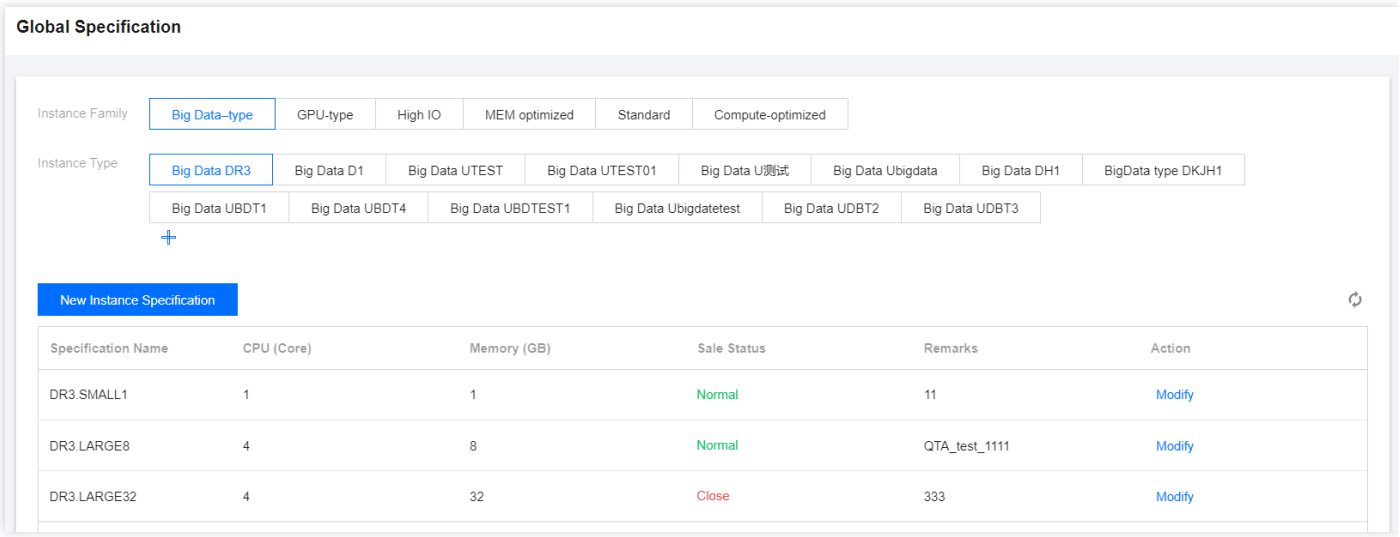
8. According to host launch requirements, select **Type Template**, **IP of Device to Activate**, **CPU Architecture Code**, and **Types for Sale** (multiple options can be selected).



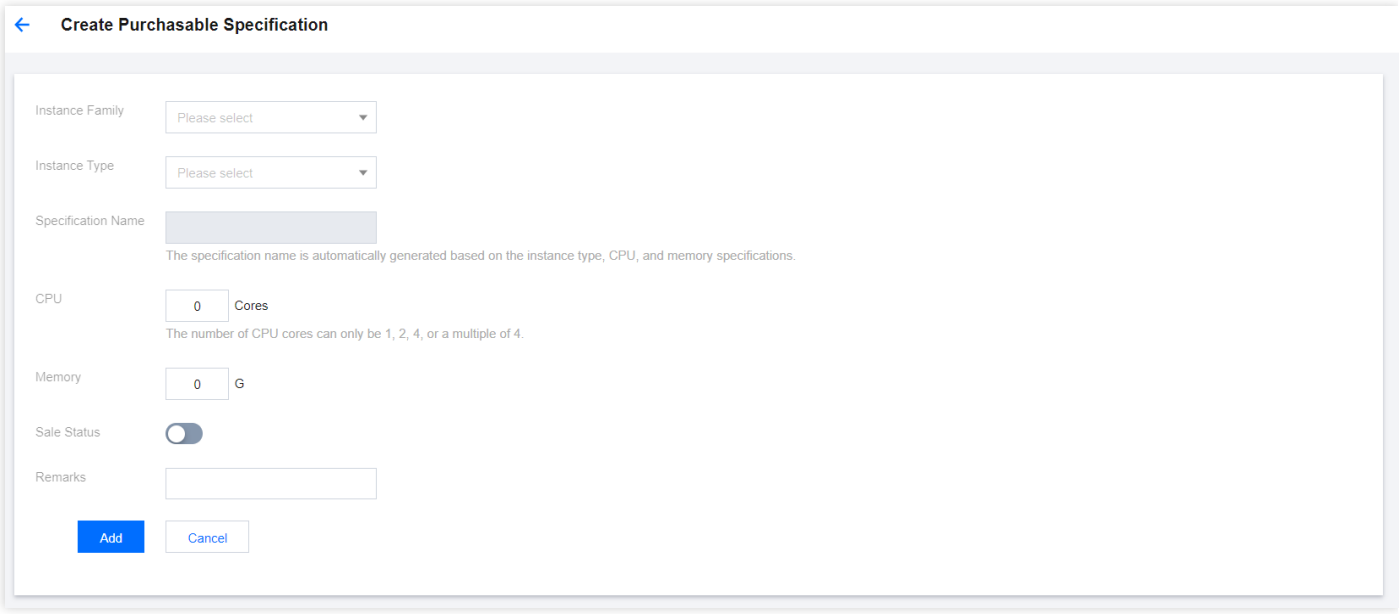
9. Click **Submit**. You can view the task status in the task list. If the task execution is normal, the task status is **Executing**. If the task status is **Failed**, click **Log** to query the specific failure cause or click **Retry** to perform the task again.



.0. (Optional) If the task status is **Successful**, you can click **Model Configuration** > **Global Specification** to access the global model page for module configuration. If you do not need to add a model, skip this step.



.1. (Optional) Select the **Instance Family** and **Instance Type** for which specifications are to be added, click **New Instance Specification**, set parameters, and click **Add**.



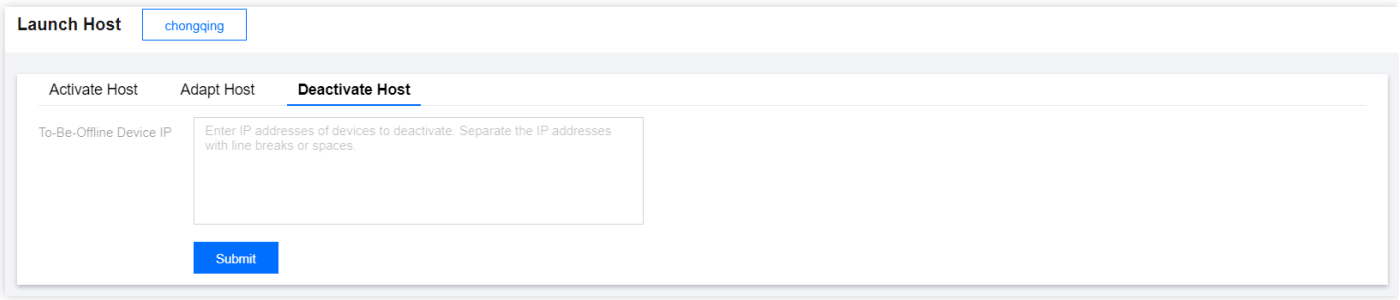
2.3 Deactivating a host

> **Note:** After a host device is deactivated, it cannot be re-activated. If you need to re-activate it, install the DCOS.

1. Log in to the CVM console.

2. In the left sidebar, choose **Host Management** > **Launch Host**.

3. Click the **Deactivate Host** tab. The device deactivation page appears.



4. Select a region for the host device, enter the device IP address, and click **Submit**.

   The task list at the lower part of the page shows the task details.

2.4 Viewing the host task list

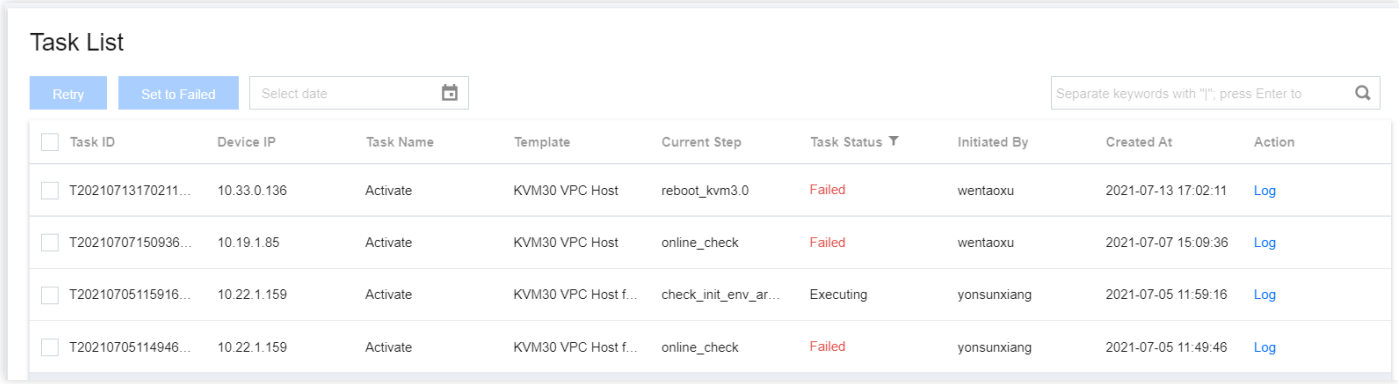
1. Log in to the CVM console.

2. In the left sidebar, choose **Host Management** > **Launch Host**.

3. The task list at the lower part of the page shows all submitted device activation or deactivation tasks.

   Displayed task information includes the **Task ID**, **Device IP**, **Task Name** (Activate or Deactivate), **Template**, **Current Step**, **Task Status**, **Initiated By**, **Create At**, and **Action**.

   You can filter the device task list by fields including region, task status (such as successful, failed, created, or executing), and time period.



4. In the upper-right corner of the **Task List** page, enter the task ID, device IP, or task submitter, and click  .

   The system lists all eligible device tasks.

2.5 Host task operations

- On the host task list page, select a failed task and click **Retry**.

  The system executes the task again.

- On the host task list page, select the target task and click **Set to Failed**.

  The system sets the task status back to **Failed**.

- Click **Log** in the **Action** column of a task to view the log information of the task.

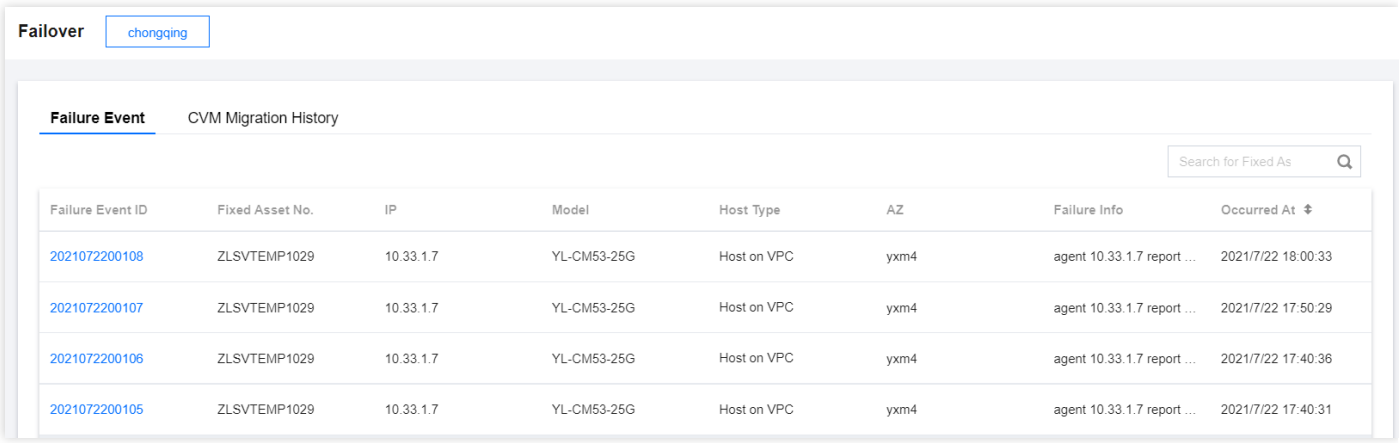
3. Failover

3.1 Viewing failure events

1. Logging in to the console

2. In the left sidebar, choose **Host Management** > **Failover**. The **Failover** page appears.

3. On the **Failure Event** tab, select a region. The system displays all the failure events of the region.



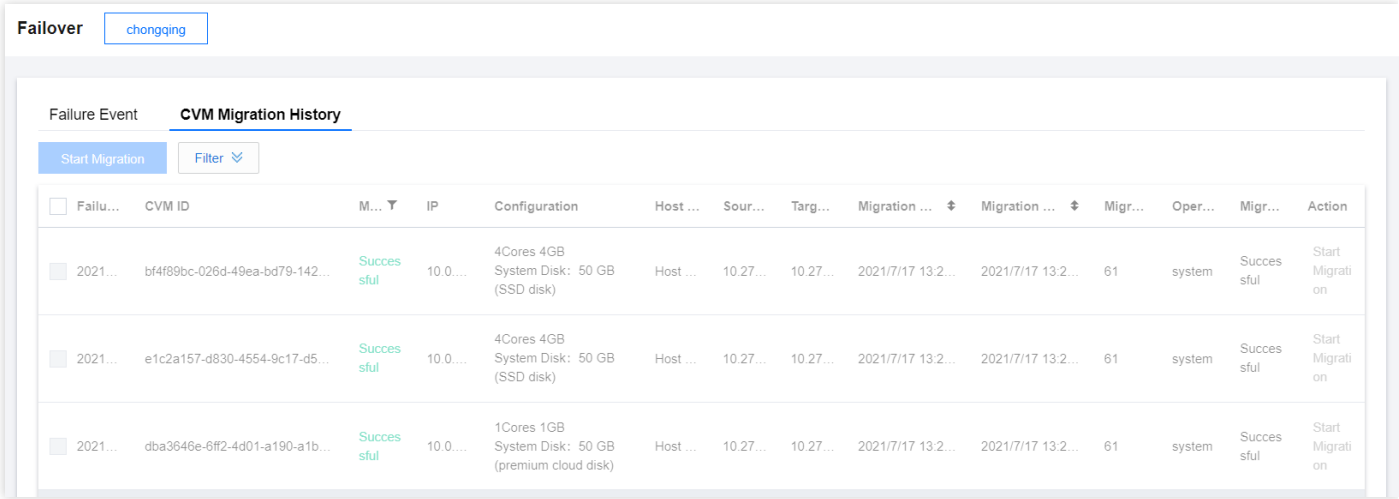
4. In the search box in the upper-right corner of the page, enter a fixed asset number or IP address and click .

   The system lists all eligible failure events.

5. Click the link of a **Failure Event ID**. The system displays the failover record corresponding to the failure event ID.

3.2 Viewing CVM failover records

1. On the **Failover** page, click the **CVM Migration History** tab, and select a region. The system displays all the migration records of the region.



- Click **Filter**. The system displays filter conditions.

  Enter filter conditions such as the failure event ID, CVM instance ID, IP address, and source host IP address. Click **Query**.

  The system displays all eligible migration records.

- Click the **Migration Status**, **Migration Start Time**, or **Migration End Time** to filter or sort the migration records.

- Click the link of a CVM instance ID to view its details.

  You can view the basic information and monitoring information of the CVM instance.

4. Sales Pool

4.1 Adding a sales pool

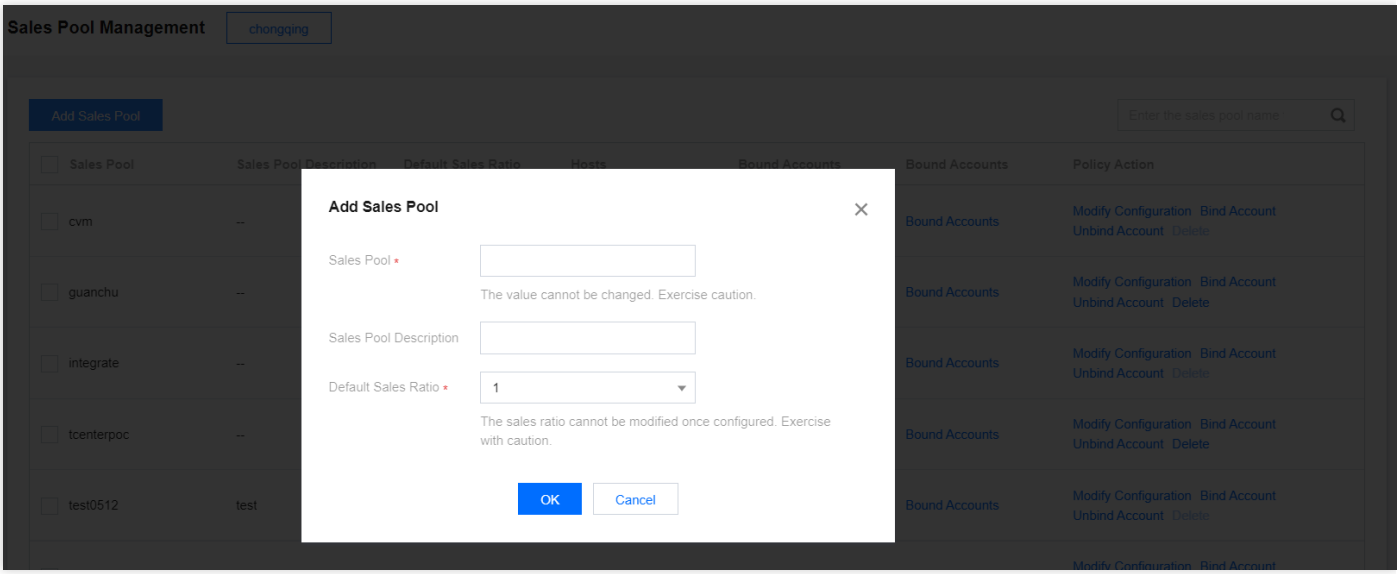
1. In the left sidebar, choose **Host Management** > **Sale Pool**. The sales pool list appears.

