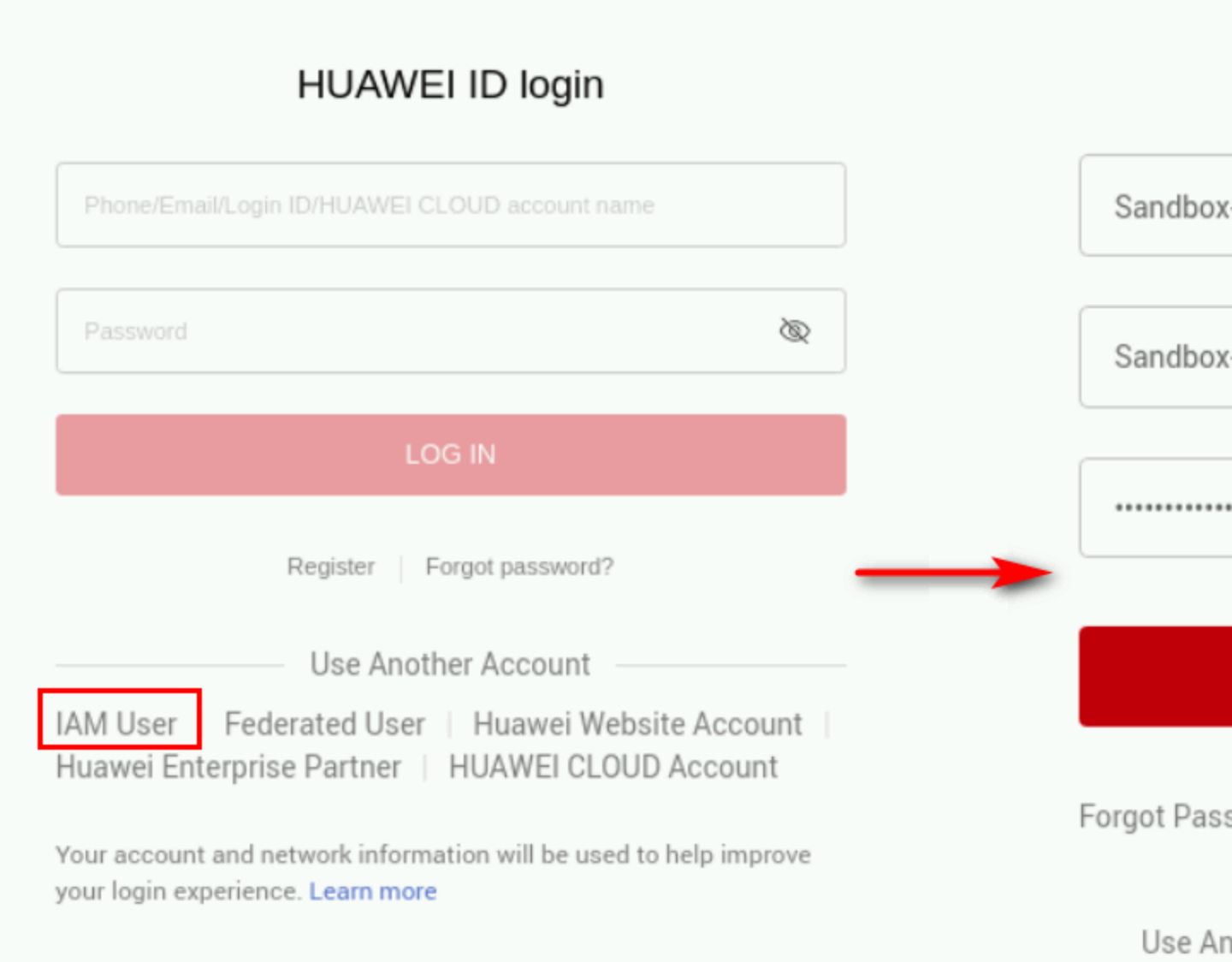
Compute Service Lab

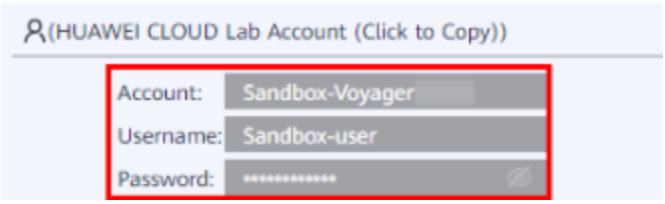
In this exercise, we will create both Windows and Linux ECSs.

Question: What is [Lab Desktop]?

Go to the [Lab Desktop] and open the Google Chrome browser to access the HUAWEI CLOUD log in page. Select IAM User Login. In the login dialog box, enter the assigned HUAWEI CLOUD lab ac count and password to log in to HUAWEI CLOUD, as shown in the following figure.



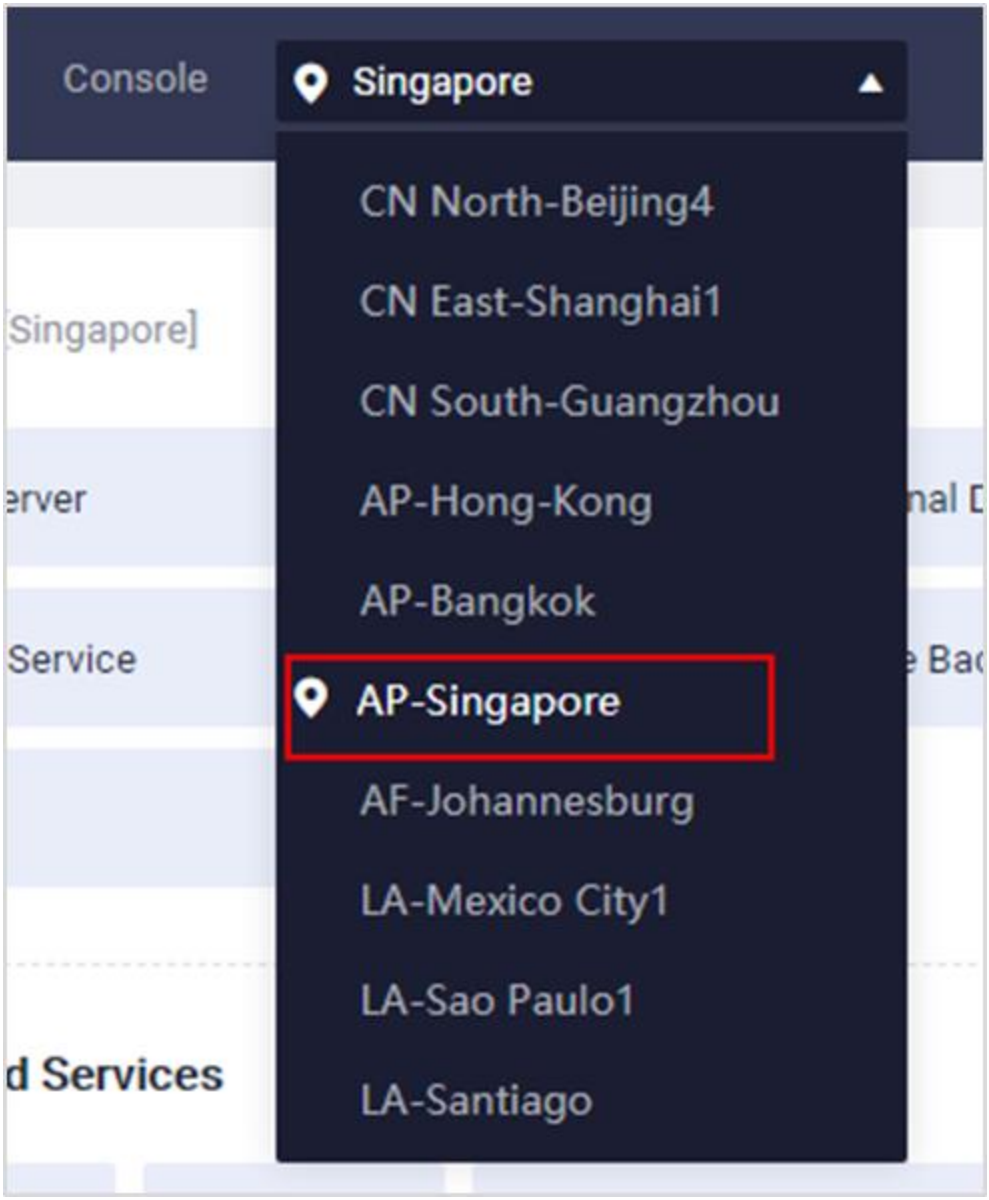
Note: For details about the account information, see the upper part of the lab manual. Do not use your HUAWEI CLOUD account to log in.



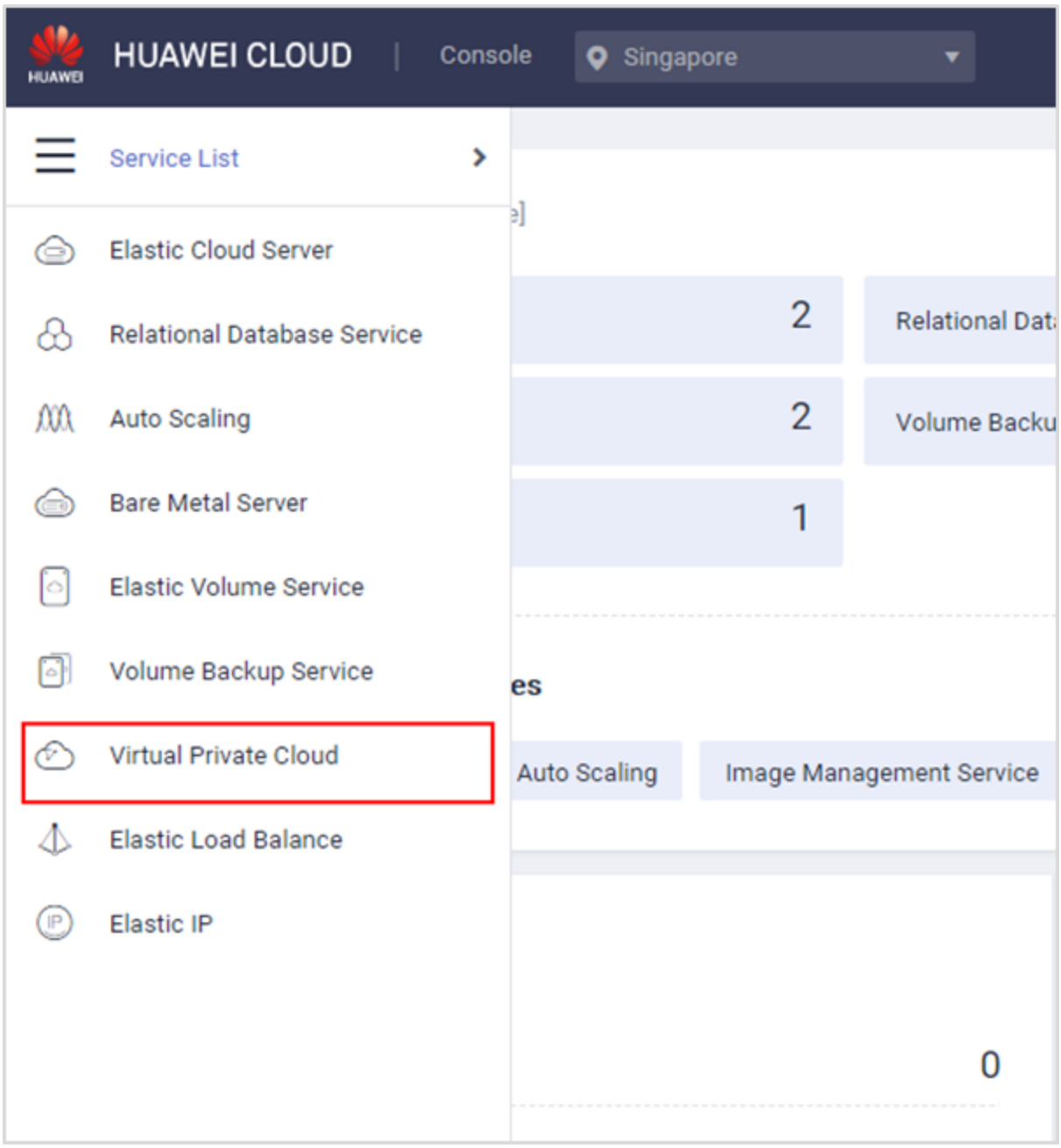
1.1 Creating Two Types of ECSs

Q: What is a VPC?