2. Click **Add Sales Pool**. The **Add Sales Pool** dialog box pops up.

3. Set parameters and click **OK**.

   The parameters are described as follows:

   - Sales Pool: name of the sales pool. It cannot be modified once configured.
   - Sales Pool Description: detailed information of the sales pool.
   - Default Sales Ratio: default sales ratio of the sales pool, that is, the ratio of the number of salable cores to the actual number of cores. For example, if you set the default sales ratio of a host with 48 cores to 2, 96 cores can be sold.



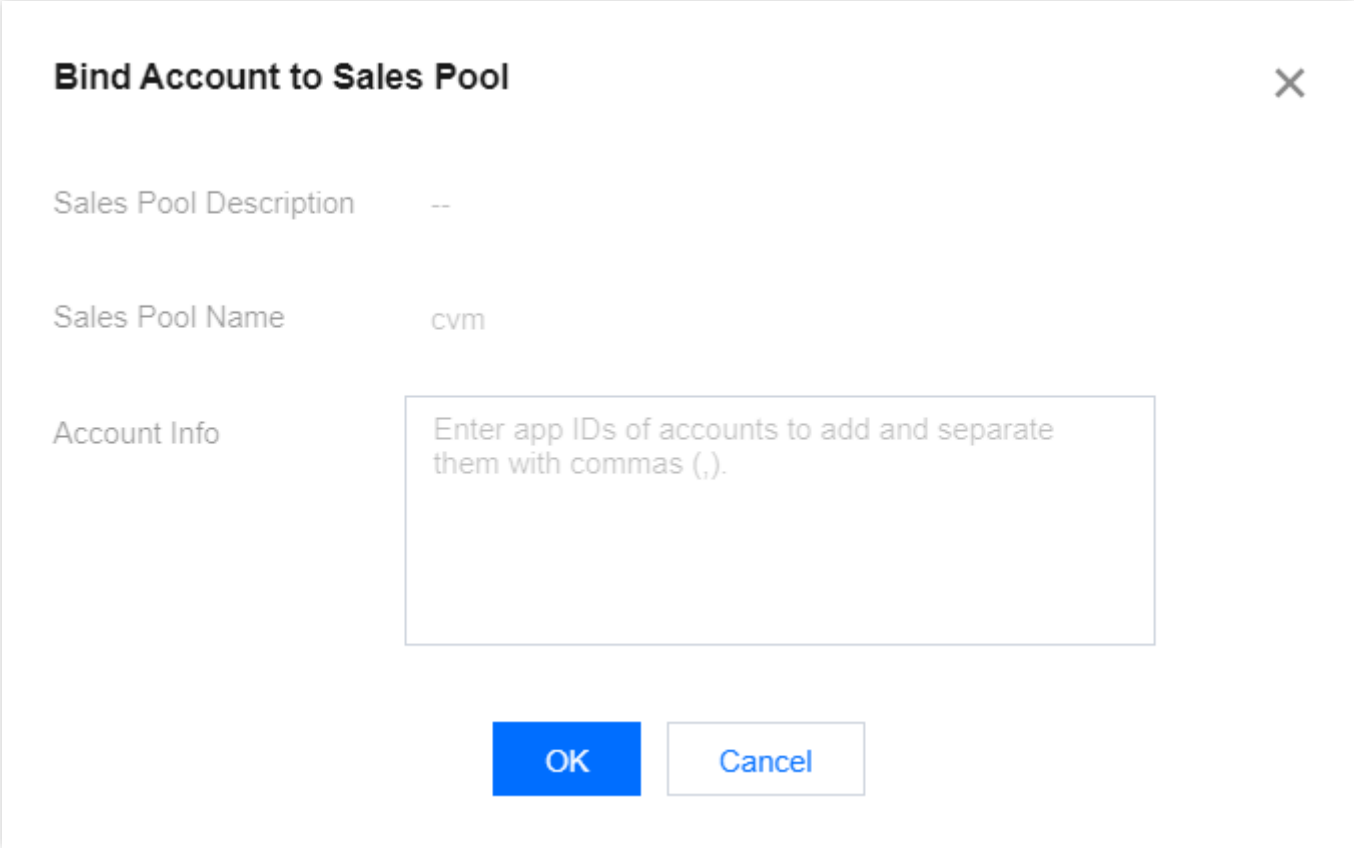
4.2 Binding accounts to a sales pool

1. In the left sidebar, choose **Host Management** > **Sale Pool**. The sales pool list appears.

2. Locate the target sales pool and click **Bind Account**. The **Bind Account to Sales Pool** dialog box pops up.

3. Enter account app IDs to bind and click **OK**.

> **Note:**
>
> - Separate multiple account app IDs with commas (,).
> - Account app IDs are required. If you enter account UINs, they will not take effect.



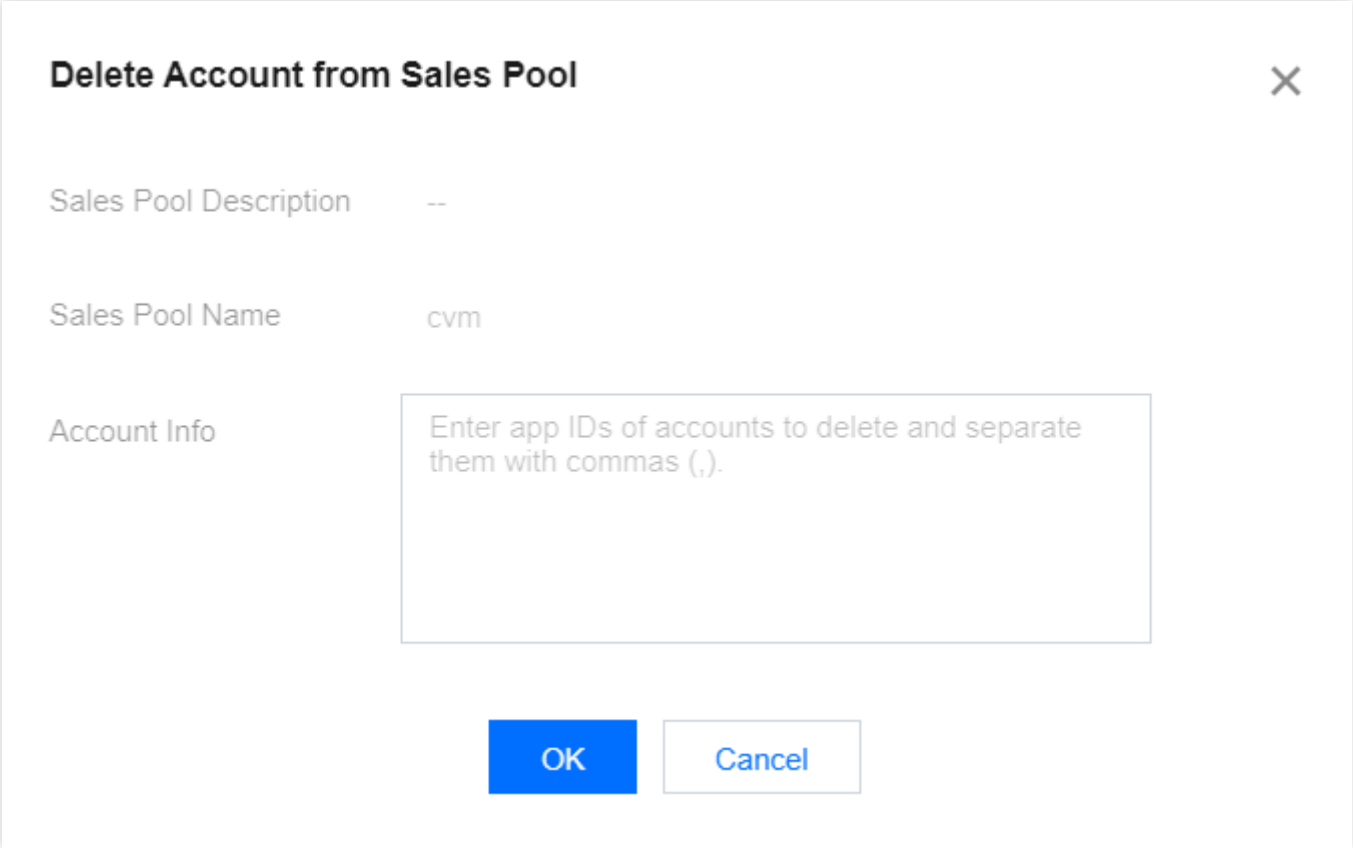
4.3 Unbinding accounts from a sales pool

1. In the left sidebar, choose **Host Management** > **Sale Pool**. The sales pool list appears.

2. Locate the target sales pool and click **Unbind Account**. The **Delete Account from Sales Pool** dialog box pops up.

3. Enter account app IDs to unbind and click **OK**.

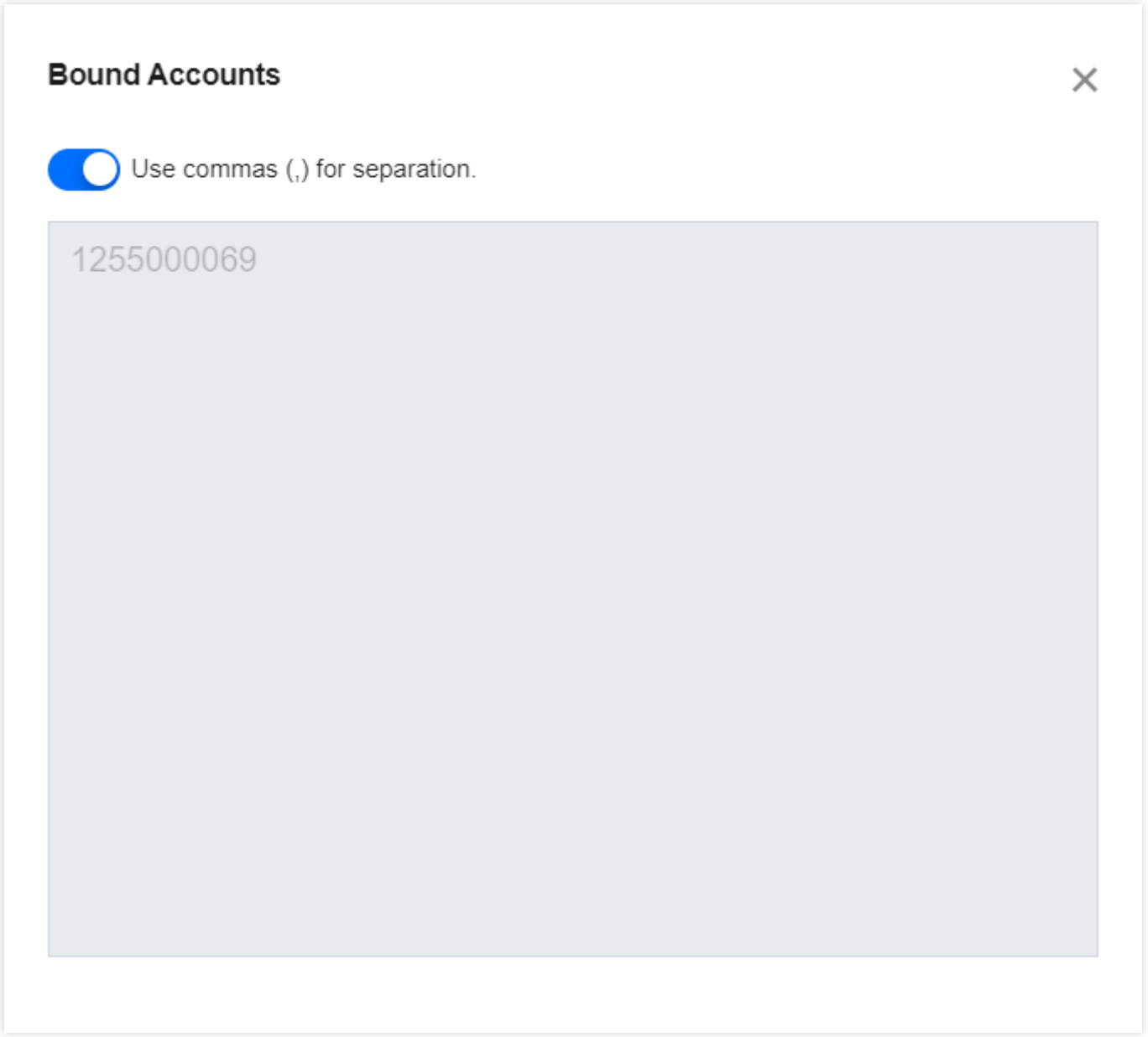
> **Note:**
>
> - Separate multiple account app IDs with commas (,).
> - Account app IDs are required. If you enter account UINs, they will not take effect.



4.4 Viewing bound accounts of a sales pool

1. In the left sidebar, choose **Host Management** > **Sale Pool**. The sales pool list appears.

2. Locate the target sales pool and click **Bound Accounts**. The **Bound Accounts** dialog box pops up.


Bound Accounts
Use commas (,) for separation.
1255000069

I Image Management

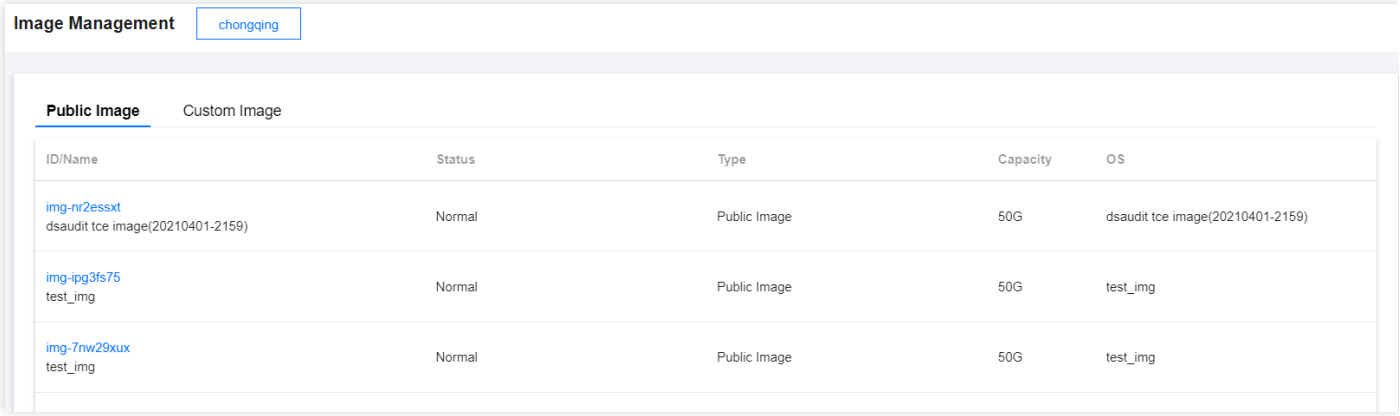
1. Image List

1.1 Viewing public image information

1. Log in to the CVM console.

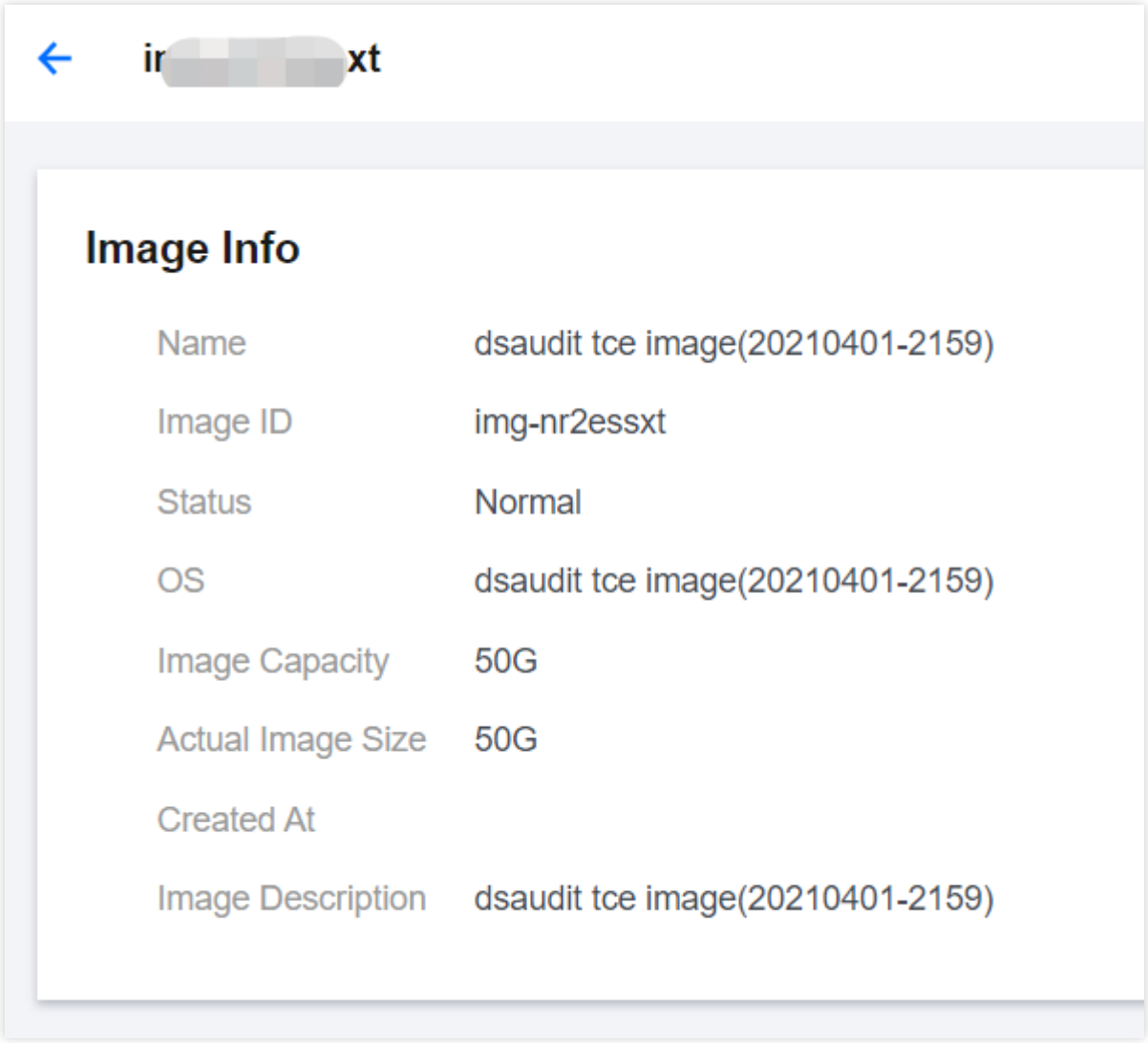
2. In the left sidebar, choose **Image Management** > **Image List**. The **Public Image** list appears by default.

   You can filter created public images by region.



3. On the **Public Image** tab page, click the ID link of a target image to view its details.

   You can view image information such as **Name**, **Image ID**, **Status**, **OS**, **Image Capacity**, **Actual Image Size**, **Created At**, and **Image Description**.



The parameters are described as follows:

Parameter	Description
Meaning	Image name entered during custom image creation.
Image ID	Image ID automatically generated by the system.
Status	Whether the image ID is available. If the status is normal, this image ID can be used to create CVM instances.
OS	Operating system identification.
Image Capacity	OS disk size of the image.
Actual Image Size	Actual size of the image file.

Parameter	Description
Image Description	Detailed image information entered during custom image creation.

1.2 Viewing custom image information

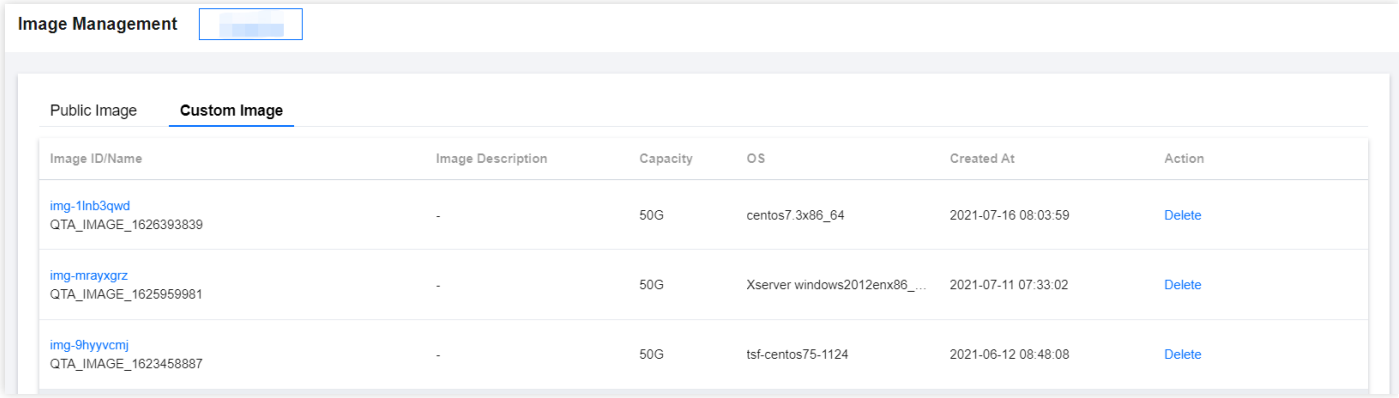
Context

This feature allows you to view the custom images related to only the operations resources but not tenant resources of CVM.

Directions

1. On the **Image Management** page, click the **Custom Image** tab. The system lists all custom images of the cloud platform.

   You can filter created custom images by region.



2. Click the ID link of a target image to view its details.

   You can view image information such as **Name**, **Image ID**, **Status**, **OS**, **Image Capacity**, **Actual Image Size**, **Creation Time**, and **Image Description**. For more information about the parameters, see Viewing public image information.

1.3. Deleting a Custom Image

1. On the **Image Management** page, click the **Custom Image** tab. The system lists all custom images.

2. Click **Delete** in the **Operation** column of the target custom image. A confirmation dialog box pops up.

3. Click **OK**.

2. Converting a Custom Image into a Public Image

2.1 Creating and converting an image

Context

The process of converting a custom image into a public image is as follows:

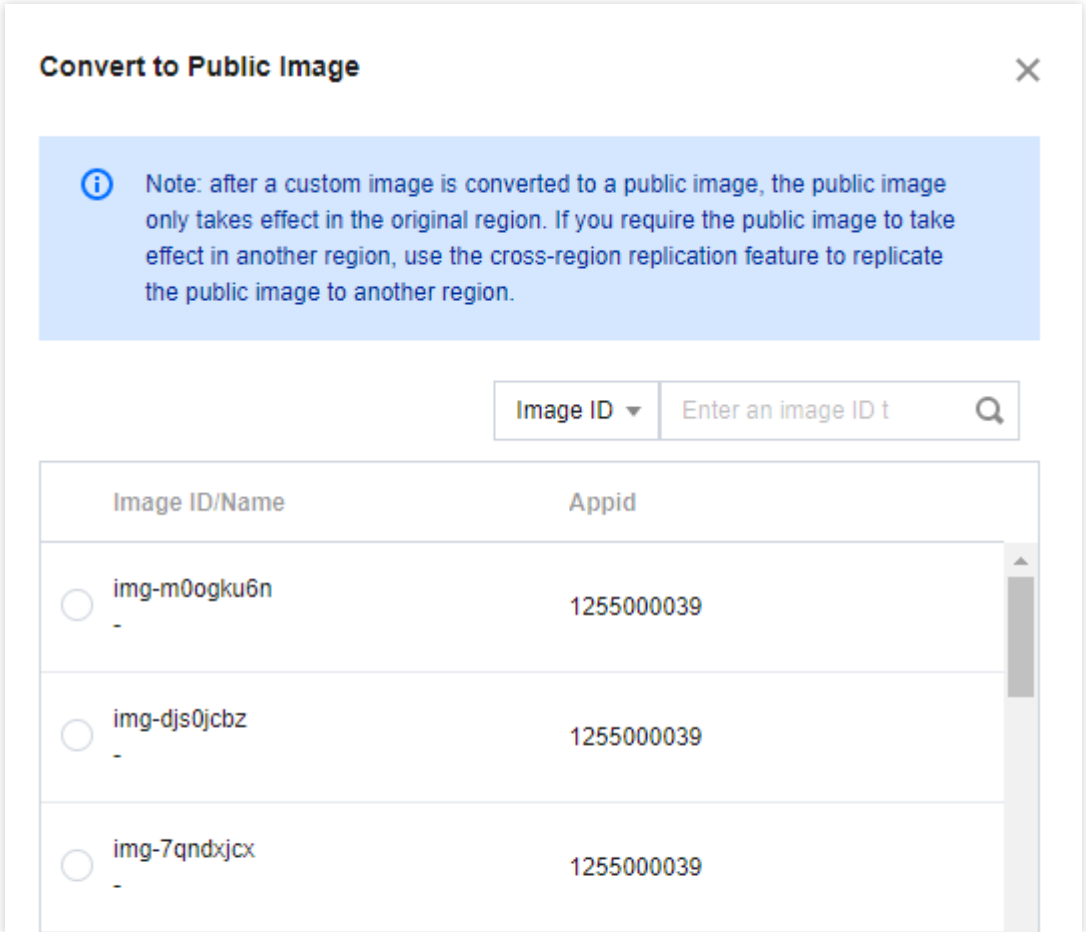
1. In the tenant console, register an account and use it to create a custom image.

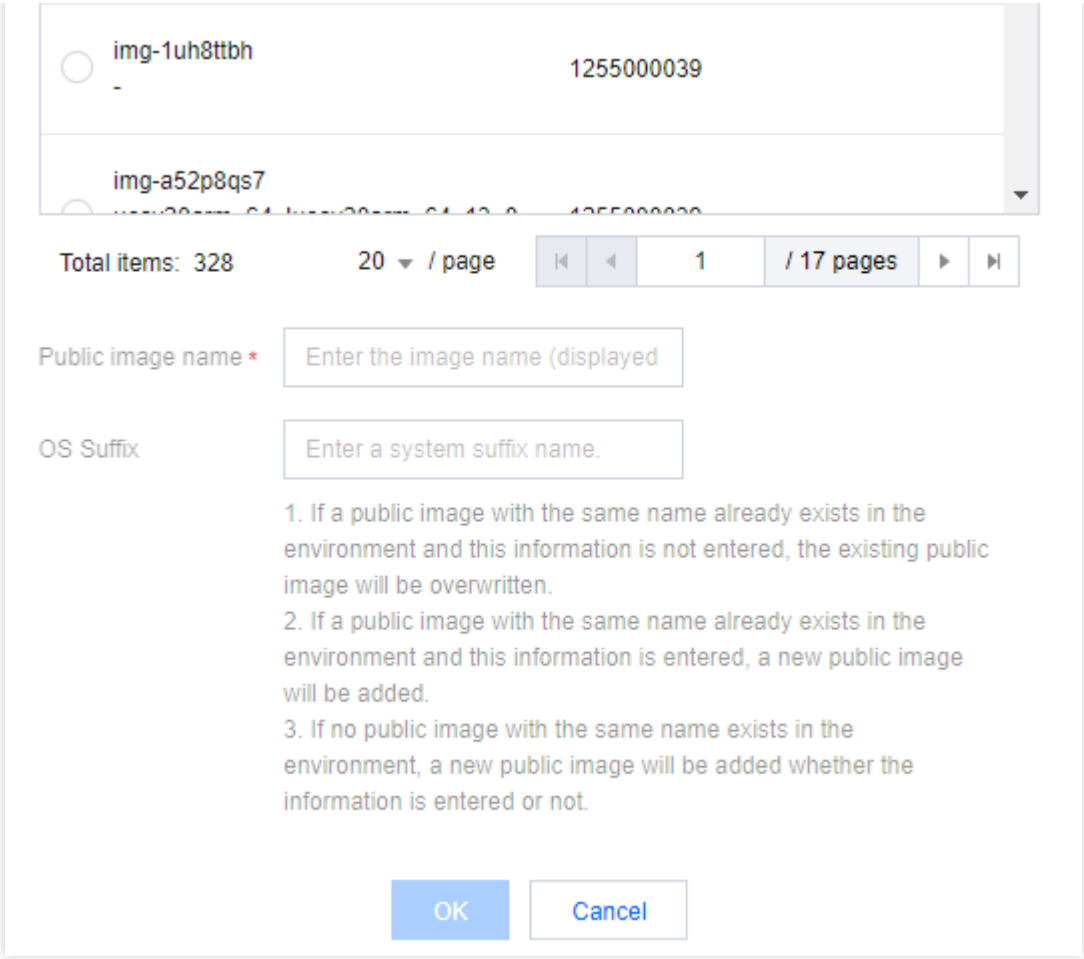
2. In the operations console, convert the created custom image into a public image.

Directions

1. In the left sidebar, choose **Image Management** > **Convert Custom Image into Public Image**.

2. Click **Create Image Conversion**. The **Convert to Public Image** page appears.





> Note:
>
> - If a public image with the same name already exists, and you enter an OS suffix, the conversion operation is to create a new public image. For example, if you need to add a new public image for the container based on the existing public image centos7.2x86_64 without overwriting it, you can enter an OS suffix such as **tke** when converting the custom image into a public image. The converted public image will be centos7.2x86_64 tke.
> - If a public image with the same name does not exist, the conversion operation is to create a new public image no matter whether you enter an OS suffix. For example, if no public image named centos7.2x86_64 exists, and you do not enter an OS suffix when converting the custom image into a public image, a new centos7.2x86_64 public image will be created.
> - If a public image with the same name already exists, and you do not enter an OS suffix, the conversion operation is to upgrade the existing public image. For example, if the centos7.2x86_64 public image already exists, and you do not enter an OS suffix when converting the custom image into a public image, the existing centos7.2x86_64 public image will be overwritten. The conversion operation is to upgrade the centos7.2x86_64 public image.

3. Select a custom image ID and click **OK**. The system converts the custom image into a public image.

After the custom image is converted into a public image, a new public image ID will be generated. The generated public image takes effect only for the current region.

2.2 Cross-region replication

Limits

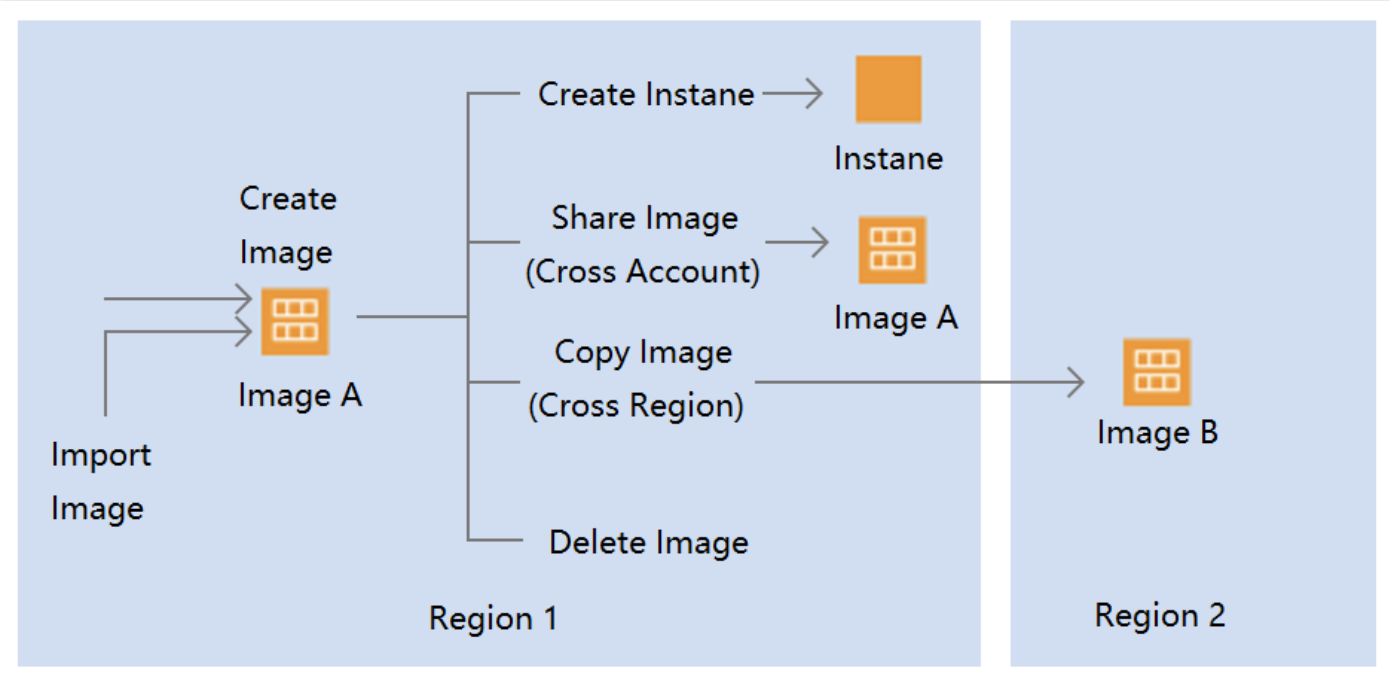
This feature supports only the following scenarios:

- Multiple regions are involved.
- A custom image is successfully converted into a public image.
- The operation status displayed in the image conversion list is **Successful**.

Directions

1. On the **Convert Custom Image into Public Image** page, click **Cross-Region Replication** in the **Operation** column of the image ID to be replicated. The **Cross-Region Replication** page appears.