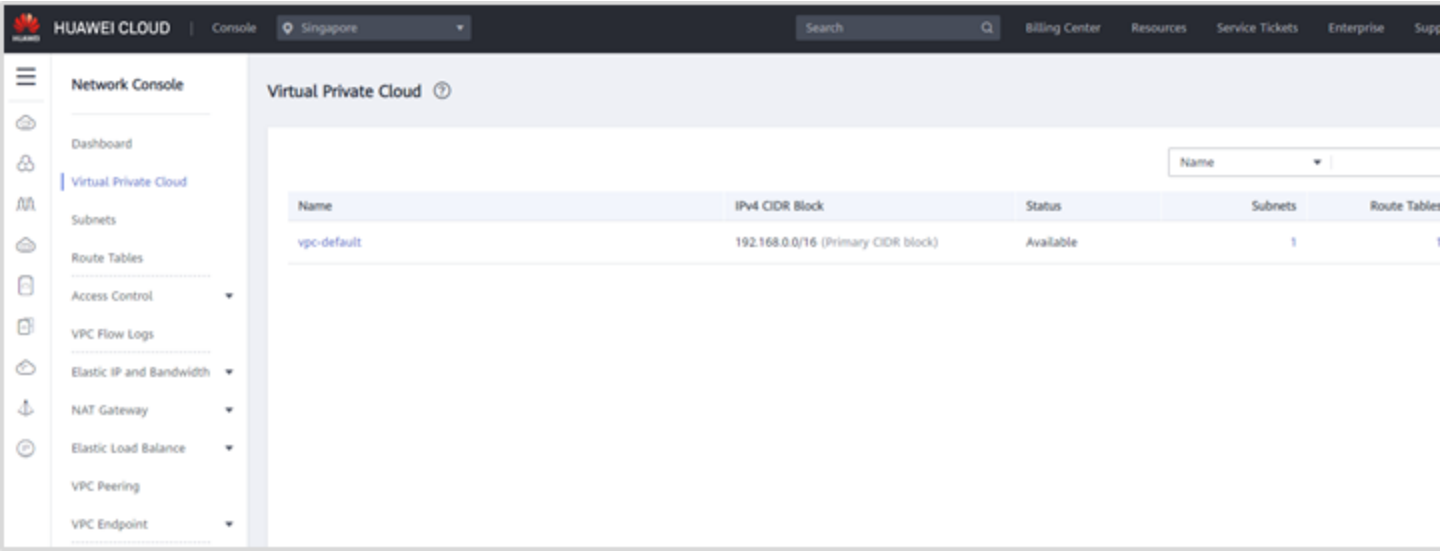
Step 1 Log in to the HUAWEI CLOUD console, and choose the **AP-Singapore** region.



Step 2 In Service List on the left, choose Virtual Private Cloud.



Step 3 Click **Create VPC**.



Step 4 Configure the VPC parameters as follows and click **Create Now**.

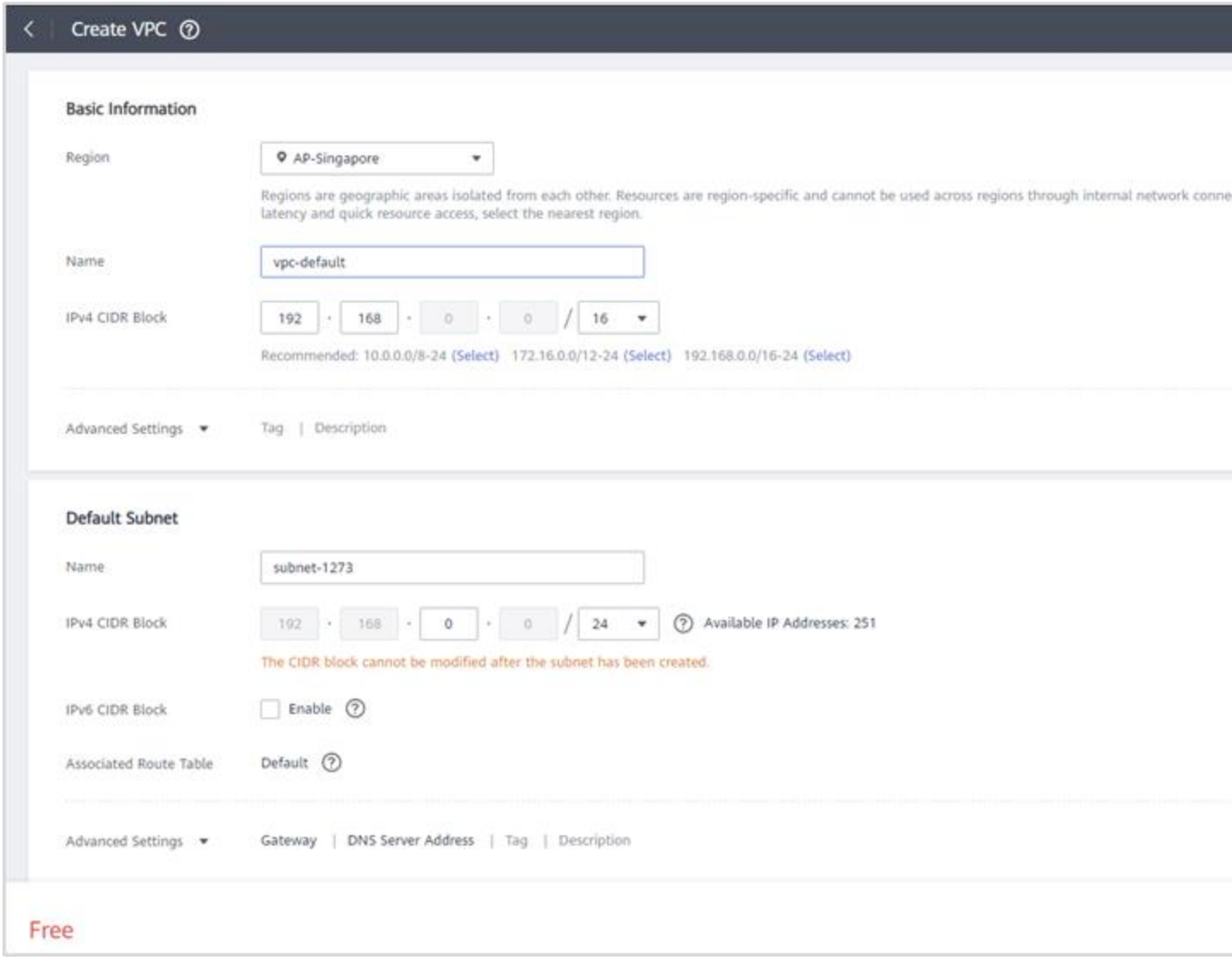
Basic Information

- **Region**: **AP-Singapore**
- **Name**:vpc-WP
- **IPv4 CIDR Block**: 192.168.0.0/16

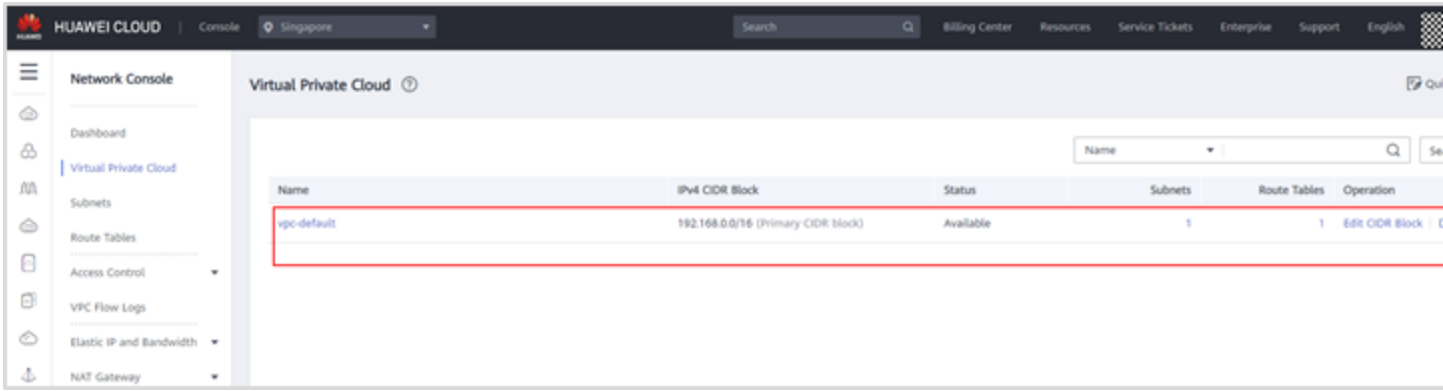
Default Subnet

- **AZ**:**AZ1**
- **Name**: subnet-WP
- **IPv4 CIDR Block**: 192.168.0.0/24
- Retain the default settings for other parameters.

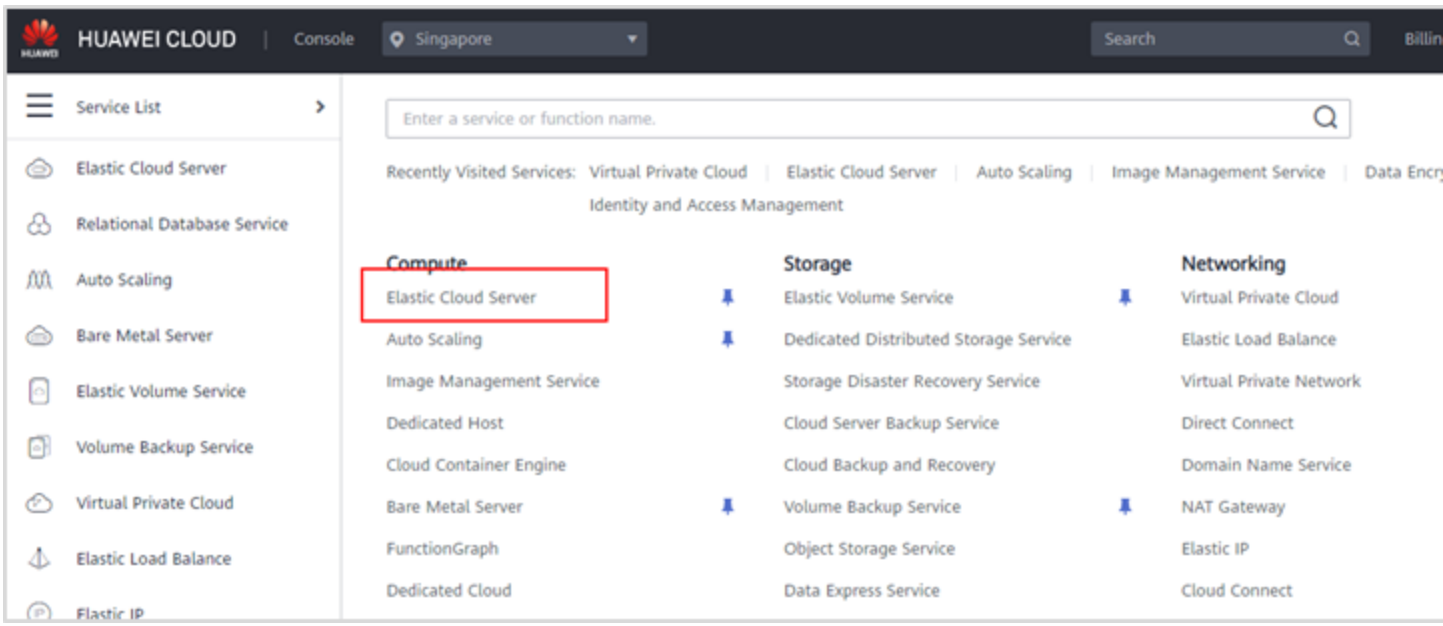
Note: Replace the VPC name vpc-WP and the default subnet name subnet-WP with the account name assigned by the system, for example, vpc-Sandbox-voyager002 and subnet-Sandbox-voyager002.



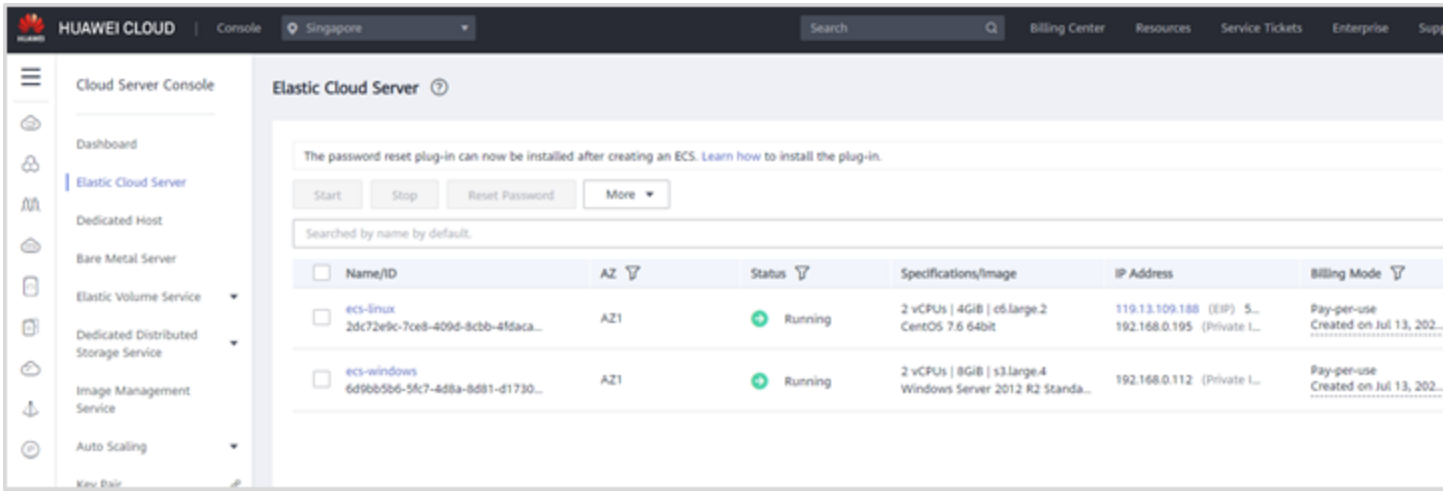
Step 5 Switch to **Virtual Private Cloud** page and view the created VPC.