2. Select the target region and click **OK** to replicate the public image.



I Model Configuration Management

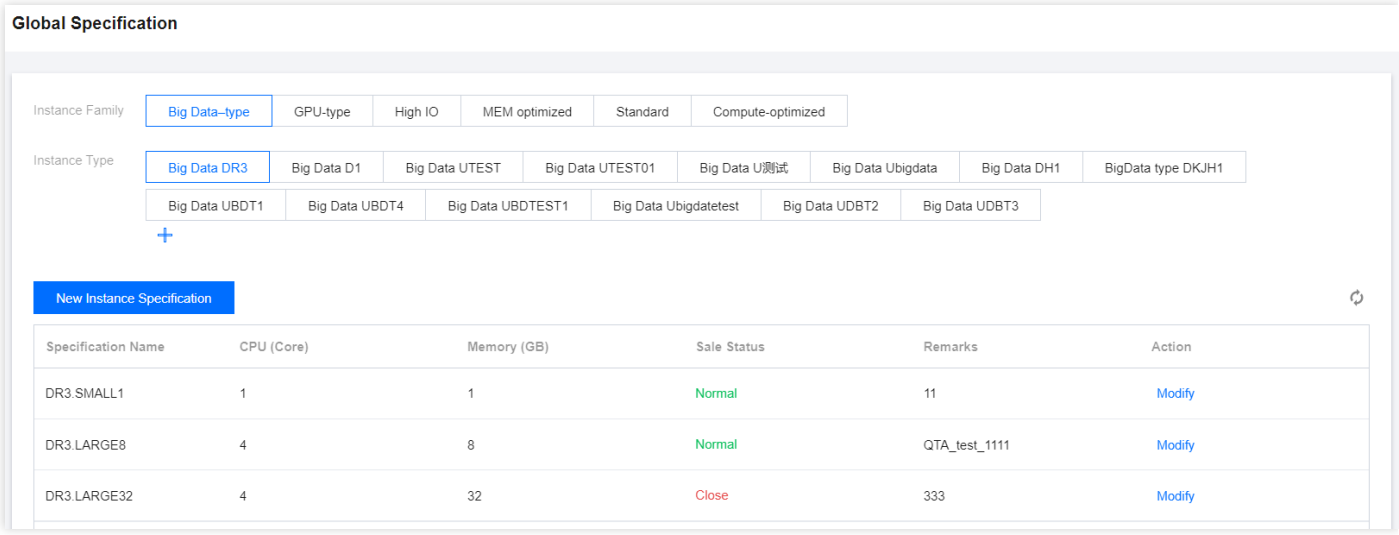
1. Global Models

1.1 Viewing global models

Directions

1. Log in to the CVM console.

2. In the left sidebar, choose **Model Configuration Management** > **Global Specification** to view global model specifications. The specification information includes the **Specification Name**, **CPU (Core)**, **Memory (GB)**, **Sale Status**, **Remarks**, and **Action**.

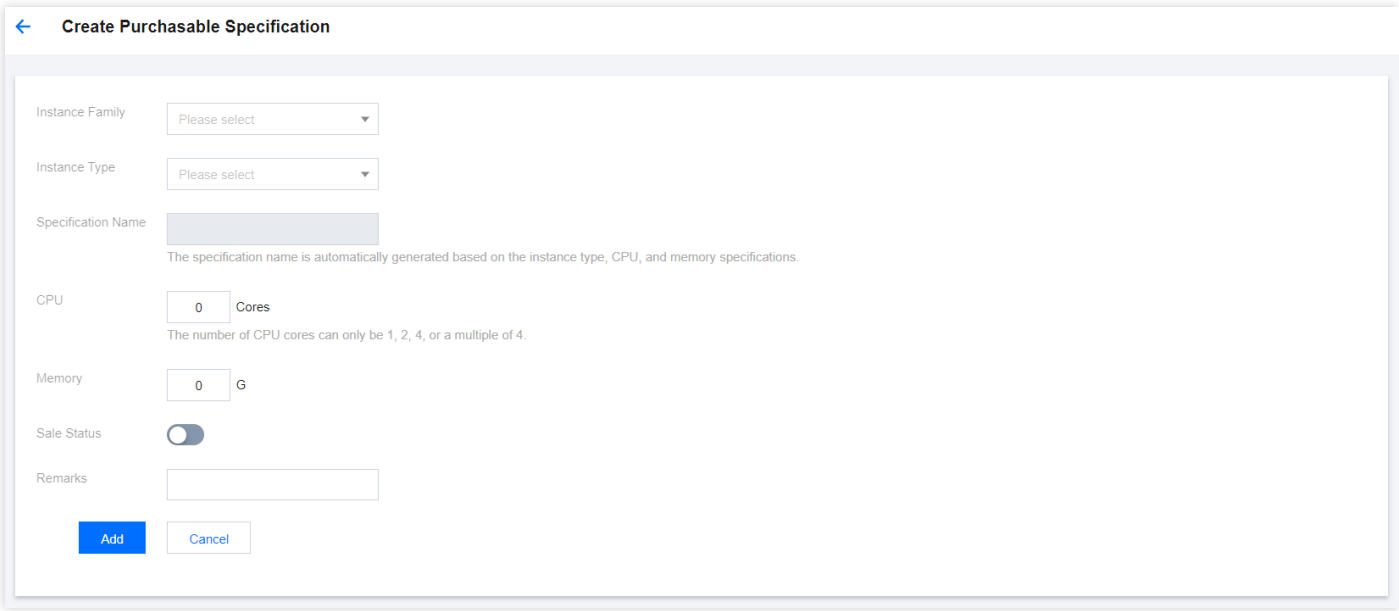


1.2 Adding global instance specifications

Directions

1. On the **Global Models** page, click **New Instance Specification** to create purchasable specifications.

   Set the **Instance Family**, **Instance Type**, **Specification Name**, **CPU**, **Memory**, **Sales Status**, and **Remarks**.



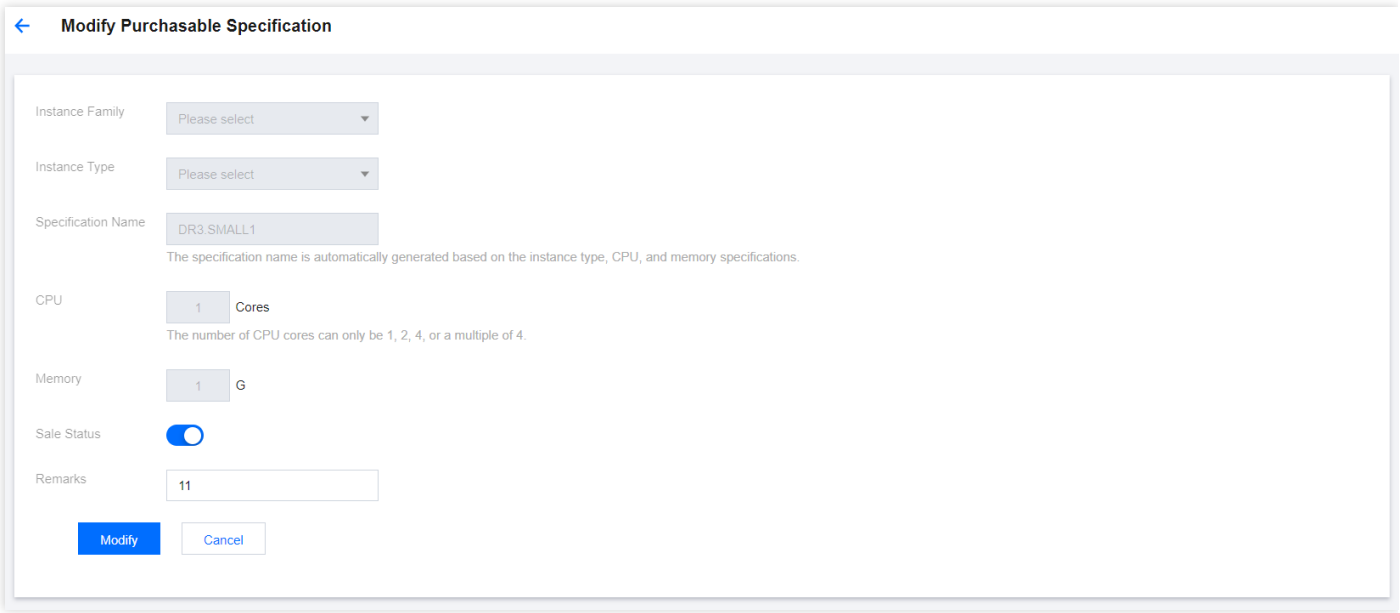
2. Click **Add** to save the configuration and return.

   The added purchasable specification appears in the specification configuration list.

1.3 Modifying global instance specifications

Directions

1. On the **Global Models** page, click **Modify** in the **Action** column corresponding to the specification to modify. Then you can modify the sales status and remarks of the specification.



2. Click **Modify** to save the configuration and return.

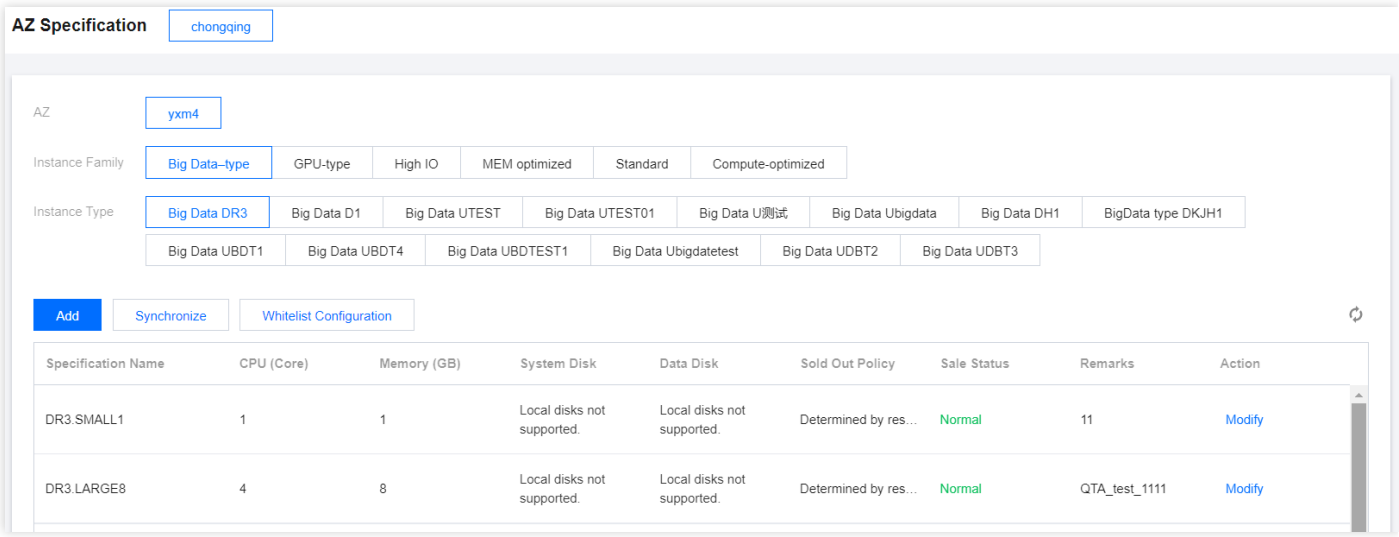
2. AZ Models

2.1 Viewing AZ models

1. Log in to the CVM console.

2. In the left sidebar, choose **Model Configuration Management** > **AZ Specification** to view AZ model specifications.

   The specification information includes **Specification Name**, **CPU (Core)**, **Memory (GB)**, **System Disk**, **Data Disk**, **Sold Out Policy**, **Sale Status**, **Remarks**, and **Action**.



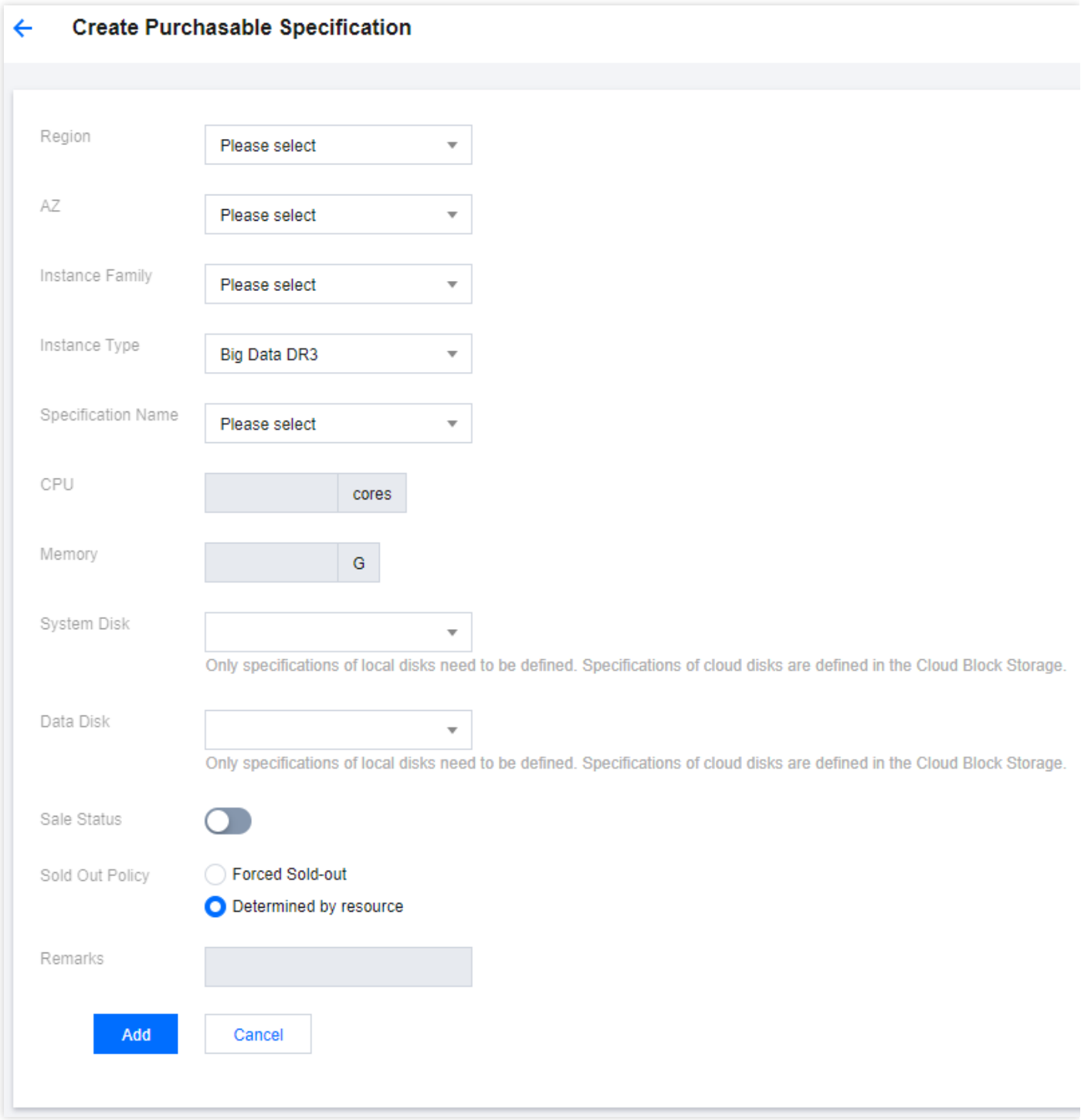
You can filter the specification list by **AZ**, **Instance Family**, or **Instance Type**.

2.2 Adding AZ models

Directions

1. On the **AZ Specification** page, click **Add** to create purchasable specifications.

   Set the **Region**, **AZ**, **Instance Family**, **Instance Type**, **Specification Name**, **CPU**, **Memory**, **System Disk**, **Data Disk**, **Sold Out Policy**, **Sale Status**, **Sold Out Policy** and **Remarks**.



2. Click **Add** to save the configuration and return.

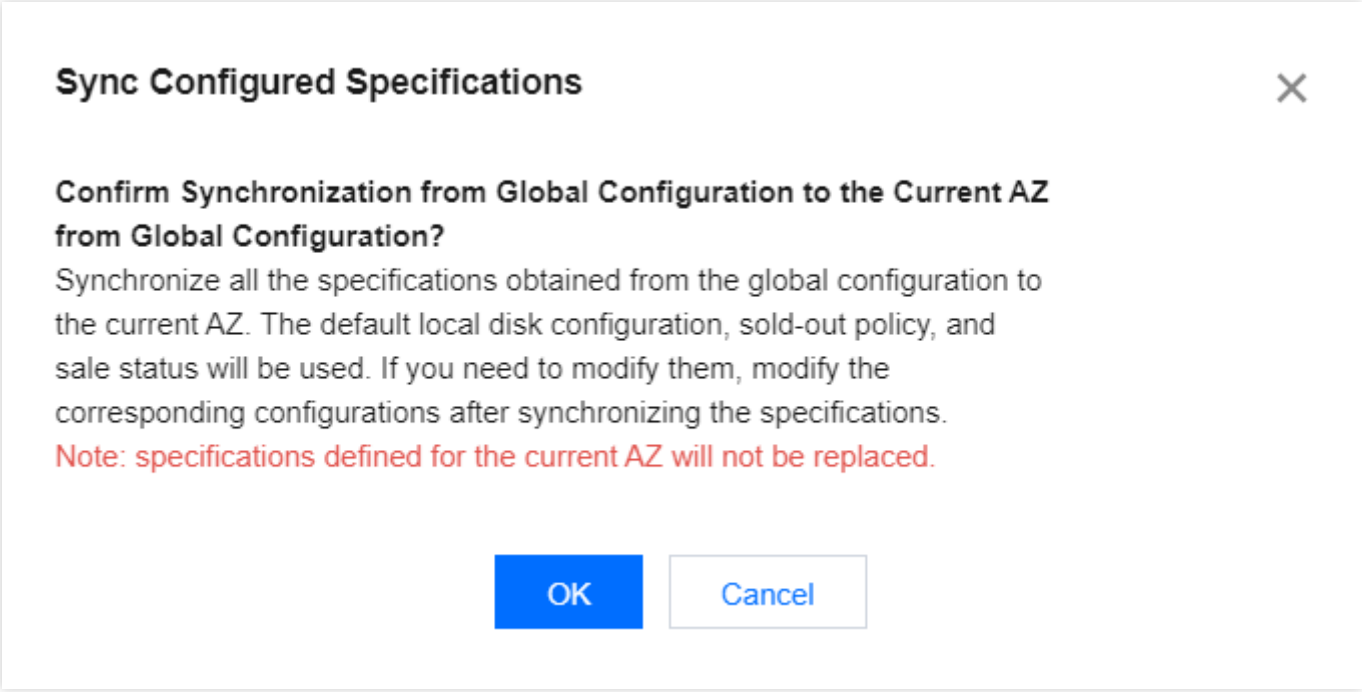
   The added purchasable specification appears in the AZ model list.

2.3 Synchronizing AZ specifications

1. On the **AZ Specification** page, select the **AZ**, **Instance family**, and **Instance Type** to synchronize.

2. Click **Synchronize**.

   The system asks you to confirm whether to synchronize the selected specifications from the global configuration to the current AZ.

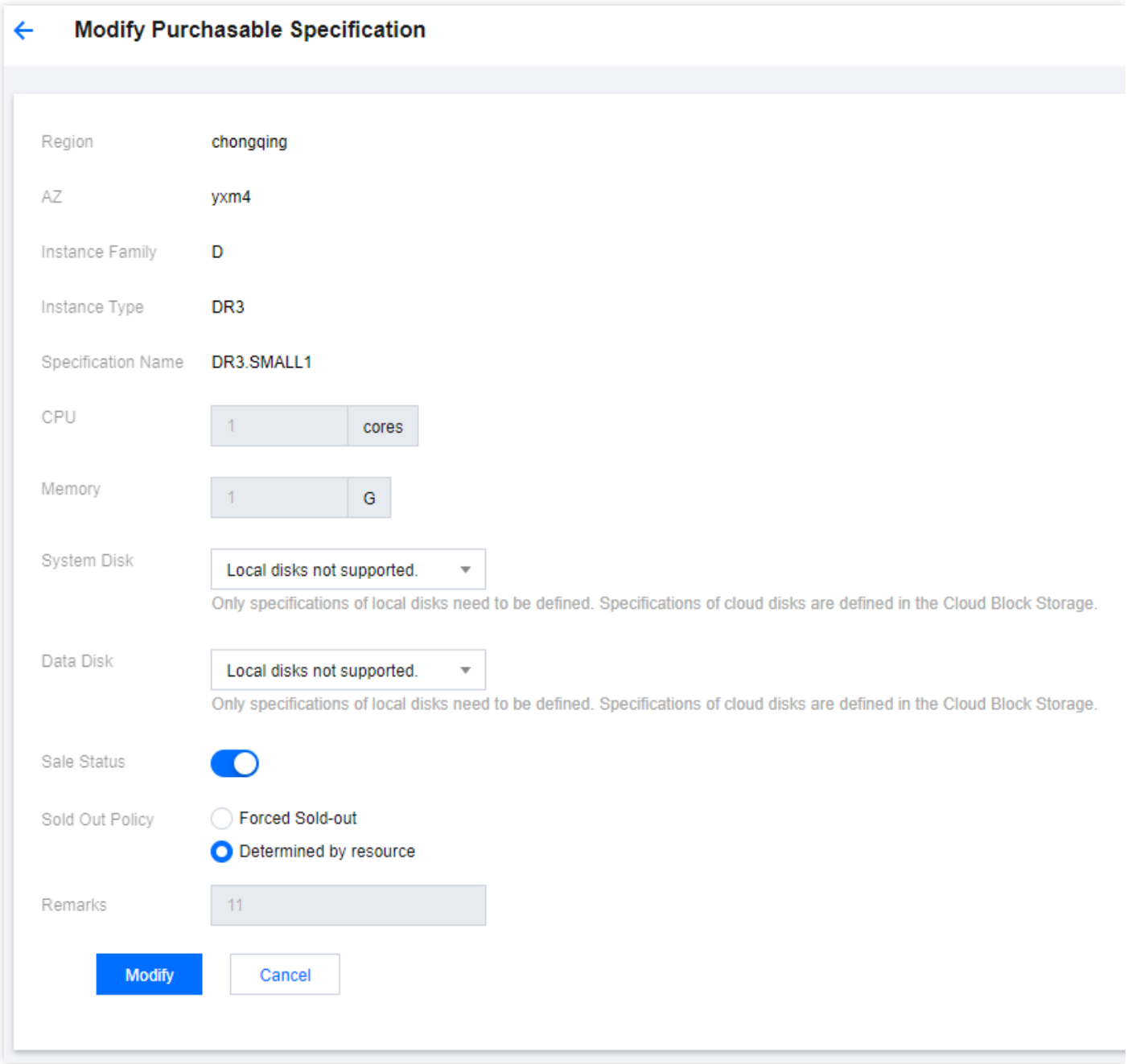


3. Click **OK**.

2.4 Modifying AZ specifications

1. On the **AZ Specification** page, click **Modify** in the **Operation** column corresponding to the specification to modify.

   Then you can modify the **System Disk**, **Data Disk**, **Sales Status**, and **Sold Out Policy** of the specification.

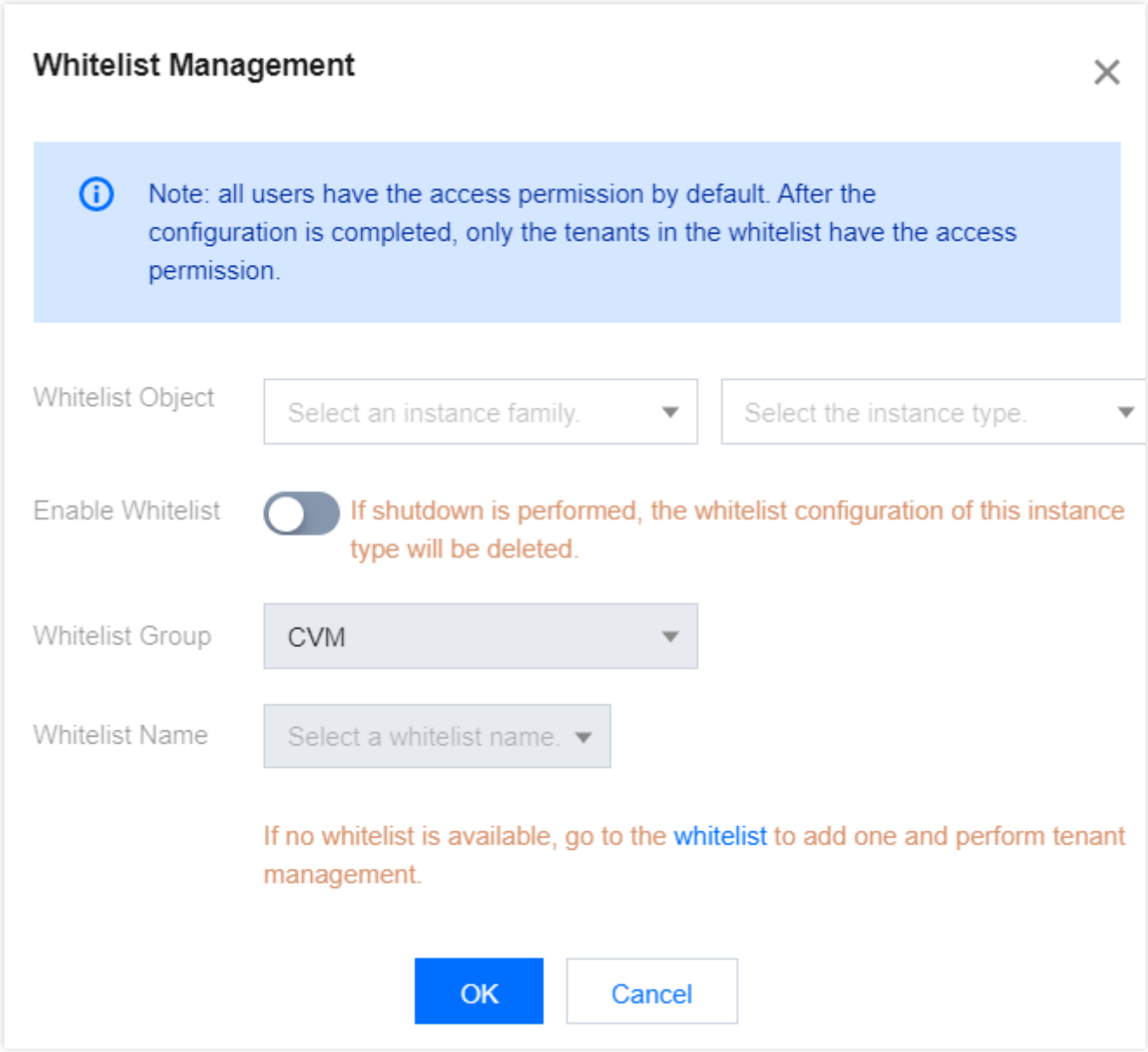


2. Click **Modify** to save the configuration and return.

2.5 Allowlist configuration

1. On the **AZ Specification** page, click **Whitelist Configuration**. Set the **Whitelist Object**, **Enable Whitelist**, **Whitelist Group**, and **Whitelist Name**.

> If no allowlist is available, create one on the allowlist management page.



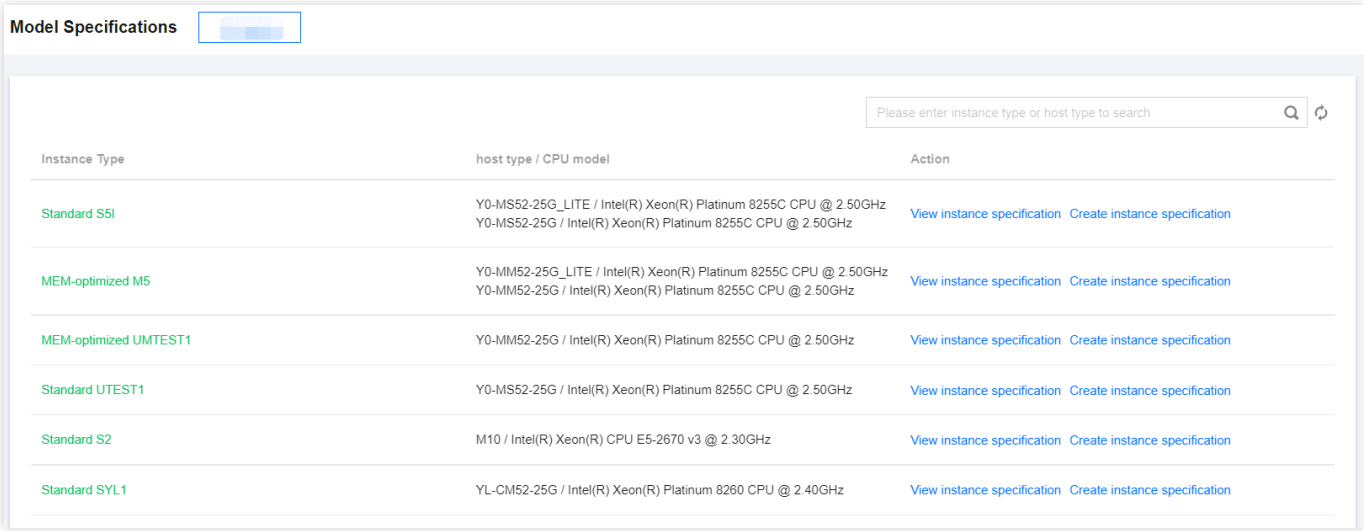
2. Click **OK**. The allowlist takes effect, and only tenants in the allowlist can purchase instances of this specification.

3. Model Comparison

1. Log in to the CVM console.

2. In the left sidebar, choose **Model Configuration Management** > **Model Specifications** to view the model comparison list.

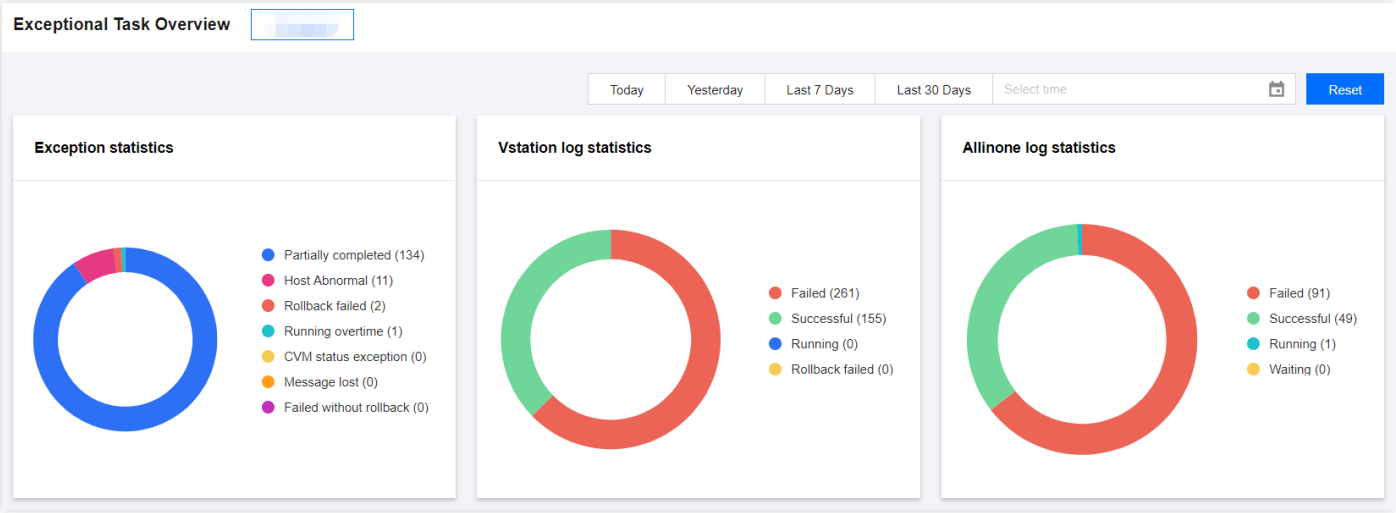
- Click **View instance specification** in the **Action** column to view the specifications of the corresponding instance type.
- Click **Create instance specification** in the **Action** column to access the **Create Purchasable Specification** page.



I Exceptional Task Management

1. Exceptional Task Overview

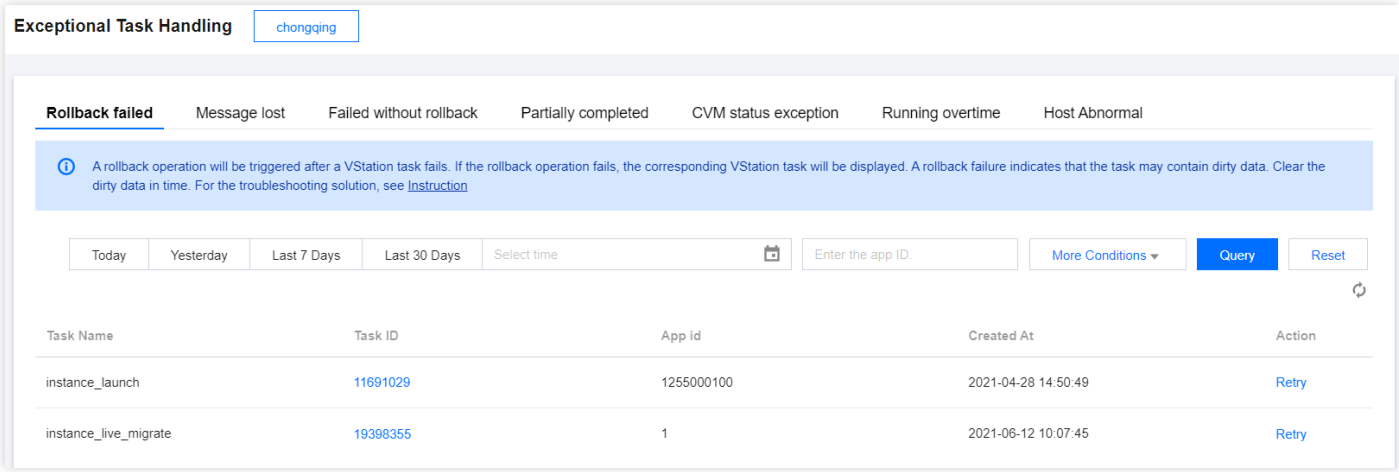
1. Log in to the CVM console.
2. In the left sidebar, choose **Exceptional Task Management** > **Exceptional Task Overview** to view exceptional tasks.



2. Exceptional Task Handling

1. Log in to the CVM console.
2. In the left sidebar, choose **Exceptional Task Management** > **Exceptional Task Handling** to view exceptional tasks.

   On the **Exceptional Task Handling** page, you can handle exceptional tasks in the states such as **Rollback failed**, **Message lost**, **Failed without rollback**, **Partly completed**, **CVM status exception**, **Running overtime**, or **Host Abnormal**.