Step 6 Click **Service List** on the left and choose **Compute > Elastic Cloud Server.**



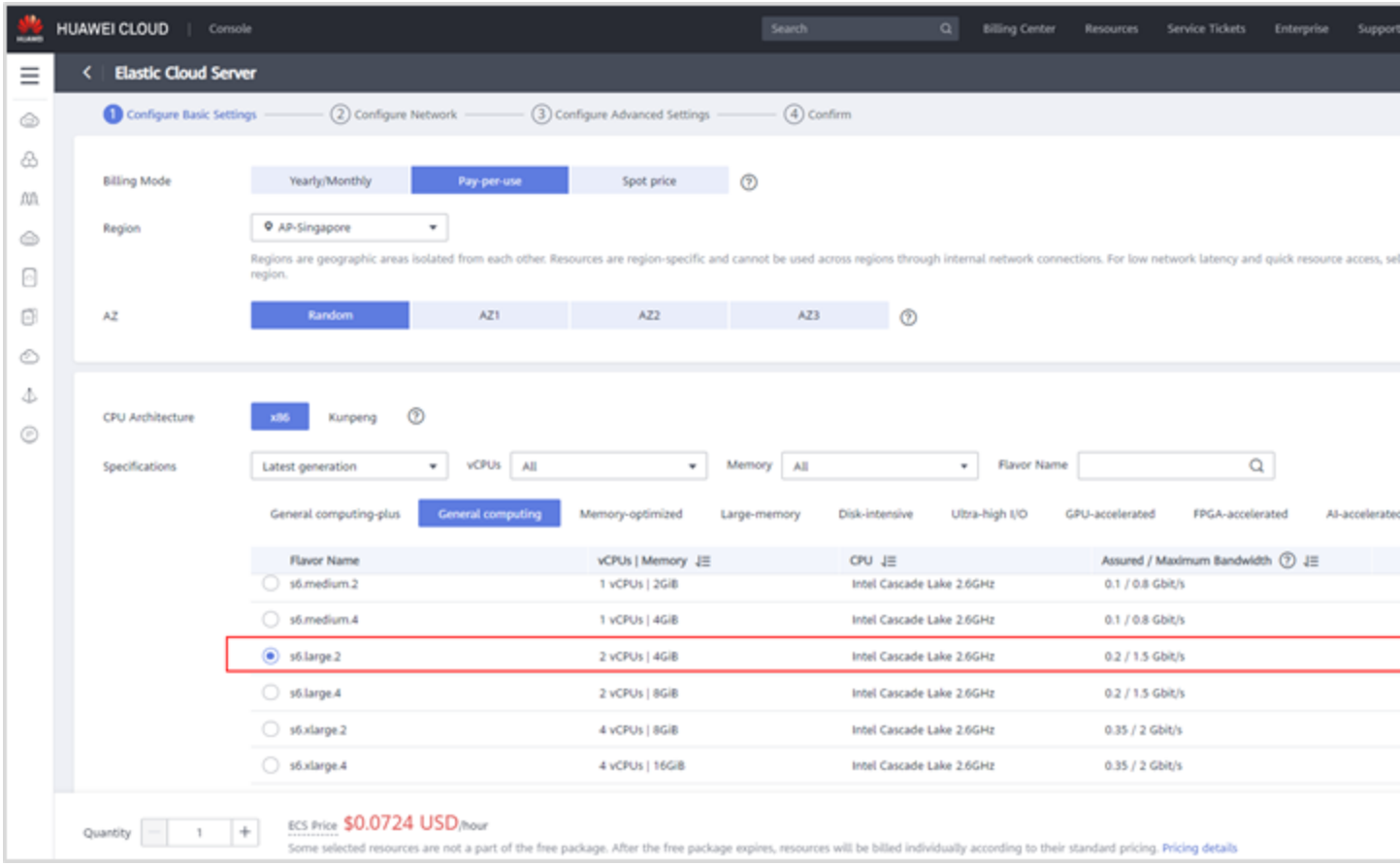
Step 7 Click **Buy ECS**.



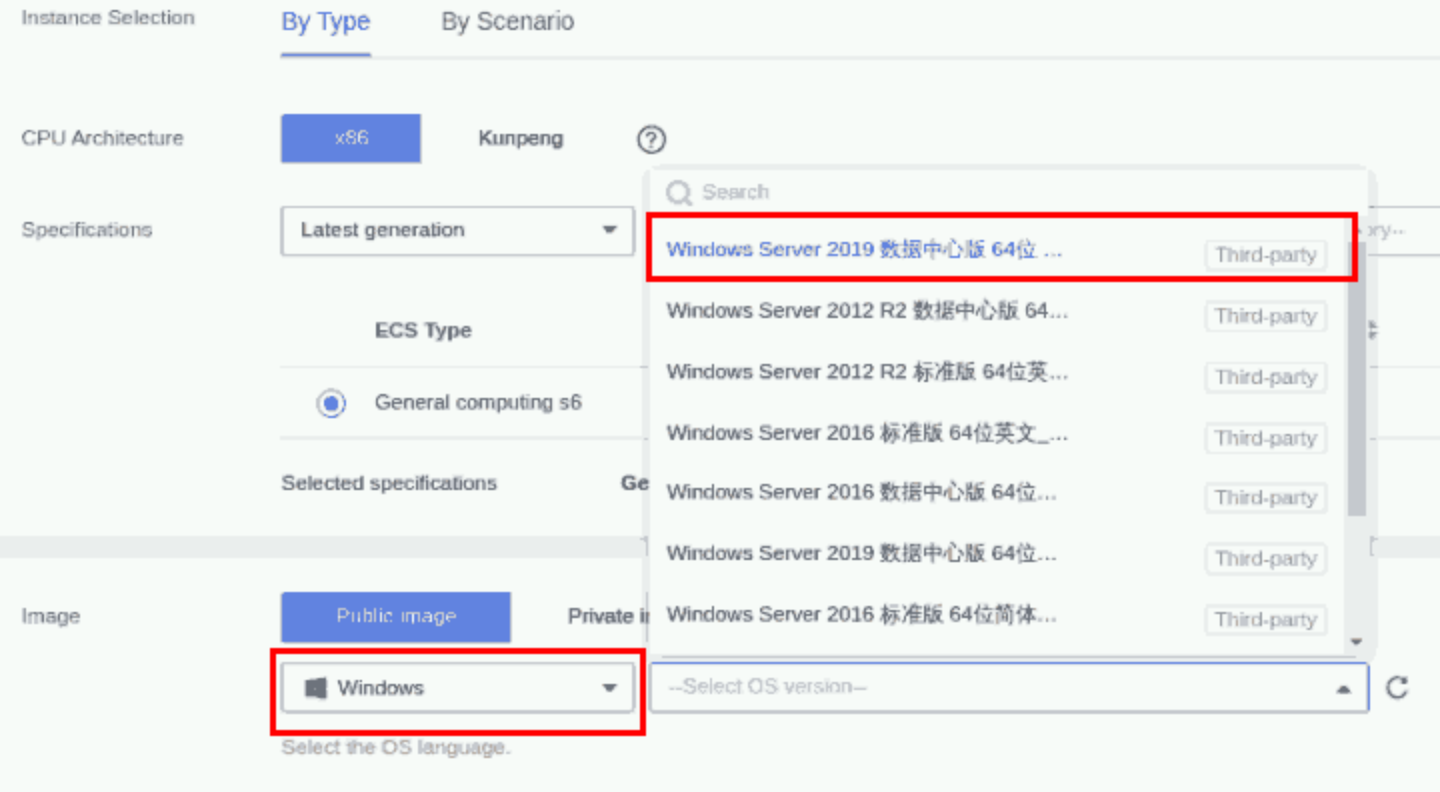
Step 8 Configure basic settings as follows:

- **Billing Mode**: **Pay-per-use**
- **Region**: **AP-Singapore**
- **AZ**: **Random**
- **CPU Architecture**: **x86**
- **Specifications**: **General computing, s6.large.2, 2 vCPUs | 4 GB** (configure based on your requ

irements)

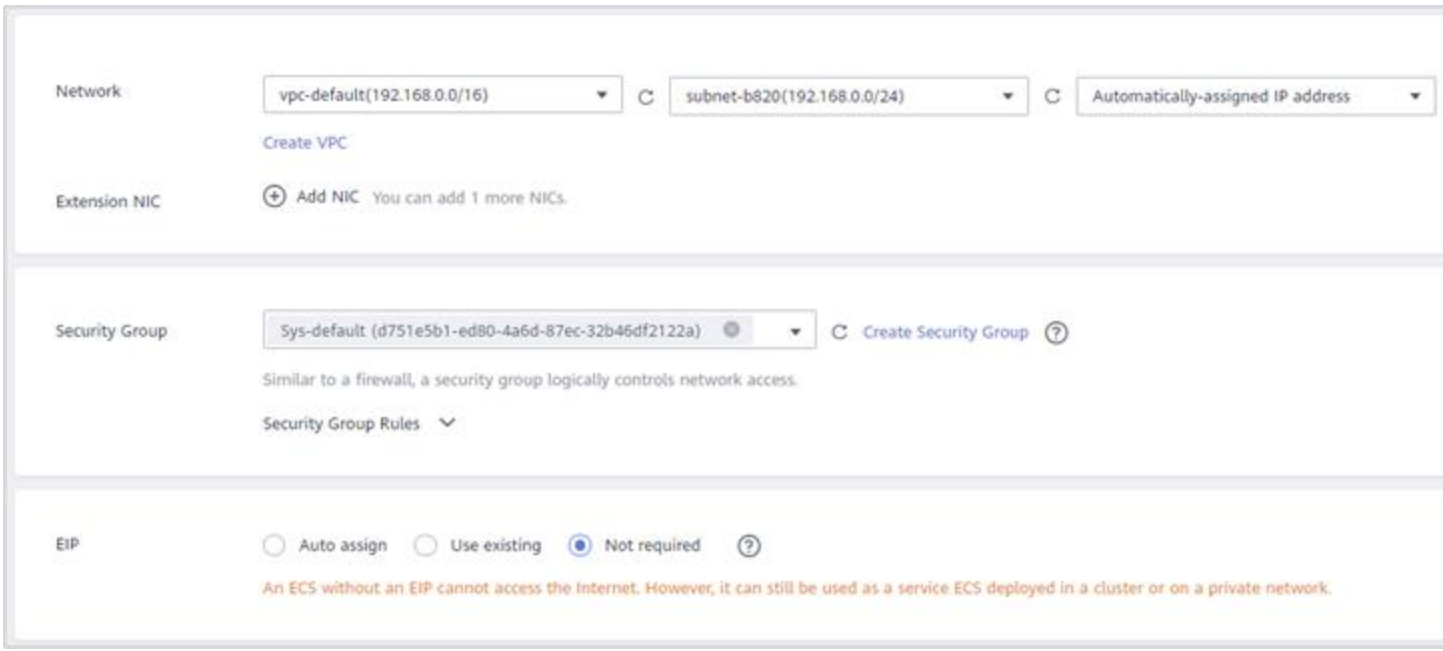


- **Image**: **Public Image, Windows, Windows Server 2012 R2 Standard 64bit English(40 GB)**
- **Host Security**: Select **Enable** (basic edition for this exercise).
- **System Disk**: **High I/O, 40 GB**