Exceptional Task Handling
chongqing
Rollback failed
Message lost
Failed without rollback
Partially completed
CVM status exception
Running overtime
Host Abnormal
A rollback operation will be triggered after a VStation task fails. If the rollback operation fails, the corresponding VStation task will be displayed. A rollback failure indicates that the task may contain dirty data. Clear the dirty data in time. For the troubleshooting solution, see Instruction
Today
Yesterday
Last 7 Days
Last 30 Days
Select time
Enter the app ID.
More Conditions
Query
Reset
Task Name
Task ID
App id
Created At
Action
instance_launch
11691029
1255000100
2021-04-28 14:50:49
Retry
instance_live_migrate
19398355
1
2021-06-12 10:07:45
Retry

I Linkage Logs

Log linkage: API request ID > DES task ID > VS task ID > Specific step > Master compute

1. API Logs

1.1 Context

This feature allows you to view CVM API logs. API logs provide API call records. You can filter log records by time and a single field to view the error information of tenant request exceptions for troubleshooting.

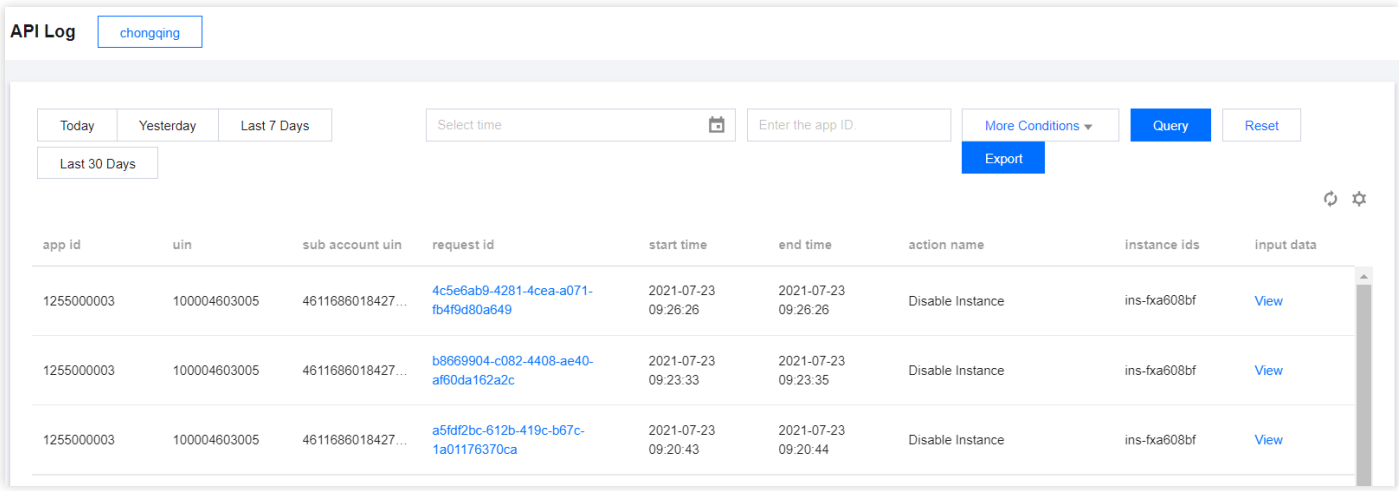
- CVM API failed to call another component: locate the request and returned packets of the call request in the API logs to further check the logs of the exceptional component.

- All CVM API requests are normal and no error was reported: this indicates that the call request was properly delivered to the DES component. You can find the task ID of the DES component in the API logs to check the corresponding DES logs for further troubleshooting.

1.2 Directions

1. Log in to the CVM console.

2. In the left sidebar, choose **Linkage Log** > **API Log**. The **API Log** page appears.



- Select a region to view all API logs of the region.

- You can view the API logs of today, yesterday, last 7 days, last 30 days, or a specified time period.
- Click **More Conditions** in the upper-right corner of the page, enter search values as needed, and click **Query**.

  Eligible log information is filtered.

- Click to set fields to be displayed in the list.

  The system can display fields such as app id, request id, uin, sub account uin, action name, instance ids, and error code.

- Click **Export**. The system exports the latest 500 log records by default. Up to 10,000 log records can be exported.

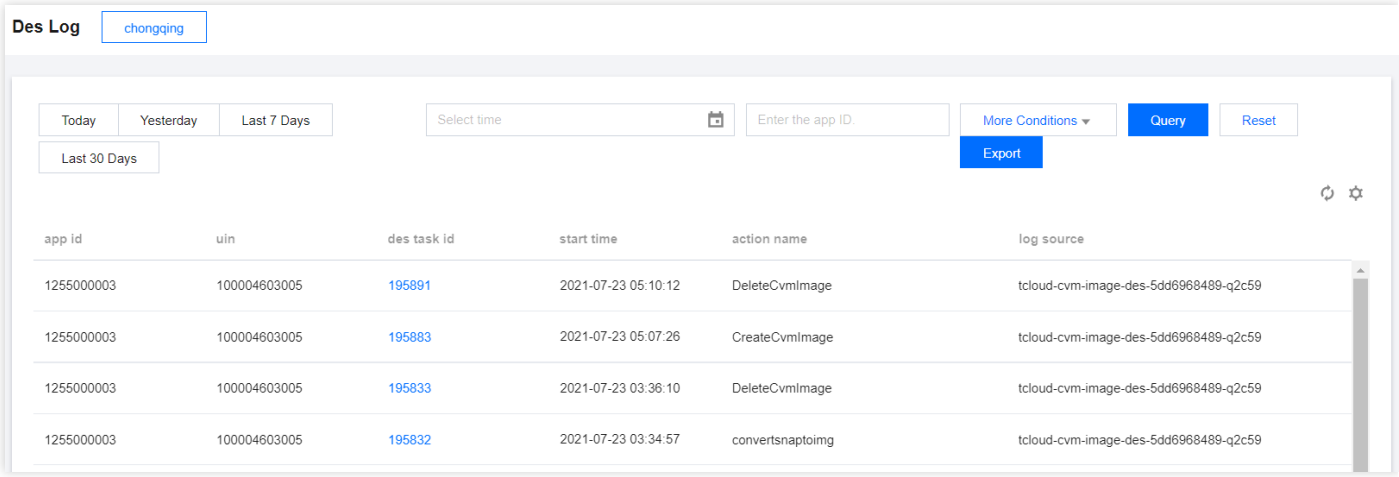
2. DES Logs

2.1 Context

This feature allows you to view CVM DES logs. DES logs provide task distribution records. You can use DES logs to locate the error causes of tenant or operations task distribution exceptions.

2.2 Directions

1. Log in to the CVM console.
2. In the left sidebar, choose **Linkage Log** > **DES Log**. The **Des Log** page appears.



- Select a region to view all DES logs of the region.
- You can view the DES logs of today, yesterday, last 7 days, last 30 days, or a specified time period.
- Click **More Conditions** in the upper-right corner of the page, enter search values as needed, and click **Query**.

  Eligible log information is filtered.

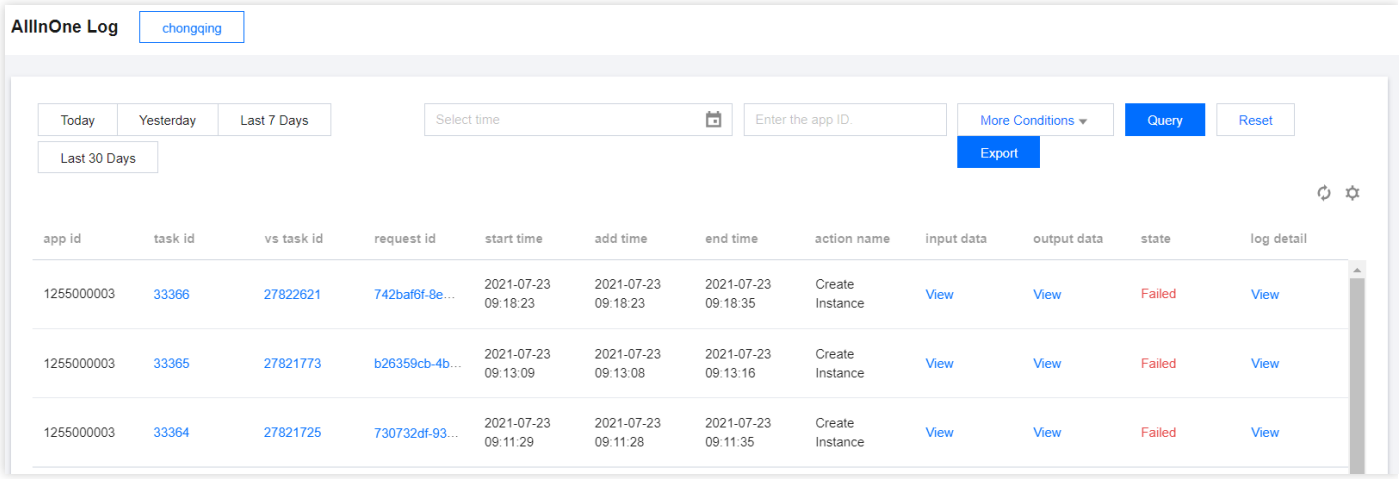
- Click to set fields to be displayed in the list.

  The system can display fields such as app id, uin, des task id, start time, action name, log source, and log type.

- Click **Export**. The system exports the latest 500 log records by default. Up to 10,000 log records can be exported.

3. AllInOne Logs

1. Log in to the CVM console.
2. In the left sidebar, choose **Linkage Log** > **Allinone Log**. The **AllInOne Log** page appears.



- Select a region to view all AllInOne logs of the region.
- You can view the AllInOne logs of today, yesterday, last 7 days, last 30 days, or a specified time period.
- Click **More Conditions** in the upper-right corner of the page, enter search values as needed, and click **Query**.

  Eligible log information is filtered.

- Click to set fields to be displayed in the list.

  The system can display fields such as app id, task id, vs task id, request id, ip, start time, add time, end time, action time, input data, output data, state, and log detail.

- Click **Export**. The system exports the latest 500 log records by default. Up to 10,000 log records can be exported.
- Click the corresponding link of the parent task to view all fields of the task log.

4. VStation Logs

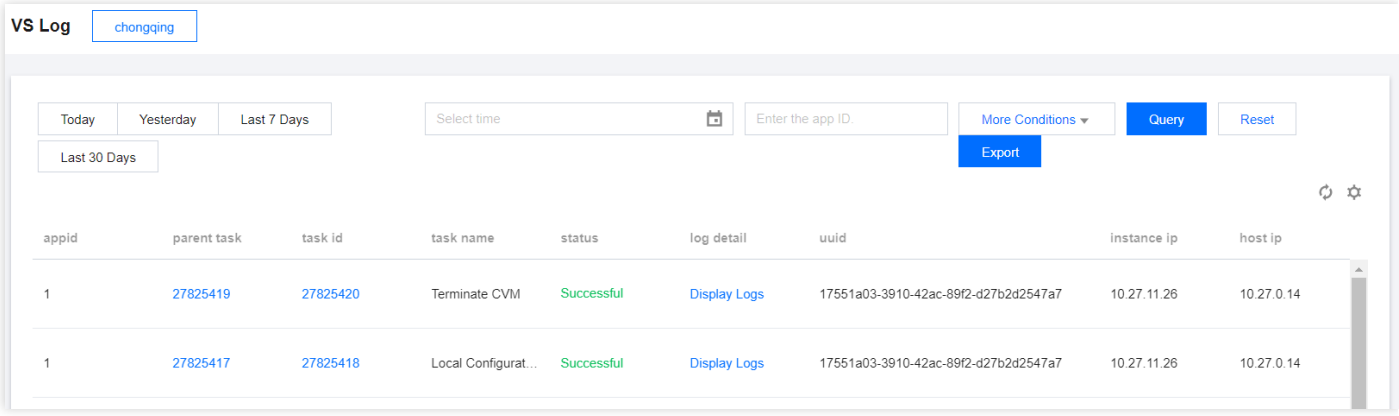
4.1 Context

This feature allows you to view CVM VStation logs. VStation logs provide instance lifecycle records, including instance creation and termination records. You can query task failure information on the **Task Query** page.

4.2 Directions

1. Log in to the CVM console.

2. In the left sidebar, choose **Linkage Log** > **VStation Log**. The **VS Log** page appears.



- Select a region to view all DES logs of the region.
- You can view the VStation logs of today, yesterday, last 7 days, last 30 days, or a specified time period.
- Click **More Conditions** in the upper-right corner of the page, enter search values as needed, and click **Query**.

  Eligible log information is filtered.

- Click to set fields to be displayed in the list.

  The system can display fields such as appid, parent task, task id, task name, status, log detail, uuid, instance ip, host ip, hostlog, image id, hypervisor, os name, create time, update time, error code, and error msg.

- Click **Export**. The system exports the latest 500 log records by default. Up to 10,000 log records can be exported.

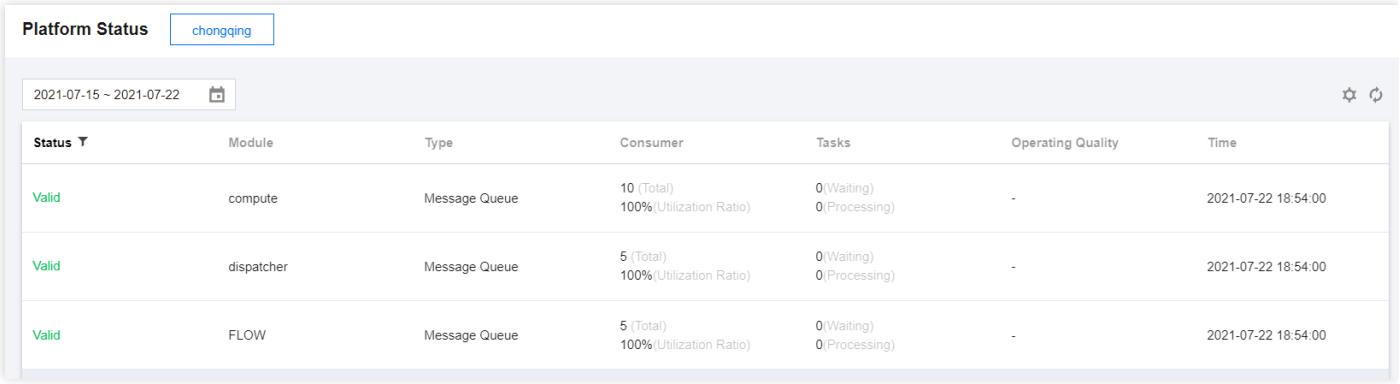
- Click the corresponding link of the parent task to view all fields of the task log.

I Virtualization Platform Status

1. Viewing Platform Status

1. Log in to the CVM console.
2. In the left sidebar, choose **Virtualization Platform Status** > **Platform Status** to view the running status of each component on the platform.

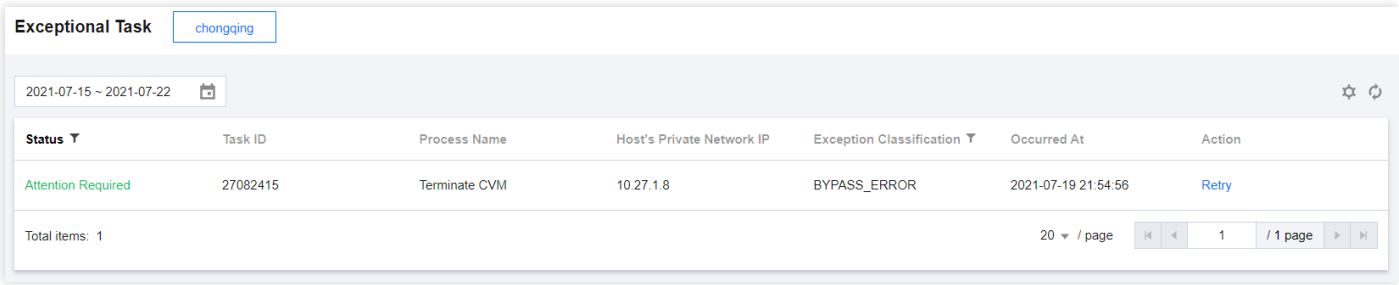
   You can filter the component status list by status (such as **Valid** and **Invalid**), time period, and region. If there are a large number of tasks, you can check which internal system components are slow. If a task always fails, check whether certain modules are exceptional. If yes, restart the service.



2. Viewing Exception Status

1. Log in to the CVM console.
2. In the left sidebar, choose **Virtualization Platform Status** > **Exceptional State** to view recent tasks where scheduling was interrupted unexpectedly.

   You can filter the exceptional task list by status (such as **Ignored** and **Need attention**), time period, and region.