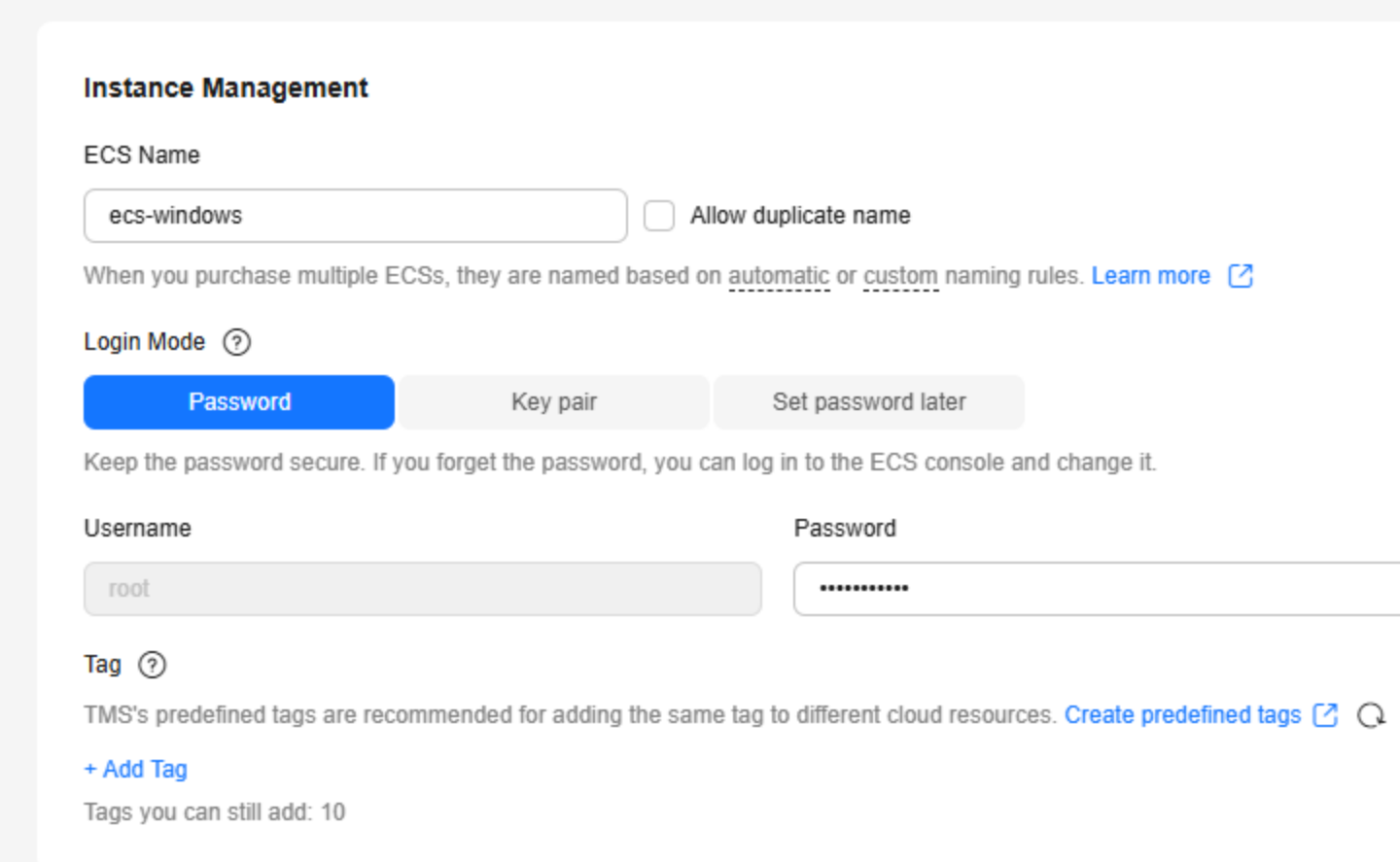
Step 9 Click **Next**: **Configure Network**. The **Configure Network** page is displayed. Configure the parameters as follows:

- **Network**: Choose the created VPC.
- **Extension NIC**: Retain the default settings.
- **Security Group**: Retain the default settings.
- **EIP**: **Not required**

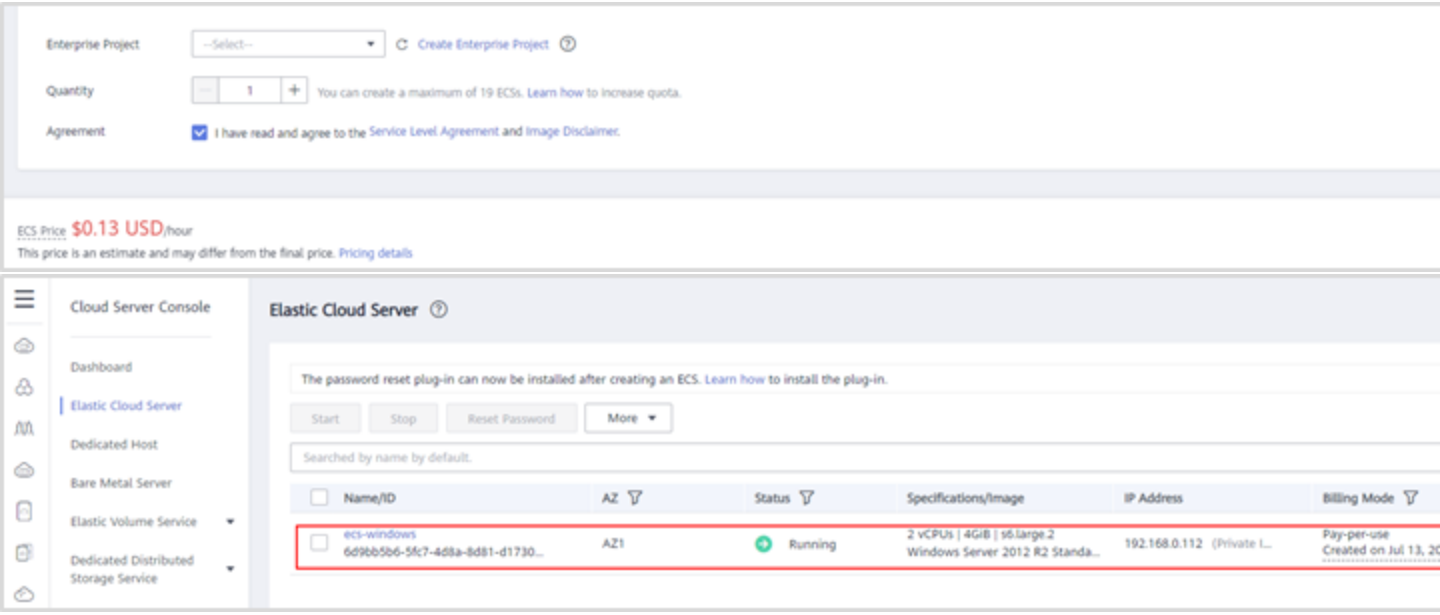


Step 10 Click **Next: Configure Advanced Settings.** The **Configure Advanced Settings** page is displayed. Configure the parameters as follows:

- **ECS Name**: **ecs-windows** (Change as required.)
- **Login Mode**: **Password**
- **Password**: Enter a password, for example, Huawei@1234
- **Cloud Backup and Recovery**: **Not required**
- **ECS Group (Optional)**: Retain the default settings.
- **Advanced Options**: Retain the default settings.

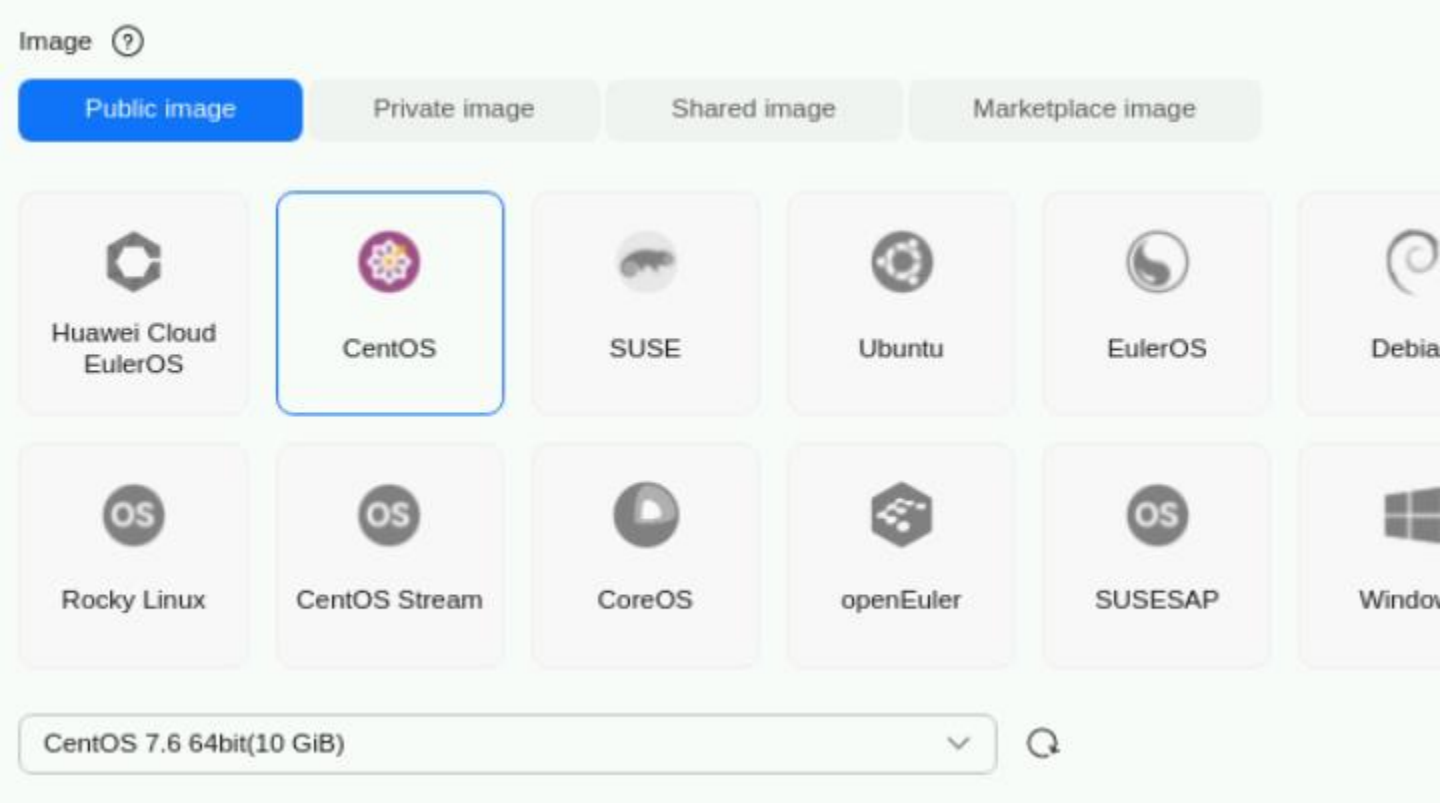


Step 11 Click **Next: Confirm.**After confirming the ECS configurations, select **I have read and agre e to the Service Level Agreement and Image Disclaimer**, and click **Submit**. After about 10 seco nds, you can view the created ECS on the **Elastic Cloud Server** page. If the **Status** is **Running**, the ECS can work normally.



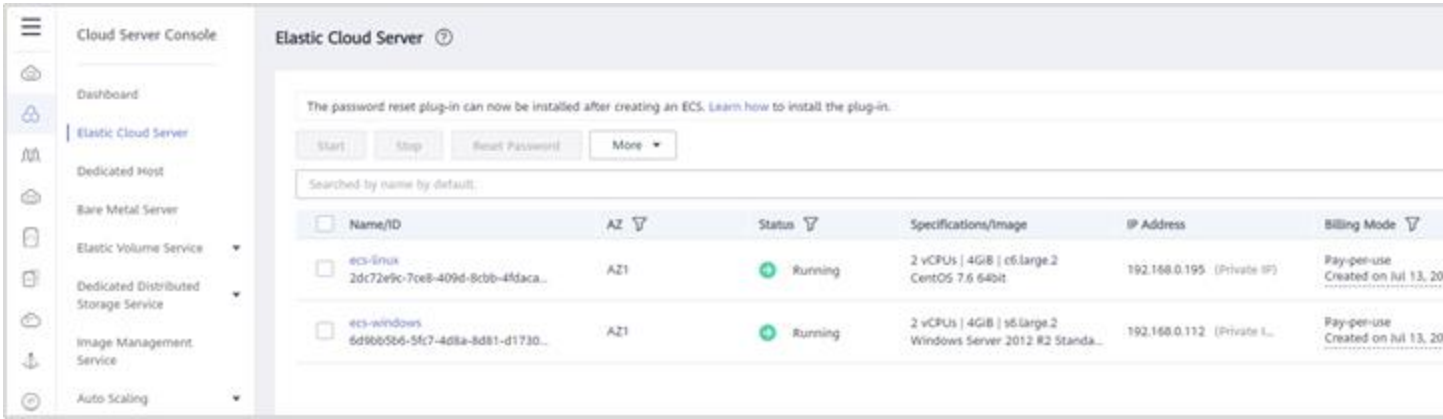
Step 12 Create a Linux ECS. Configure the parameters the same as creating the Windows ECS, exc ept for **ECS Name**, **Image**, and **Login Mode** (choose Password， EIP: Auto assign).

Image: Public image, CentOS, CentOS 7.6 64-bit



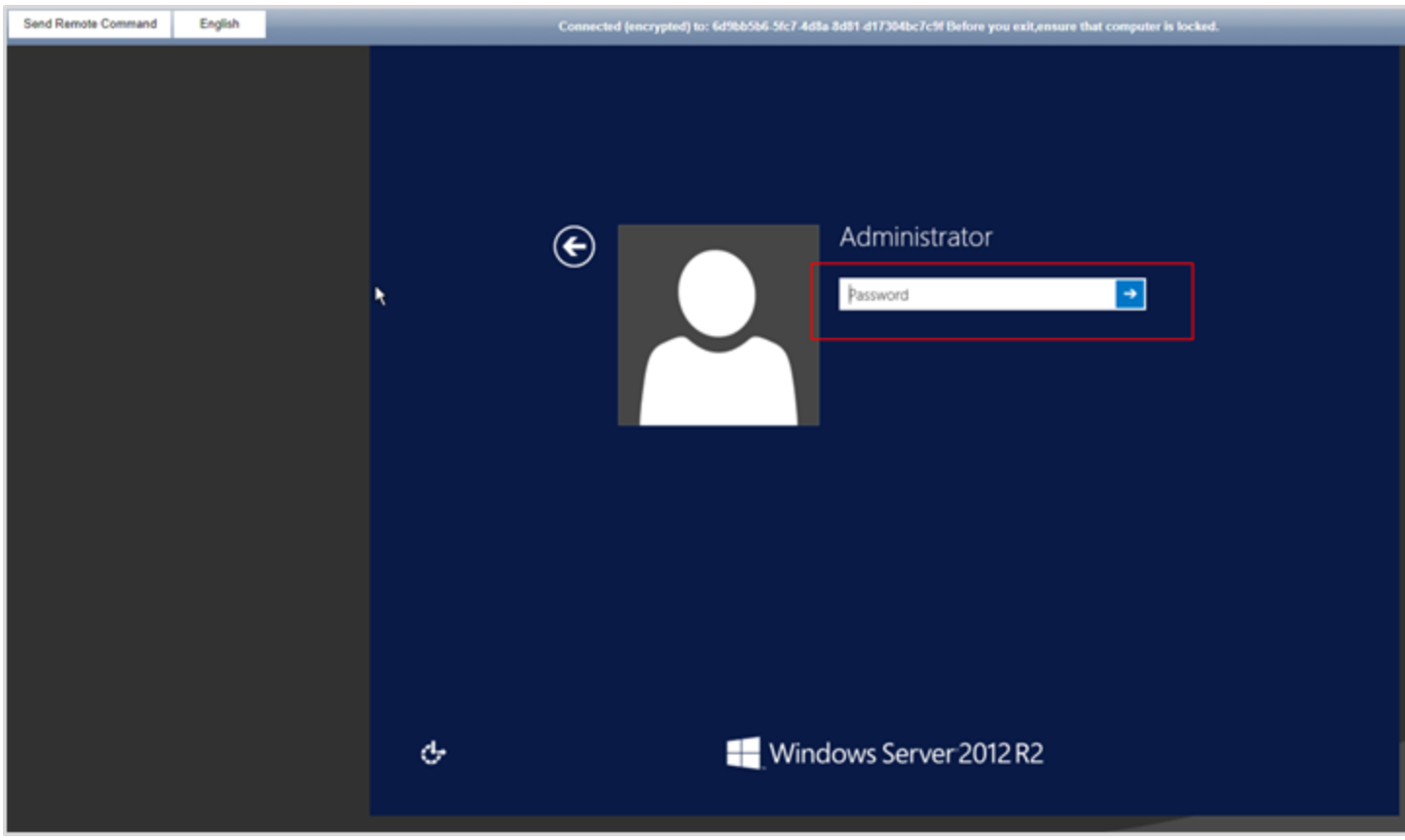
1.2 Logging In to an ECS

Step 1 On the **Elastic Cloud Server** page, you can view the ECS AZ and its status. Click **Remote L ogin** in the **Operation** column on the right.

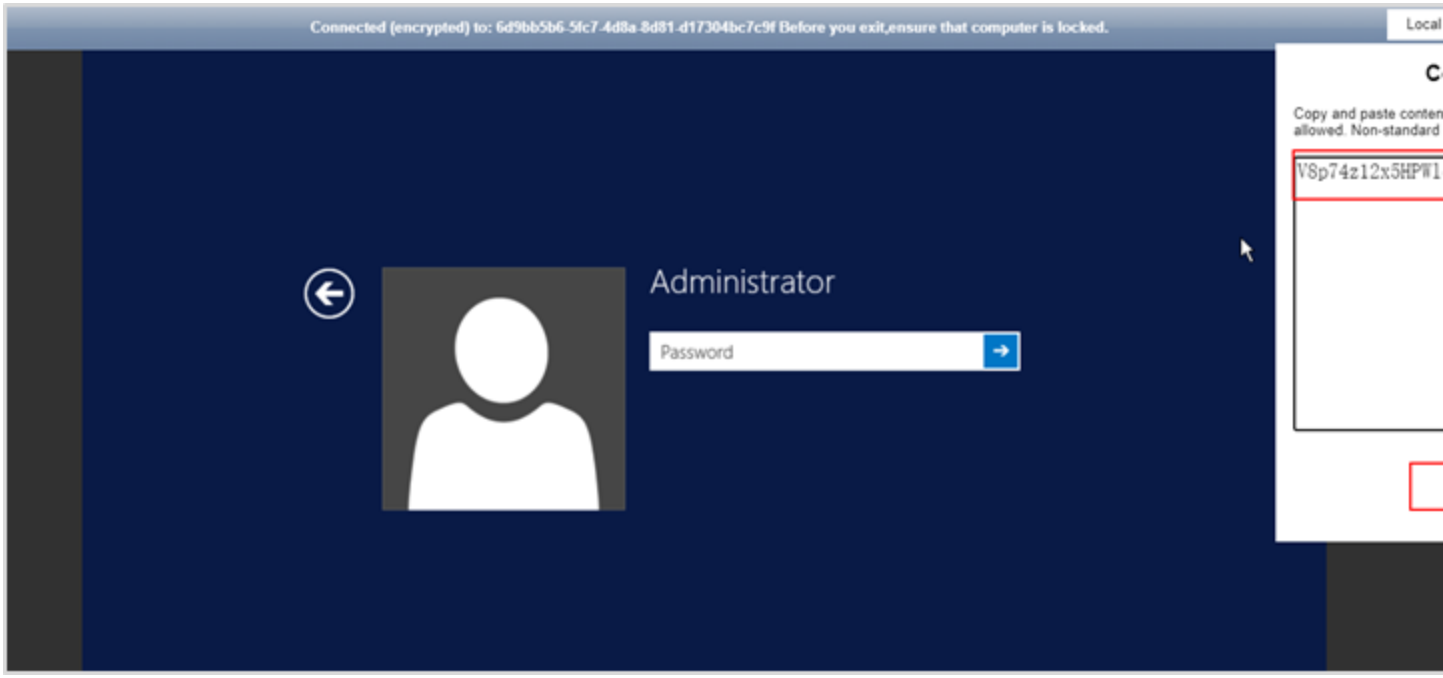


Step 2 Locate the row containing **ecs-windows**, click **Remote Login**, and click **Log In**.

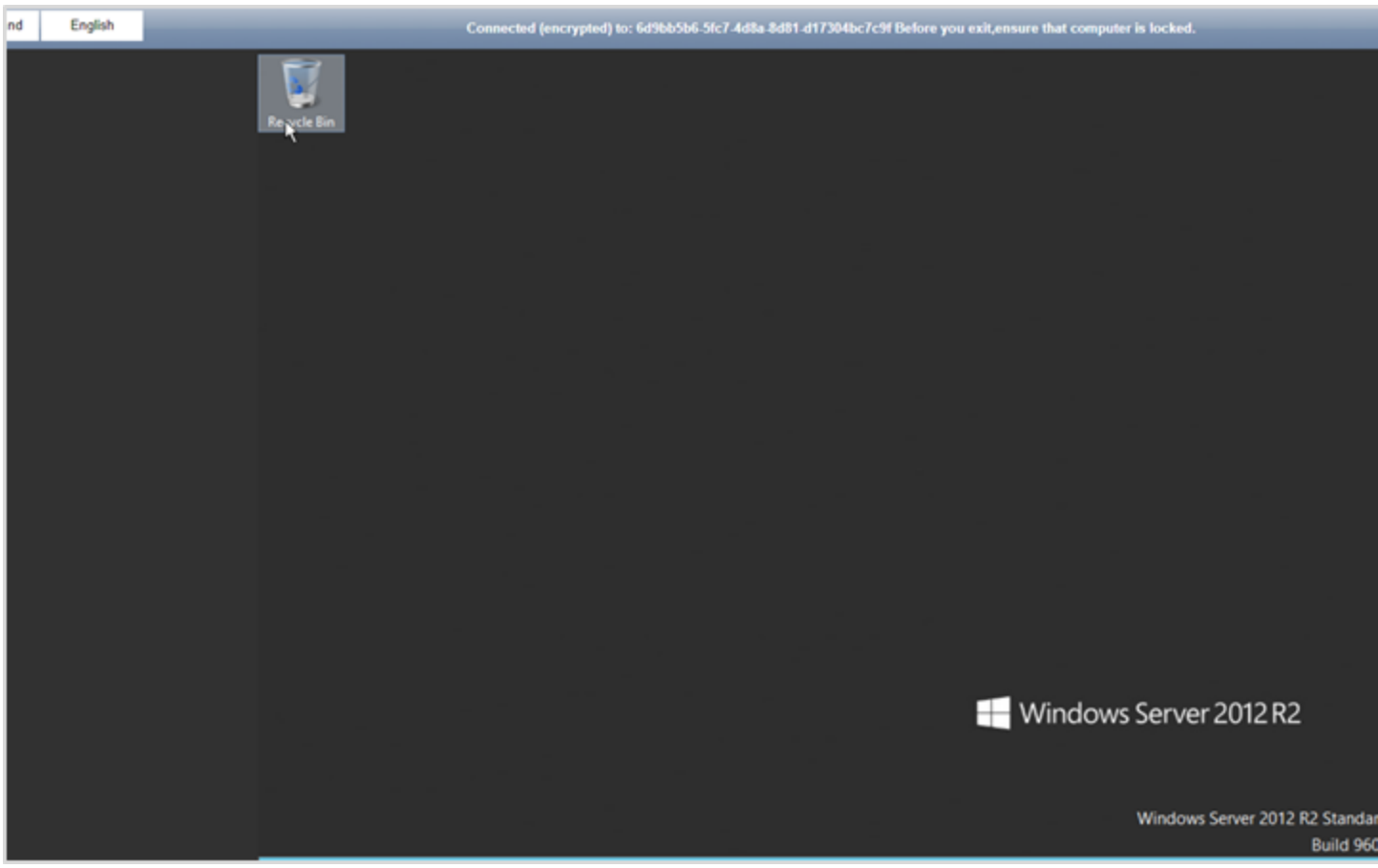
If Press Ctrl+Alt+Delete to sign in is displayed, click Send CtrlAltDel in the upper part of the remo te login page.



Step 3 Click **Input Commands** in the upper right corner, paste the copied password, click **Send**, and then press **Enter**.



Step 4 If a page similar to the one in following figure is displayed, the ECS login was successful.



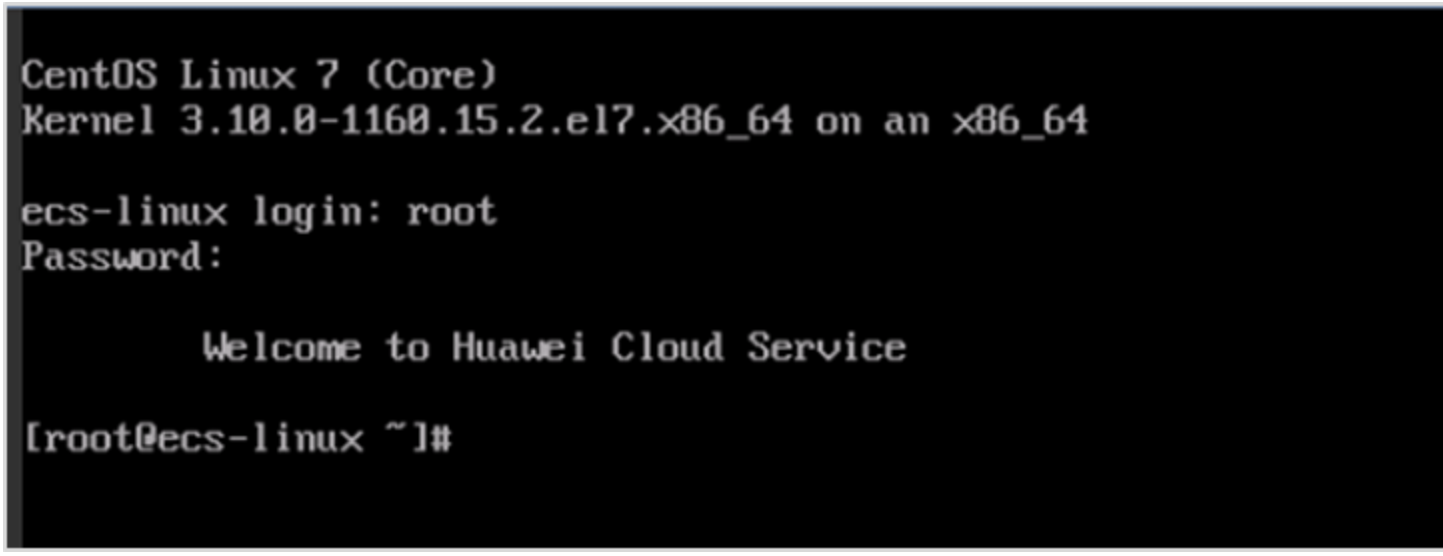
Step 5 In this exercise, there is no EIP bound to the Linux ECS. Therefore, you cannot use remote l ogin tools (SSH tool) to log in to the ECS. You can choose **Remote Login** in the row containing **ec s-linux**, and click **Log In** to log in to the ECS using VNC.

Linux:

ecs-linux login: root

Password: Enter a password, for example, Huawei@123.

Linux ECSs do not have a GUI. After you log in the Linux ECS remotely, enter root after ecs-li nux login, and then press Enter to input the password. The password is entered in ciphertext . Ensure that the password is correct before pressing Enter. If Welcome to Huawei Cloud Ser vice is displayed, the ECS login was successful.