3. If an exceptional task exists, click **Retry** in the **Operation** column to execute the task again.

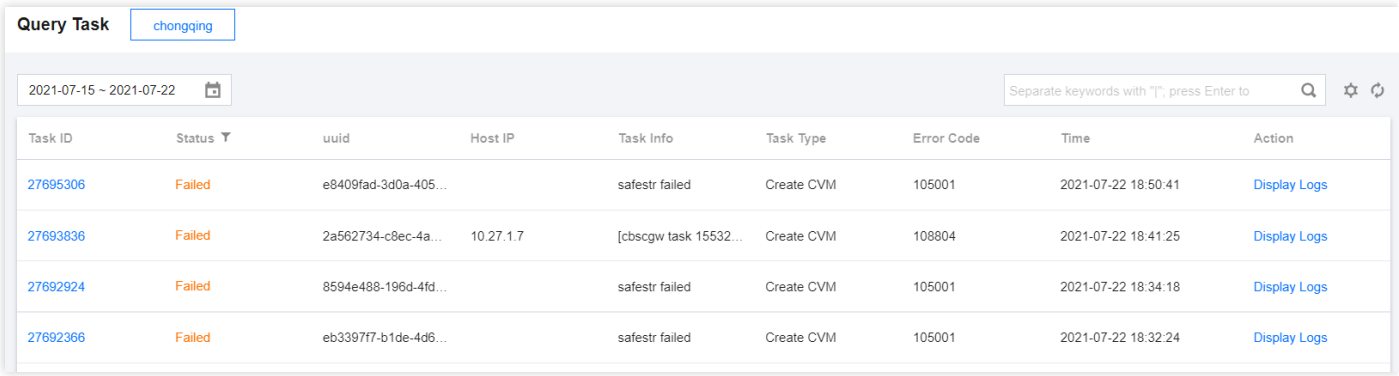
   If the task still fails after multiple retries, check the failure cause on the **Task Query** page.

3. Task Query

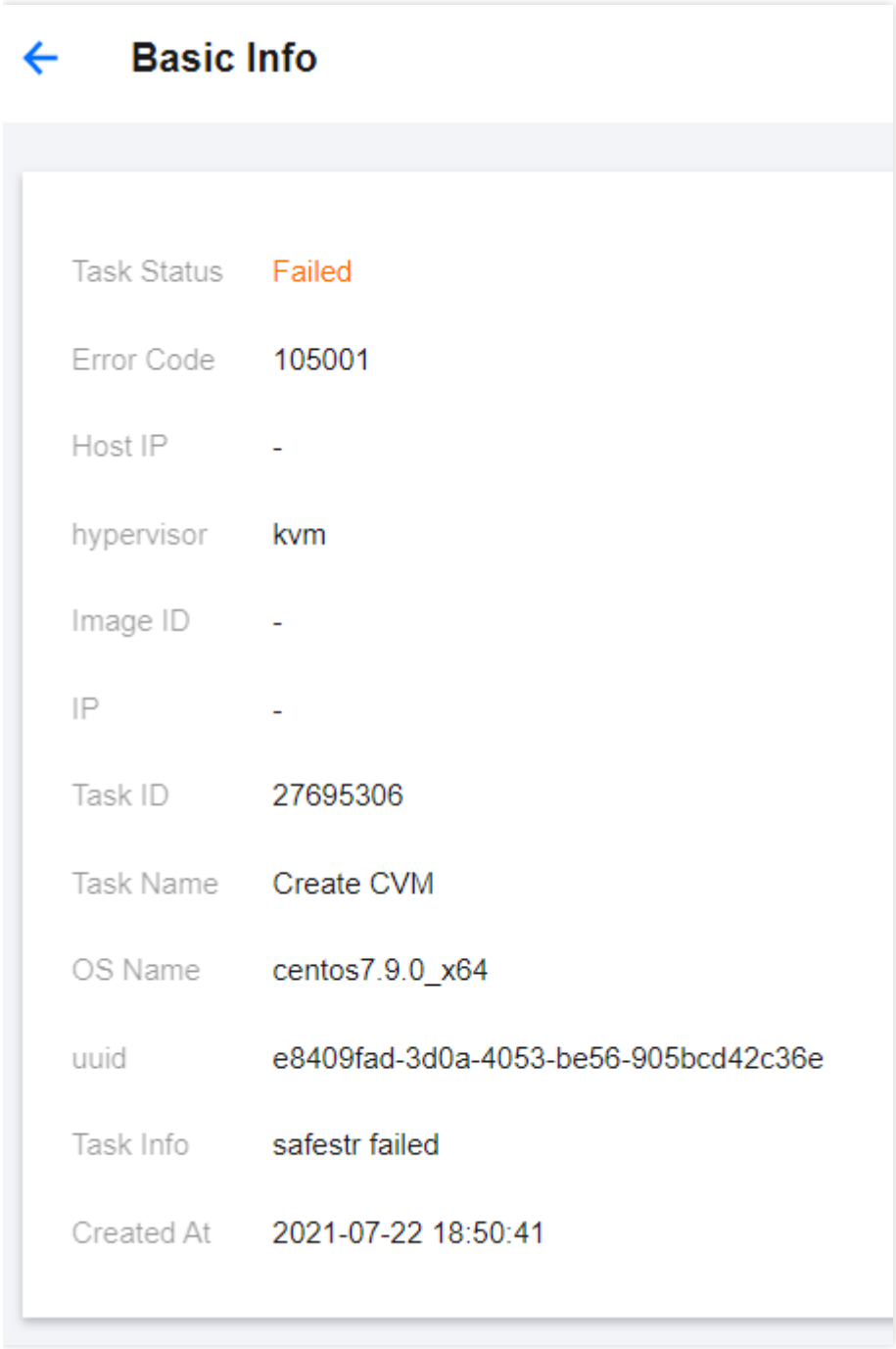
1. Log in to the CVM console.

2. In the left sidebar, choose **Virtualization Platform Status** > **Task Query** to view all scheduling status.

   You can filter the task list by status (such as **Running**, **Successful**, **Failed**, **Rollback failed**, and **Basically finished**), time period, region, and other filters (such as task ID, UUID, host IP, and task type).



3. Click the task ID link to view the basic information of the task.

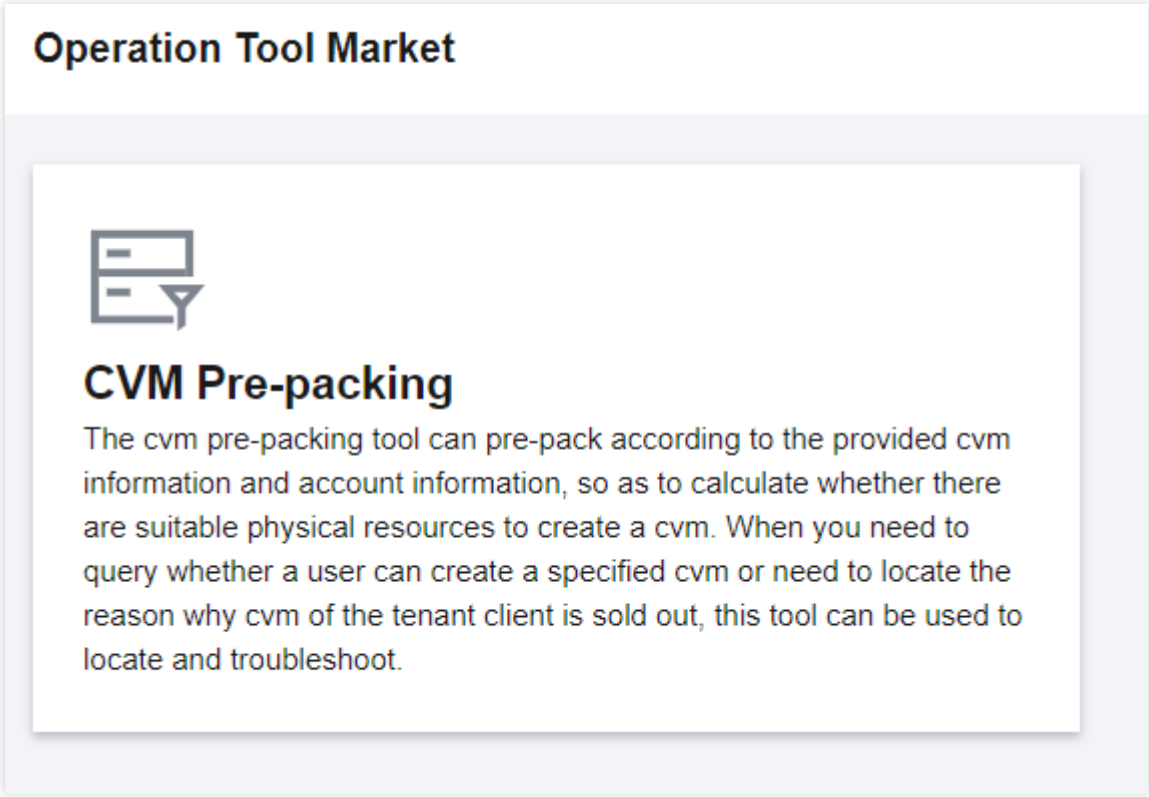


1. Click **Show Log** in the **Operation** column to view the log information of the task.

I Operations Tool Market

1. Log in to the CVM console.

2. In the left sidebar, choose **Operations Tool Market**.



I Appendix

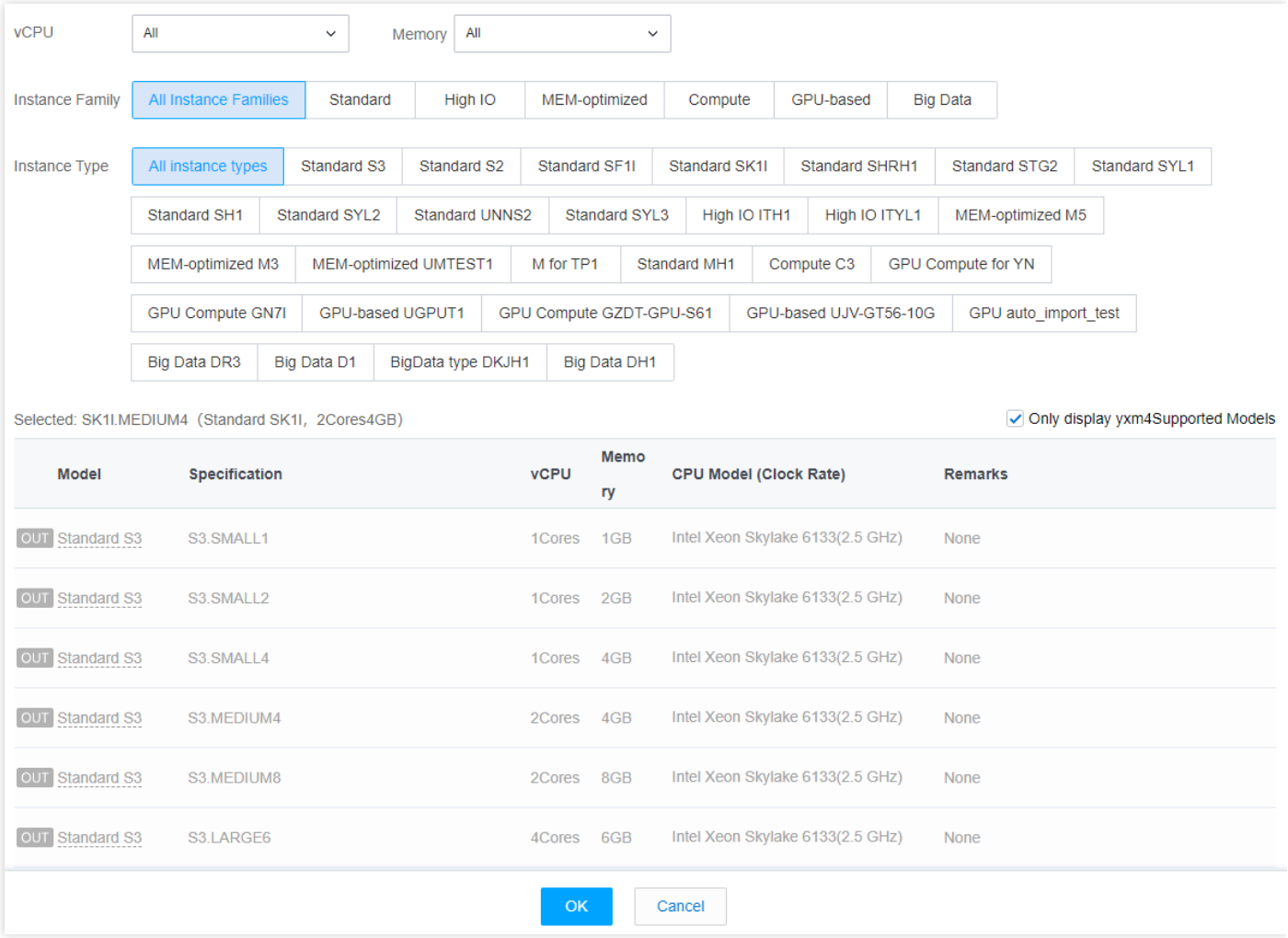
II Verifying CVM Features

> Note: only the verification scheme is provided here. For the detailed operation process of each feature, see the corresponding feature test case documentation of CVM.

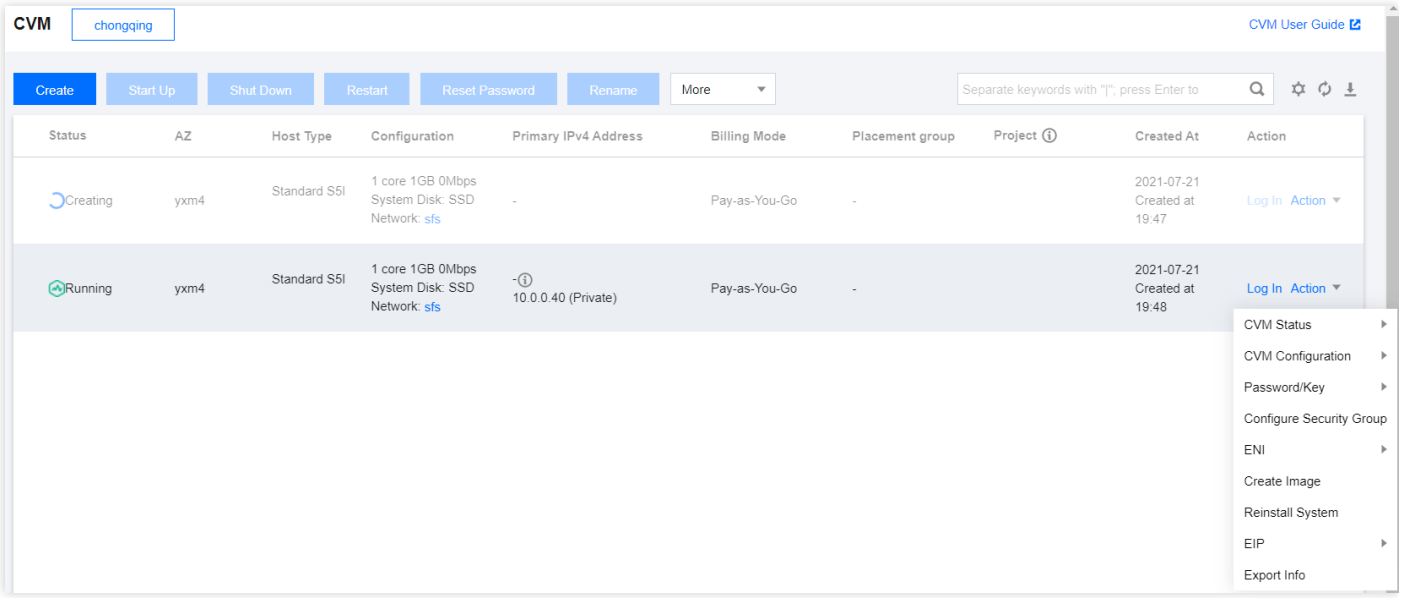
1. Verifying CVM Features with the VPC Launch Type

1. Log in to the CVM tenant console, choose **Cloud Virtual Machine** > **CVM**, and click **Create** to access the CVM instance creation page.

2. Click the **Reselect** link provided in the **Instance** parameter, select the newly adapted instance type model, and set other parameters to create the CVM instance.

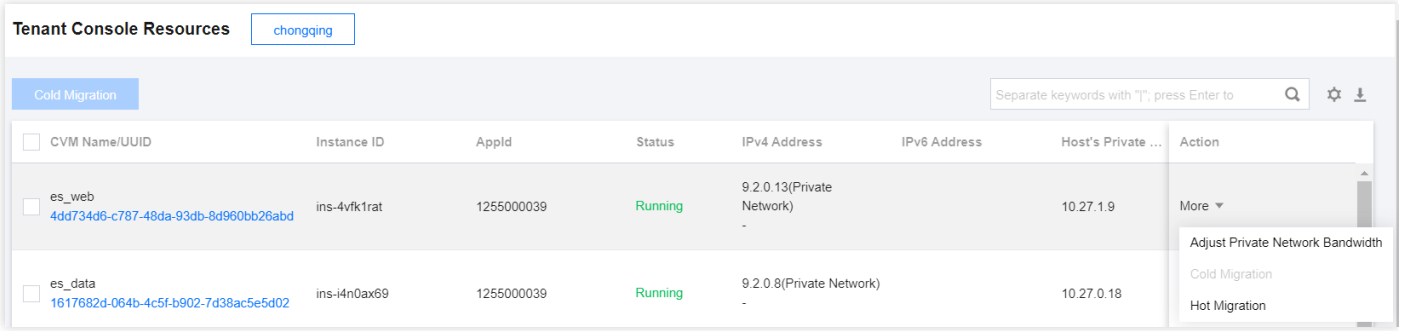


3. Choose **Cloud Virtual Machine** > **CVM** again, locate the CVM instance created in step 1, and click **Action** in the **Action** column. Verify all features listed in the drop-down list, including restart, startup, shutdown, renaming, configuration/disk/bandwidth adjustment, password resetting, key loading, security group configuration, ENI binding, ENI unbinding, image creation, system reinstallation, EIP binding, EIP unbinding, and termination.