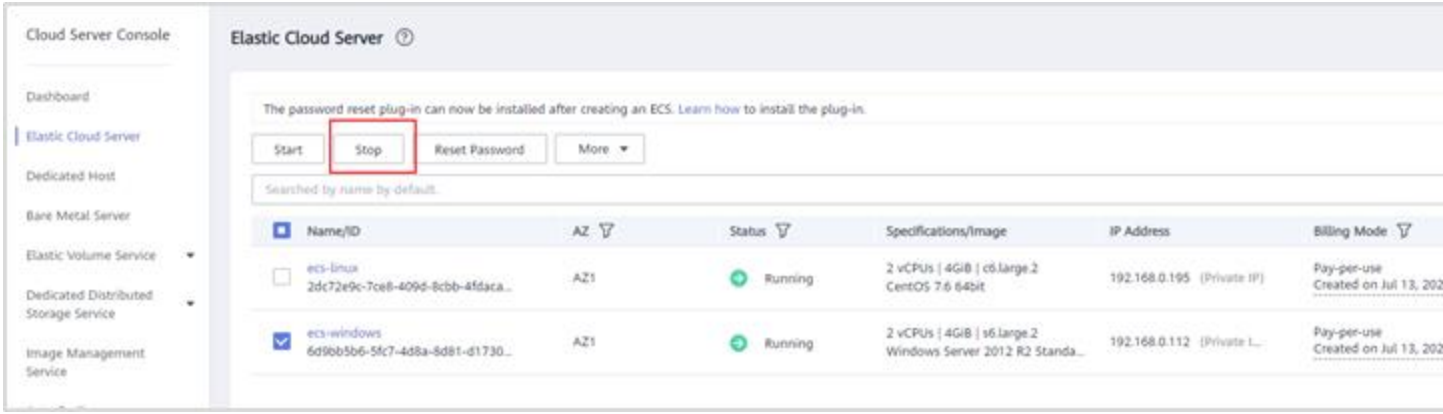


Step 6 If a page similar to the one in preceding figure is displayed, the Linux ECS login was succes sful.

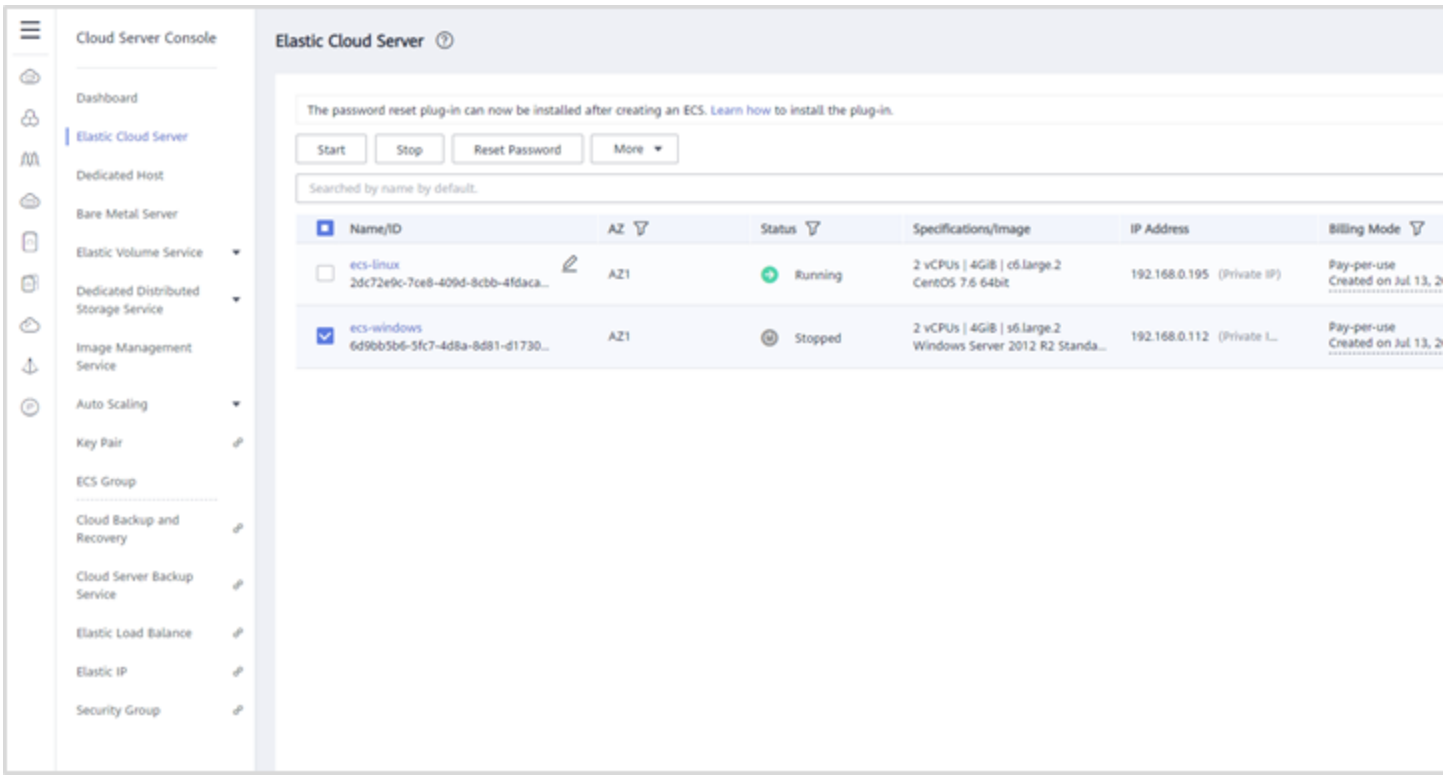
1.3 Modifying Windows ECS Specifications

Step 1 On the **Elastic Cloud Server** page, view the status of the target Windows ECS.

Step 2 If the ECS is not in the stopped state, select it and click **Stop**. If the **Stop ECS** page is displa yed, select **Forcibly stop the preceding ECSs** and click **Yes**.



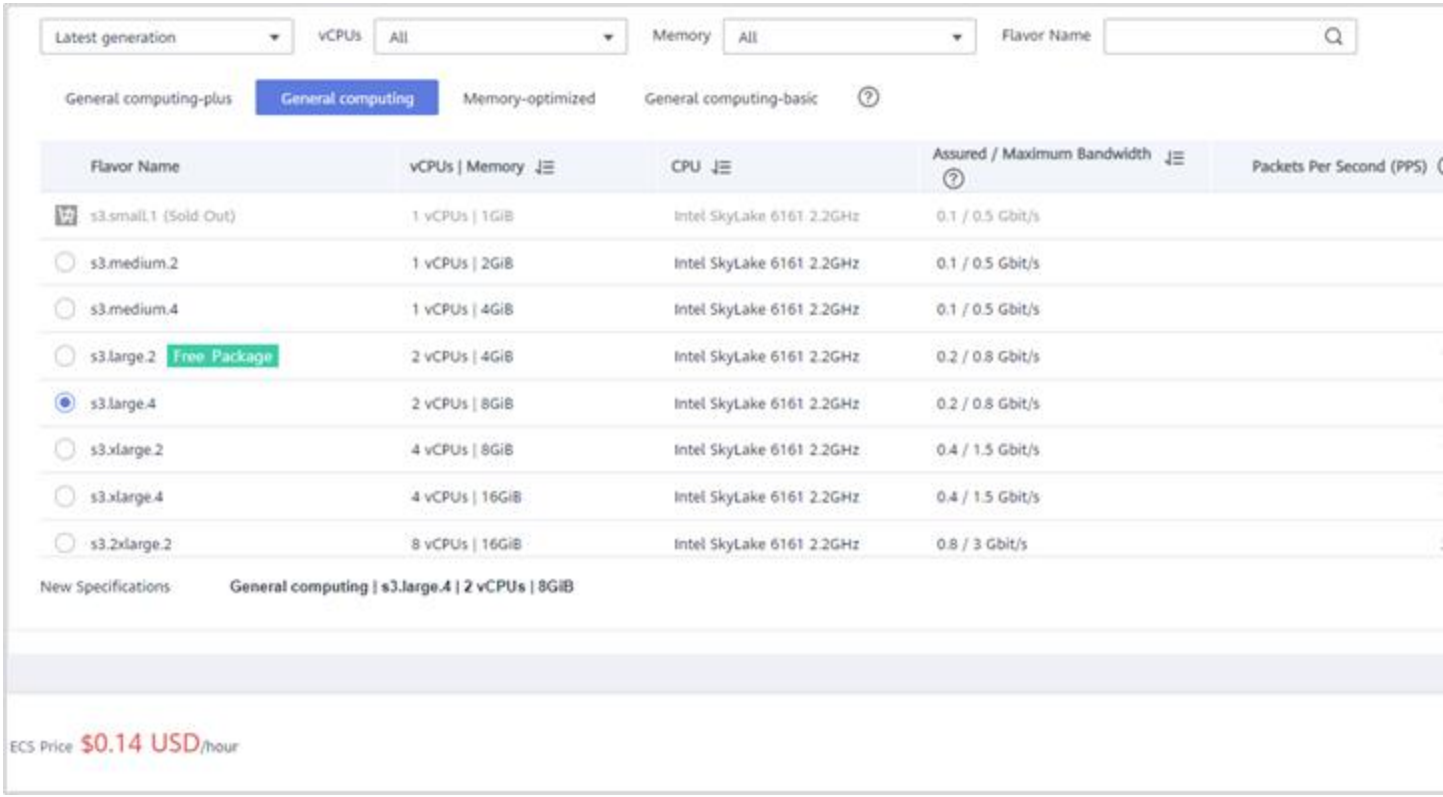
Step 3 After the ECS has stopped, click **More** in the **Operation** column of this ECS and choose **M odify Specifications**.



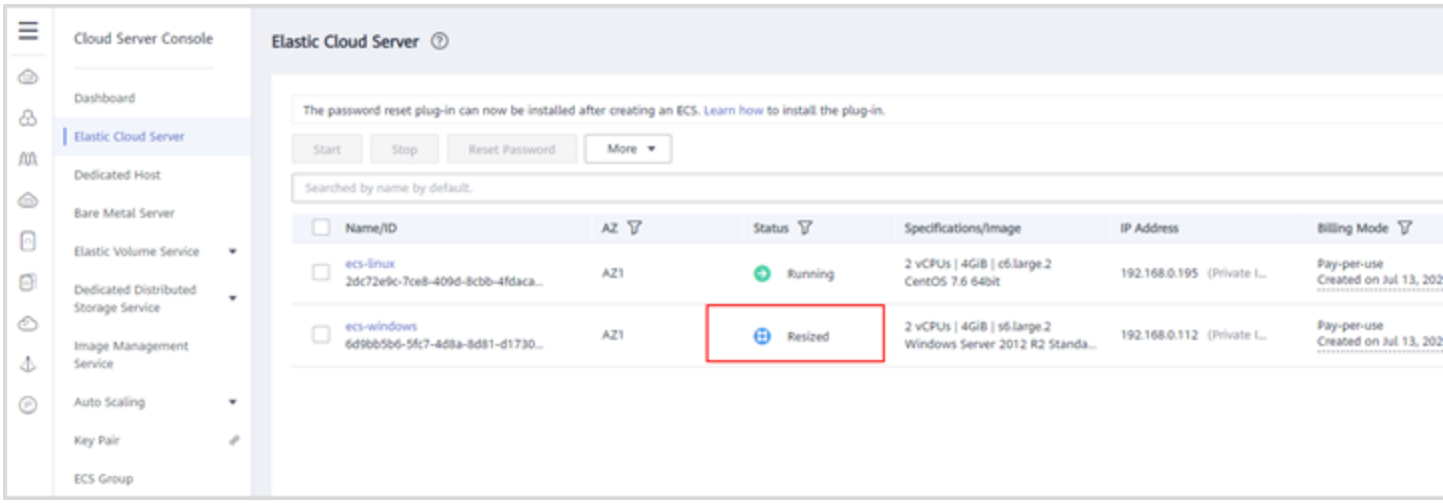
Step 4 In the **Modify Specifications** dialog box,

select the desired ECS type, vCPUs, and memory size based on service requirements. In this exerci

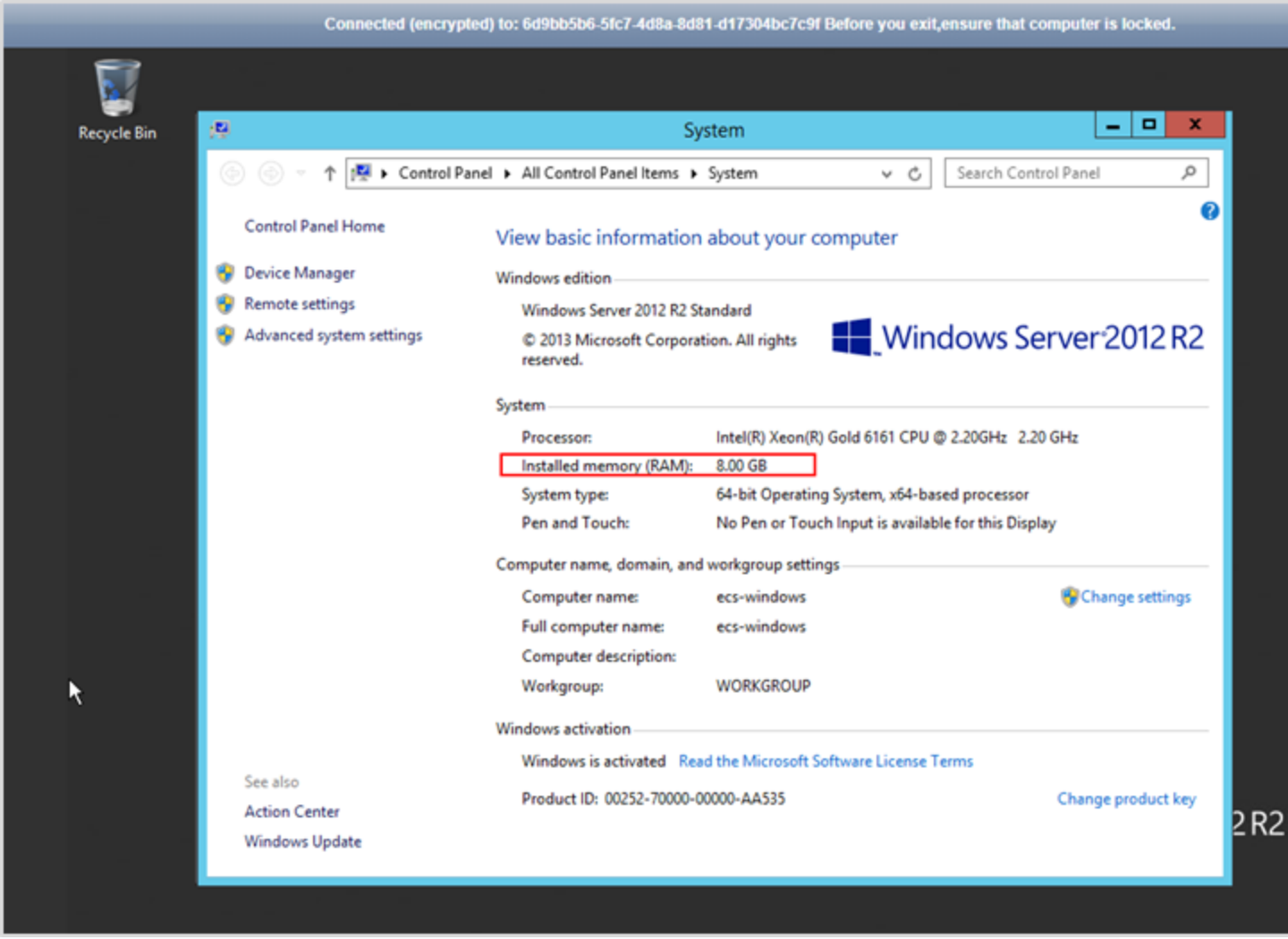
se, the memory size is changed from 4 GB to 8 GB. Click **Next**.



Step 5 After confirming the new ECS specifications,select **I have read and agree to the Image Disclaimer** and click **Submit**. Go to the **Elastic Cloud Server** page and you will see that the ECS status is **Resized**.



Step 6 Start the ECS. The ECS specifications have been modified.



2.Creating a Windows System Disk Image from an ECS

Show less

If you have created and configured a Windows ECS based on your service requirements (for example, by installing software and setting up an application environment), you can create a system disk image based on this configured ECS. Then, all new ECSs created from this image will have the same software and environment preinstalled.

To create a Windows system disk image using an ECS, you need to configure a Windows ECS and then use it to create a system disk image.

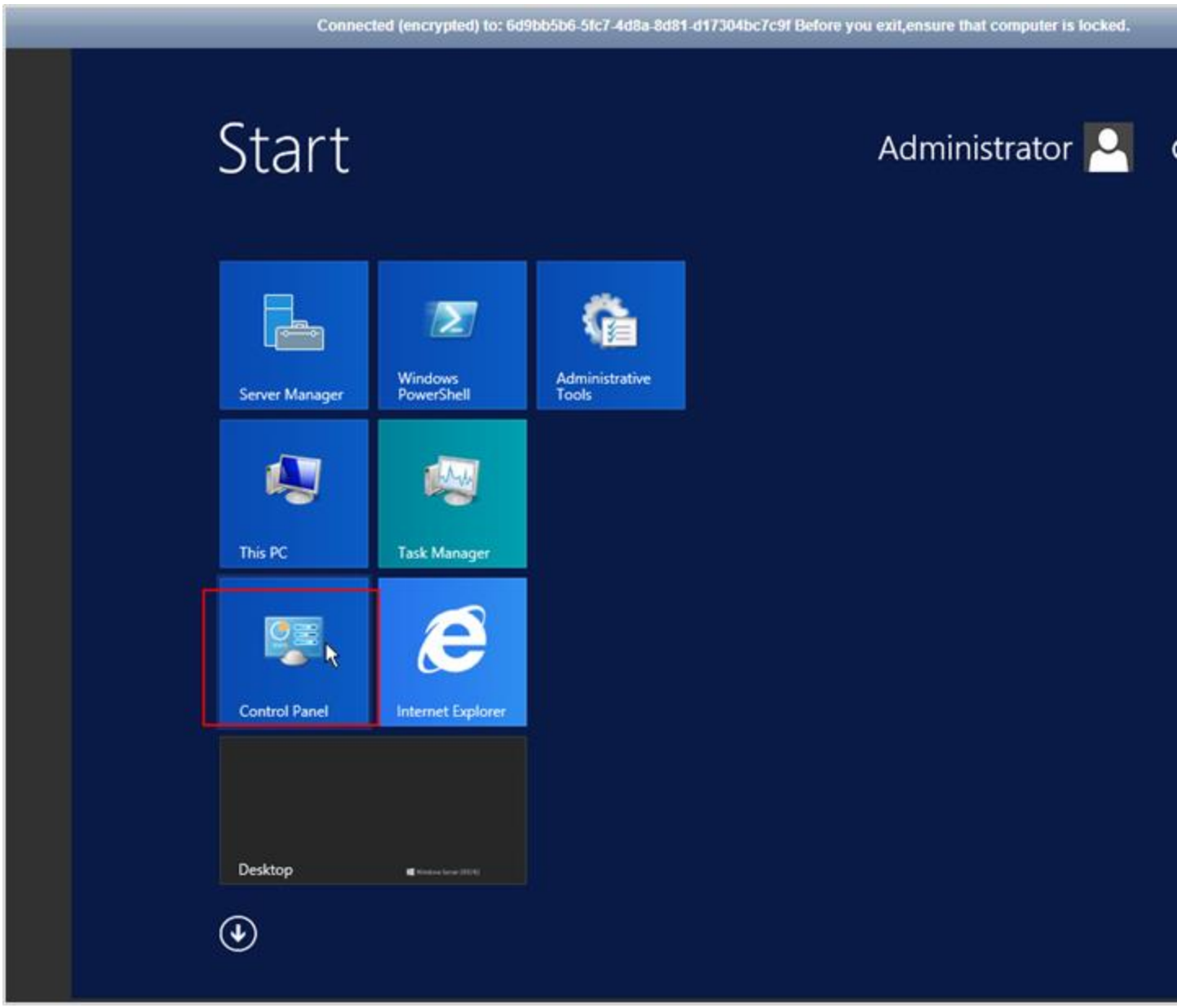
2.1 Configuring a Windows ECS

Take the ecs-windows ECS you created as an example.

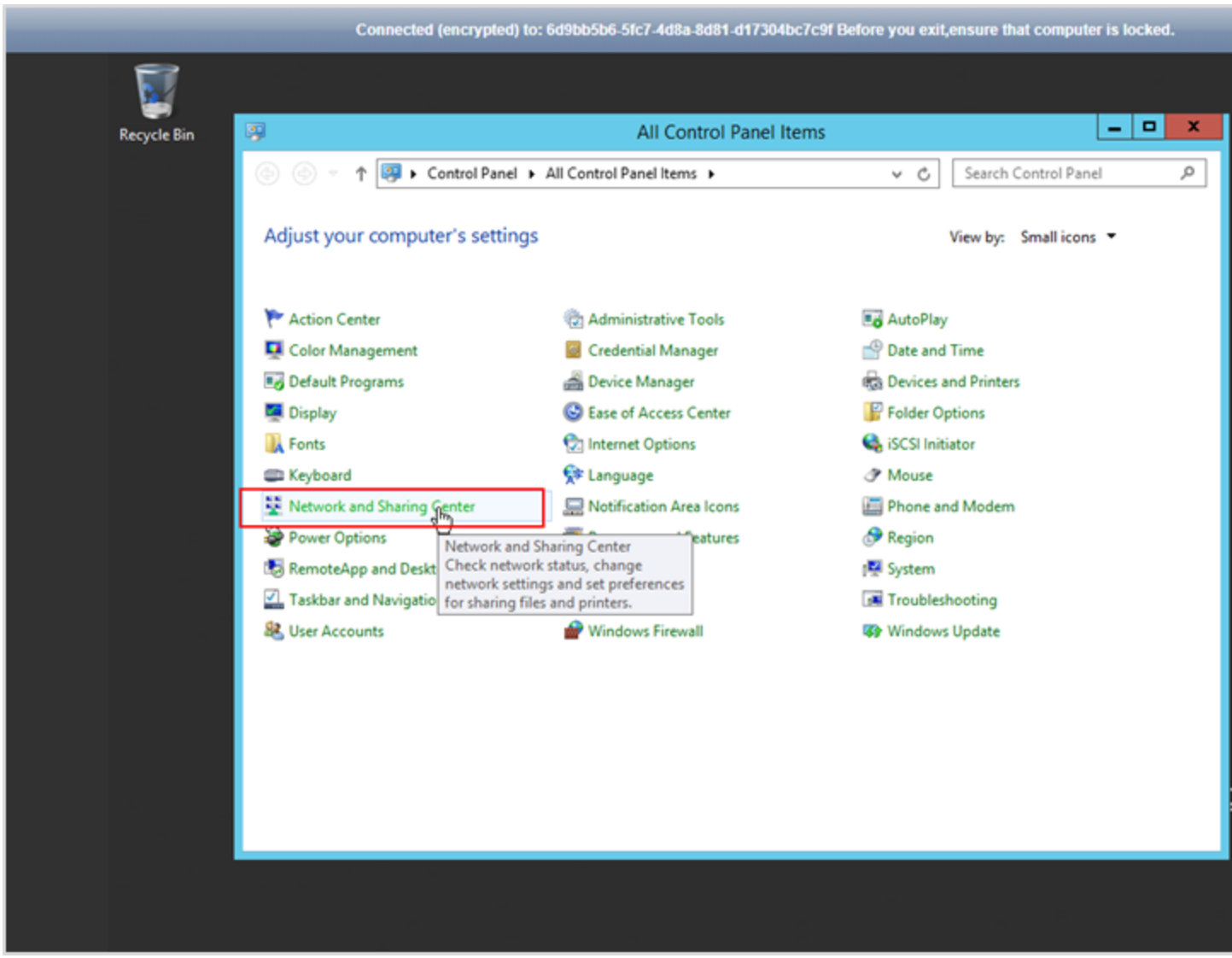
Step 1 Remotely log in to the ECS.

Step 2 Check whether DHCP is configured for the ECS NICs. If it is not, configure it.

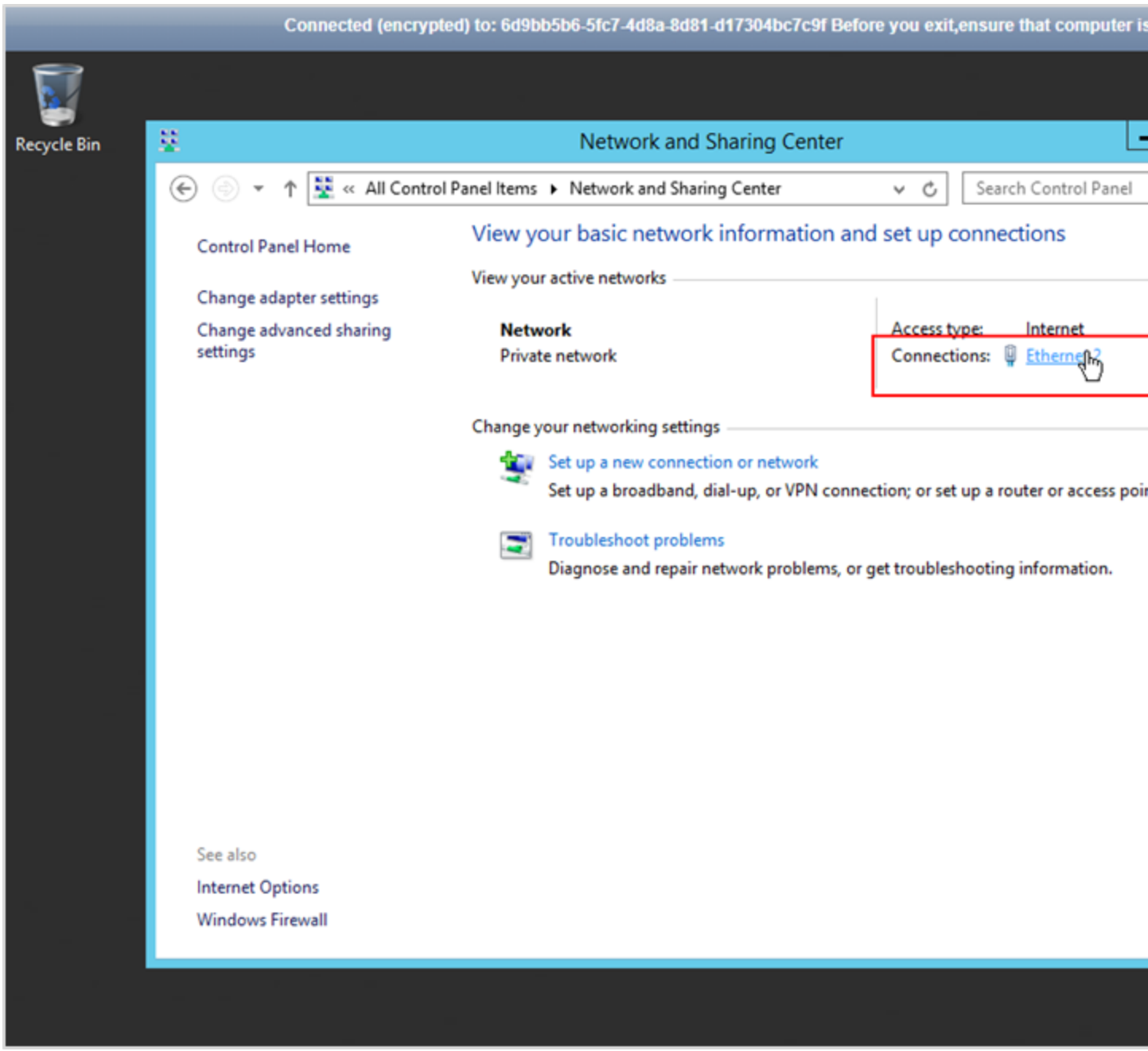
1. Choose Start > Control Panel. (The GUI varies somewhat depending on the OS version.)