4. Log in to the CVM operations console, choose **Cloud Virtual Machine** > **CVM Management** > **Tenant Console**, search and select the CVM instance created in step 1, and click **More** in the **Action** column. Verify all features listed in the drop-down list, including private network bandwidth adjustment, cold migration, and hot migration.

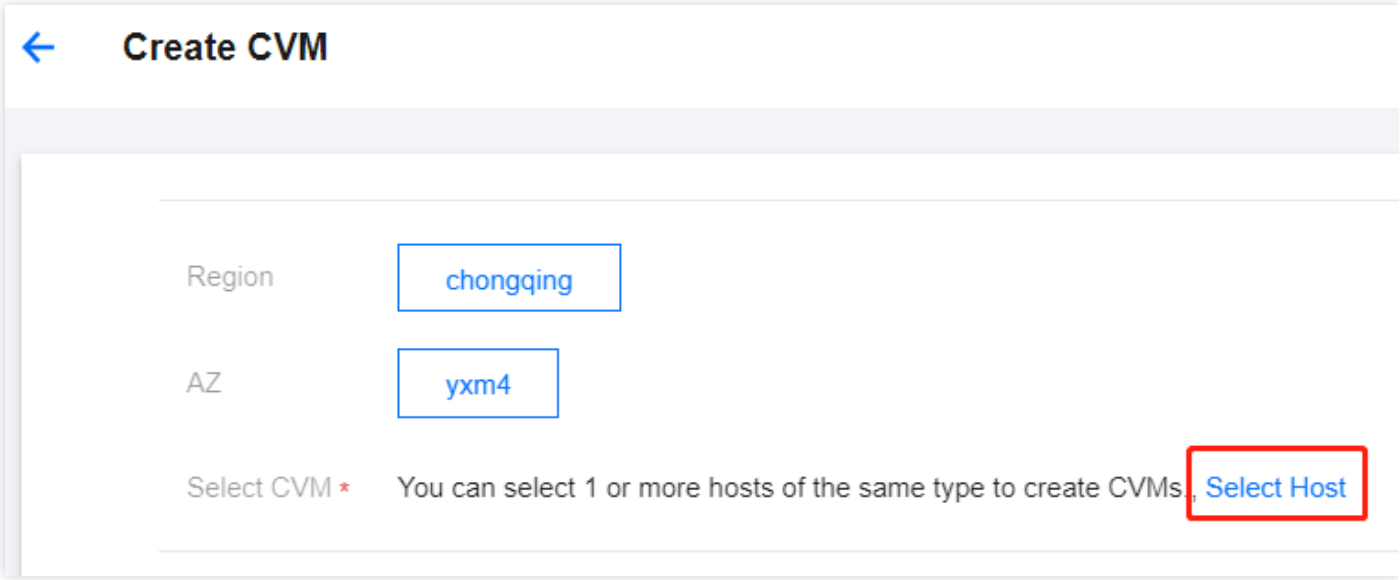
> Note: certain special models, such as GPU and big data instances, may not support migration operations such as cold migration and hot migration.



2. Verifying CVM Features with the Classic Network Launch Type

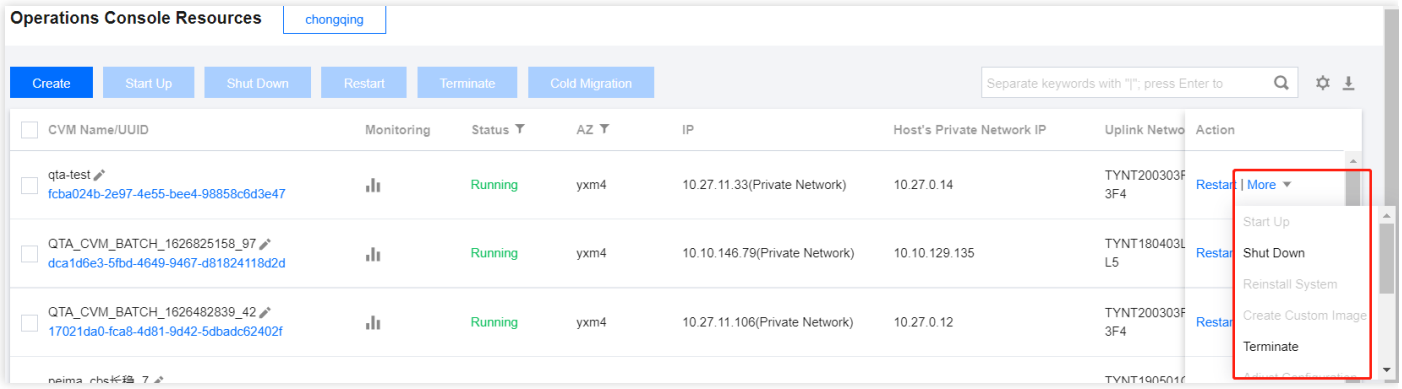
1. Log in to the CVM operations console, choose **Cloud Virtual Machine** > **CVM Management** > **Operations Console**, and click **Create** to access the CVM instance creation page.

2. Click the link provided in the **Select Host** parameter, select the newly adapted host, and set other parameters to create the CVM instance.



3. Choose **Cloud Virtual Machine** > **CVM Management** > **Operations Console** again, select the CVM instance created in step 1, and click **More** in the **Action** column. Verify all features listed in the drop-down list, including restart, startup, shutdown, system reinstallation, custom image creation, configuration adjustment, disk adjustment, password resetting, VNC information acquisition, cold migration, hot migration, and termination.

> Note: certain CVM operations can only be performed when the CVM instances are shutdown. Such operations include startup, system reinstallation, custom image creation, configuration adjustment, disk adjustment, password resetting, and cold migration.



II Fault handling Tools

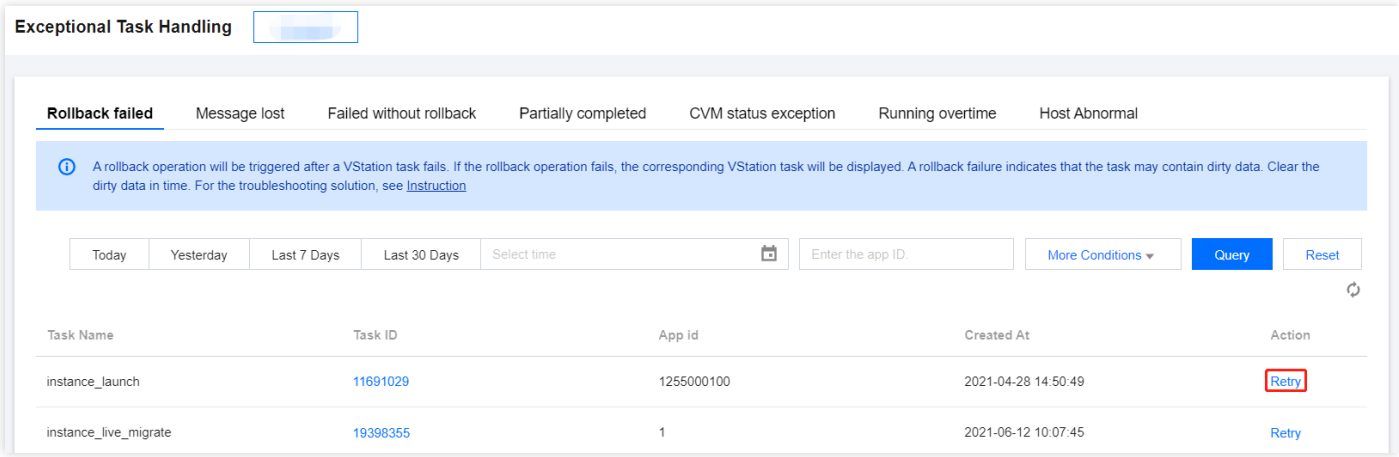
1. VStation Task Exception Handling

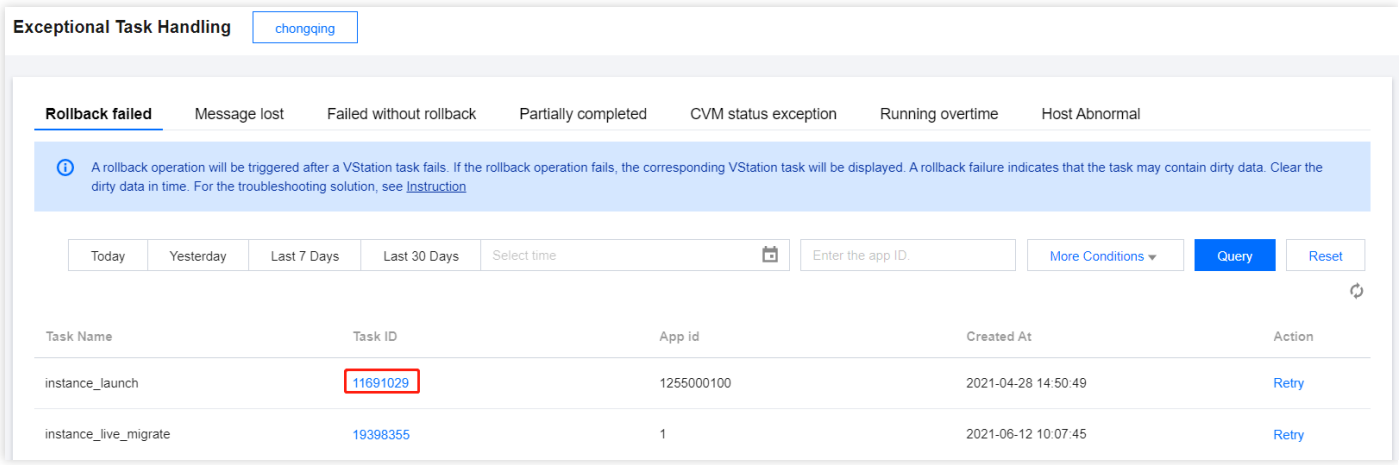
The states of failed VStation tasks include **Rollback failed**, **Message lost Failed without rollback**, and **Partly completed**.

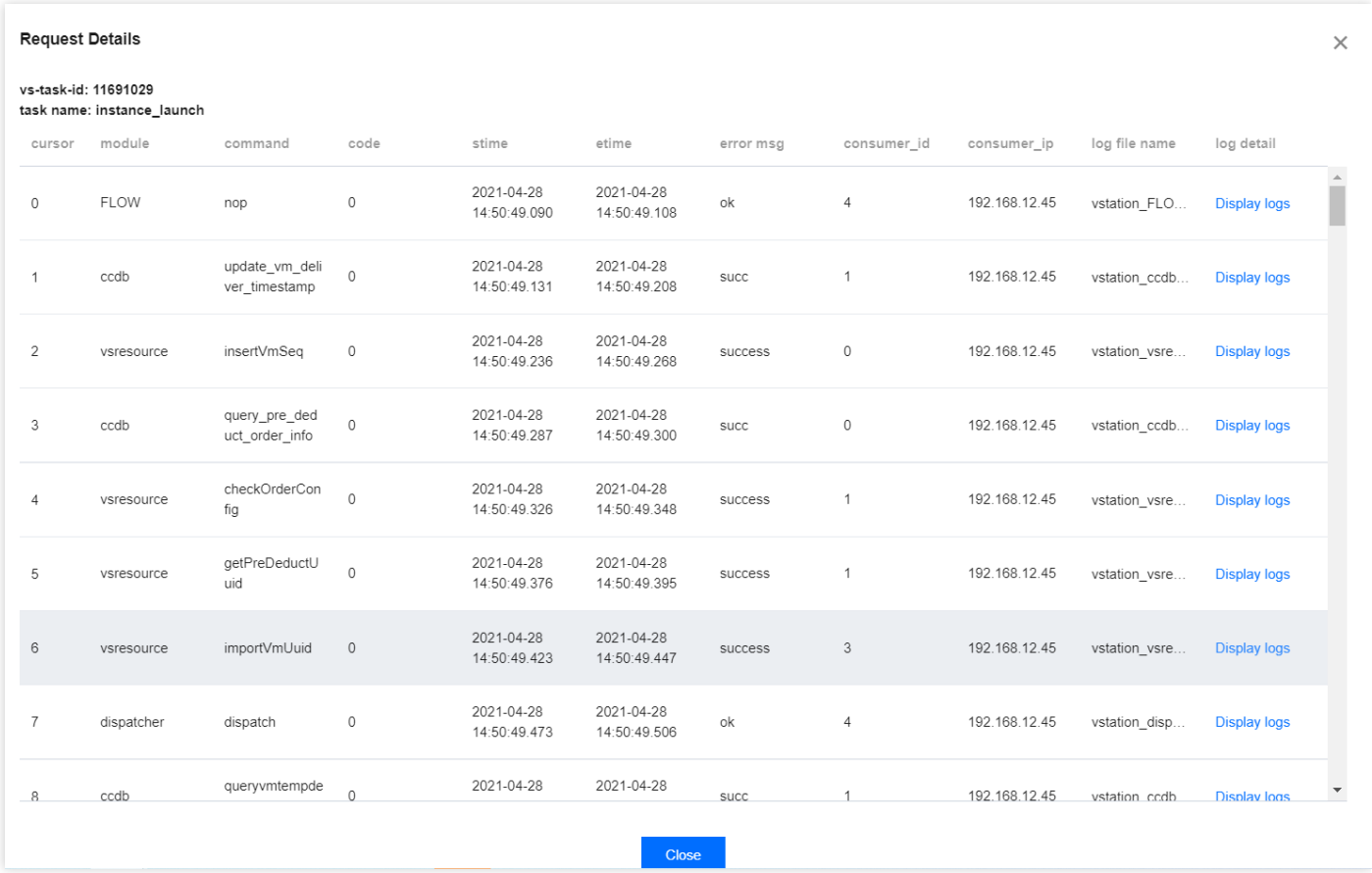
The scheme for clearing dirty data for such tasks is:

Retry the task.

- If the task retry fails, it indicates that there is a problem with the MQ connection. Recover the MQ connection and retry the task.
- If the task retry is successful and the retried task is no longer in the refreshed task list after a certain period of time, it indicates that the retry has been completed and the task has been successfully processed.
- If the retried task is still in the task list, it indicates that there is a problem with the environment and the task cannot be completed due to the failure of other API calls when the task is retried. In this case, you need to click the task ID to check the VStation task log. The following figures take a **Rollback failed** task as an example: the retried task is still in the task list. Click the task ID. The details show that the CBS API call timed out. Then you can check the log information or use the log file to enter the container for further fault location and troubleshooting.



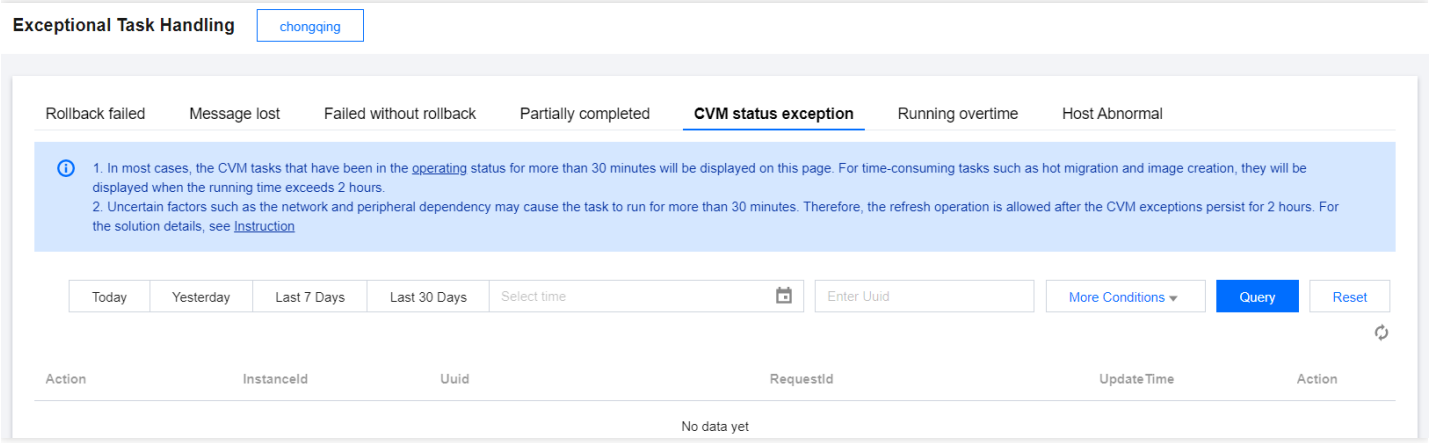




2. Instance Exception Handling

> An instance can be refreshed only after it is in an exceptional state for at least 2 hours.

You can set the state of a refreshed instance to **Successful** or **Failed** according to the operation result. Click the corresponding request ID to view the API log and check the operation result. If the operation fails, set the instance state to **Failed**; otherwise, set the instance state to **Successful**. As shown in the following figures, the operation result is **Successful**. In this case, set the instance state to **Successful**.



3. Long-running Task Handling

Click the ID of a running overtime task to view AllInOne task logs and check the API logs of the last request in the request details. Then click **View** in the **output data** column to check the output logs and locate the fault based on the error code.