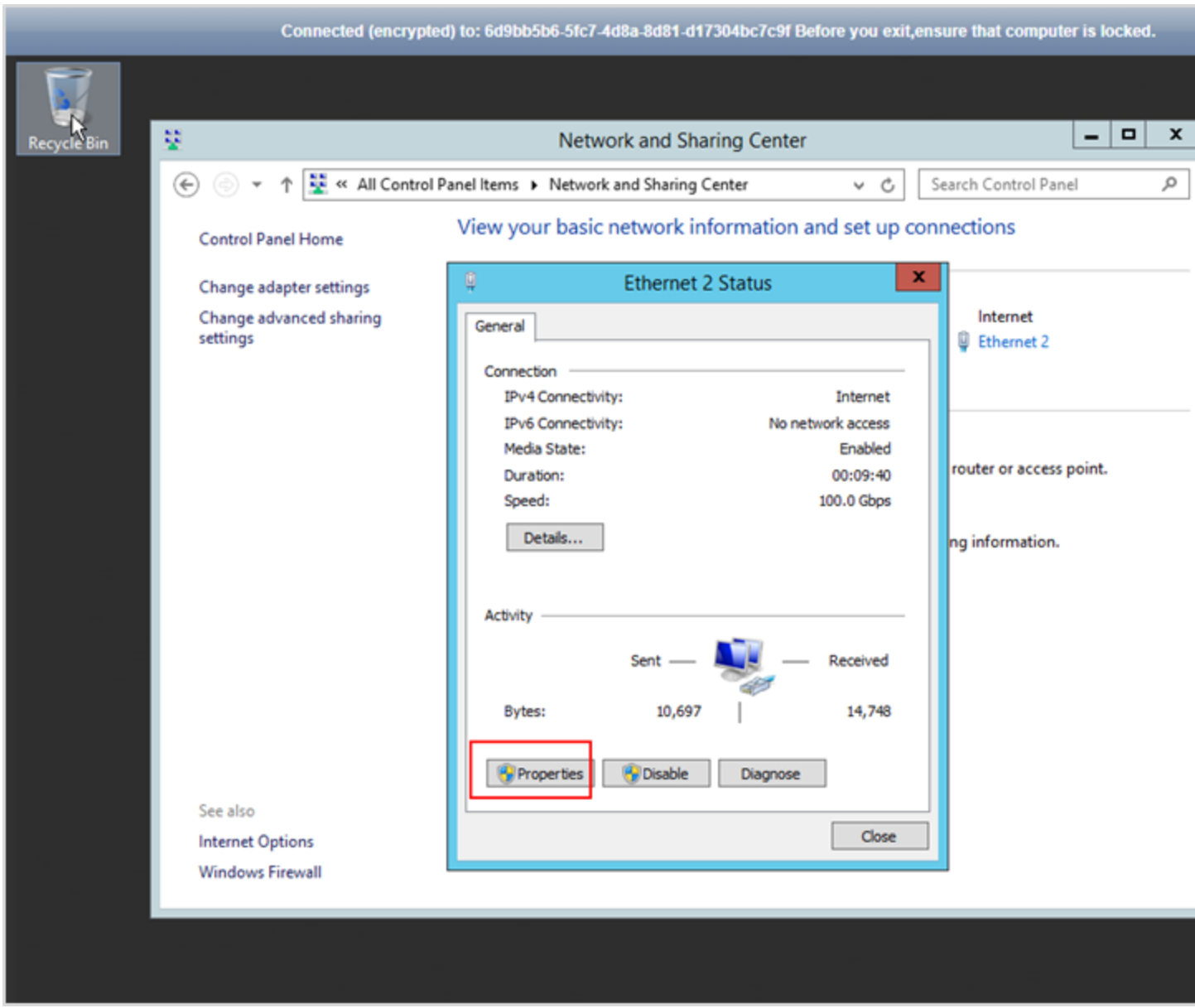
2. Click Network and Sharing Center.



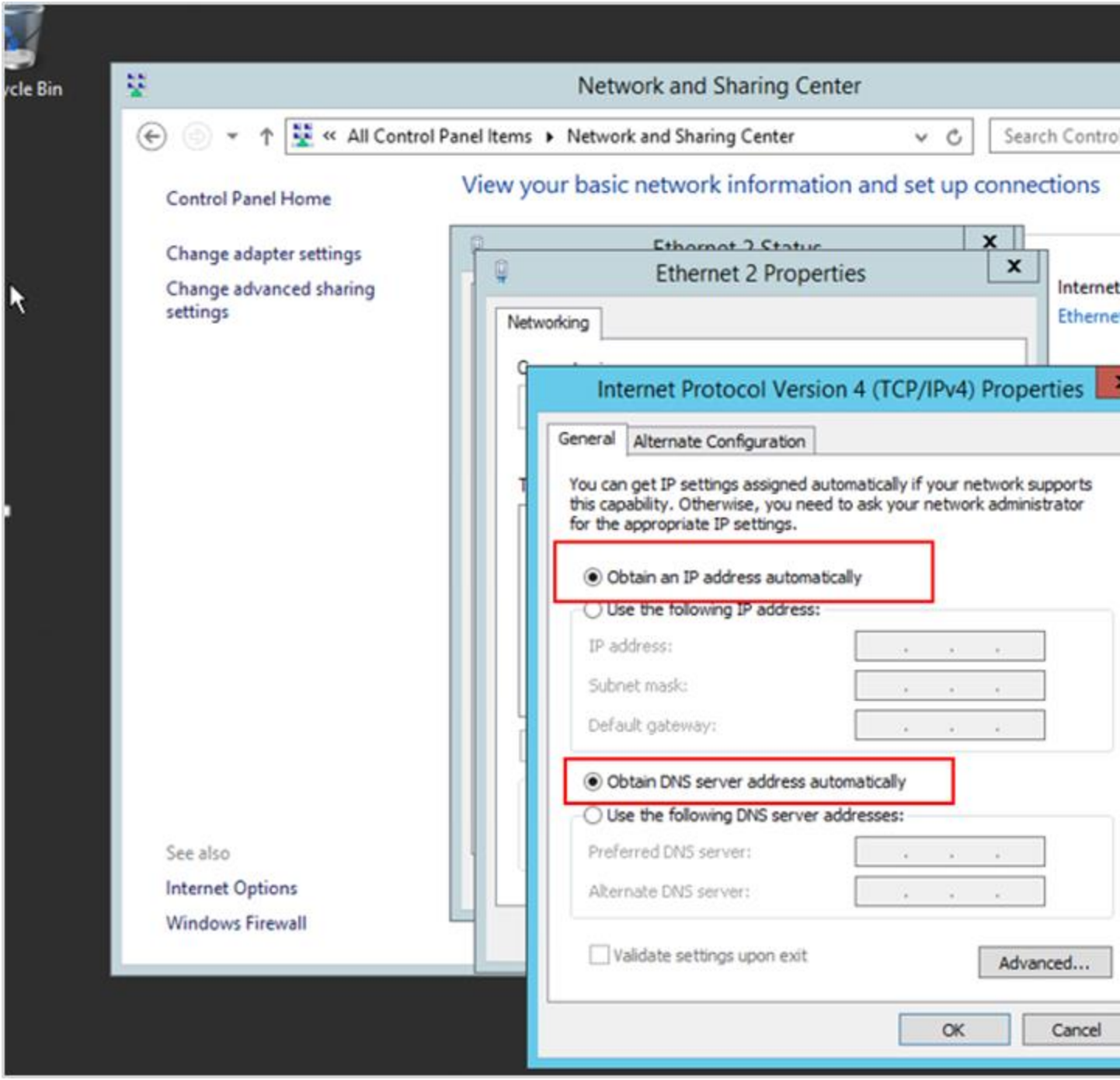
3. Click a network connection, for example, Ethernet 2.



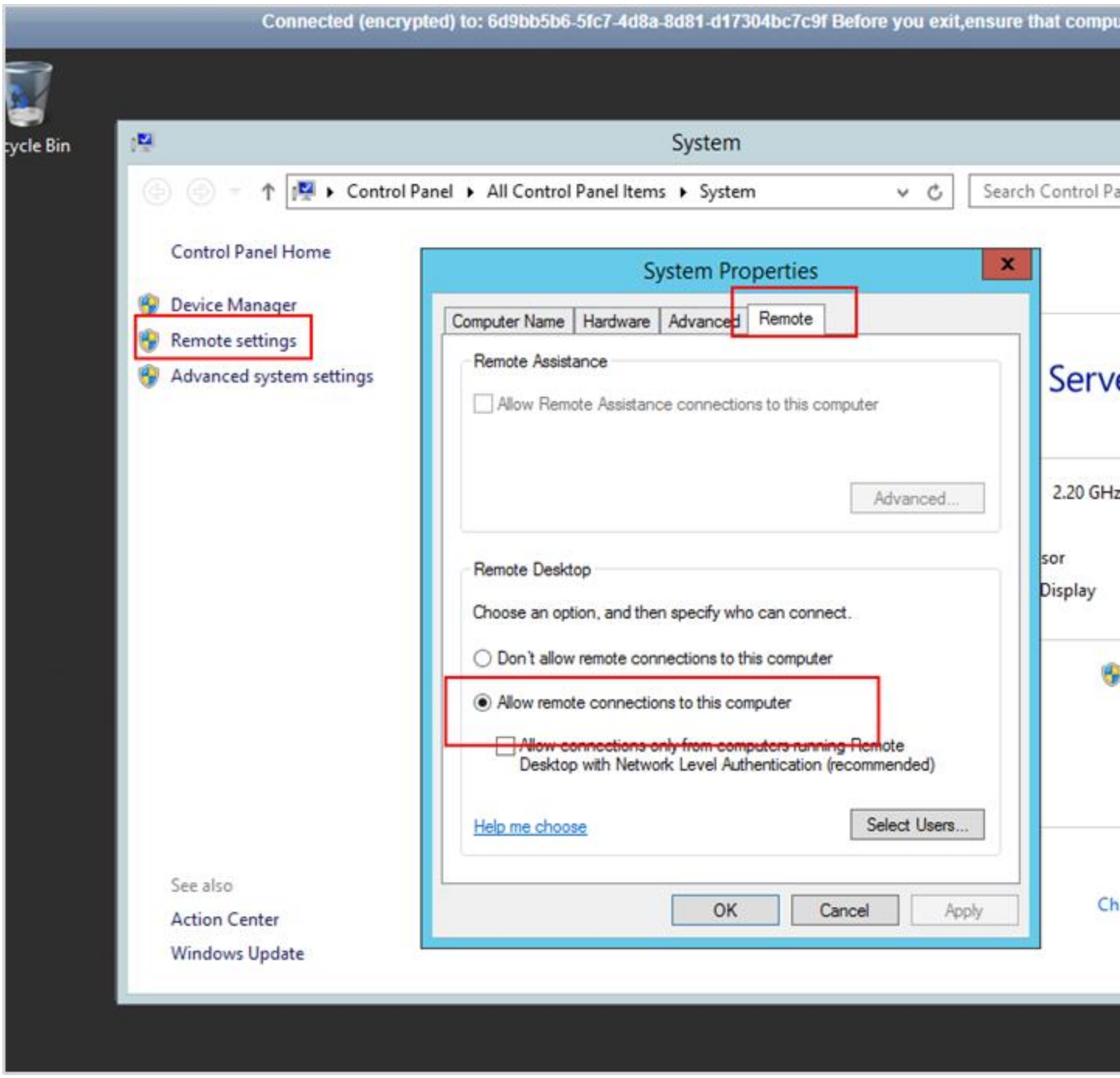
4. Click Properties, select Internet Protocol Version 4 (TCP/IPv4), and click Properties.



5. If Obtain an IP address automatically and Obtain DNS server address automatically are sel ected, DHCP has been configured. Otherwise, select the two check boxes and click OK.

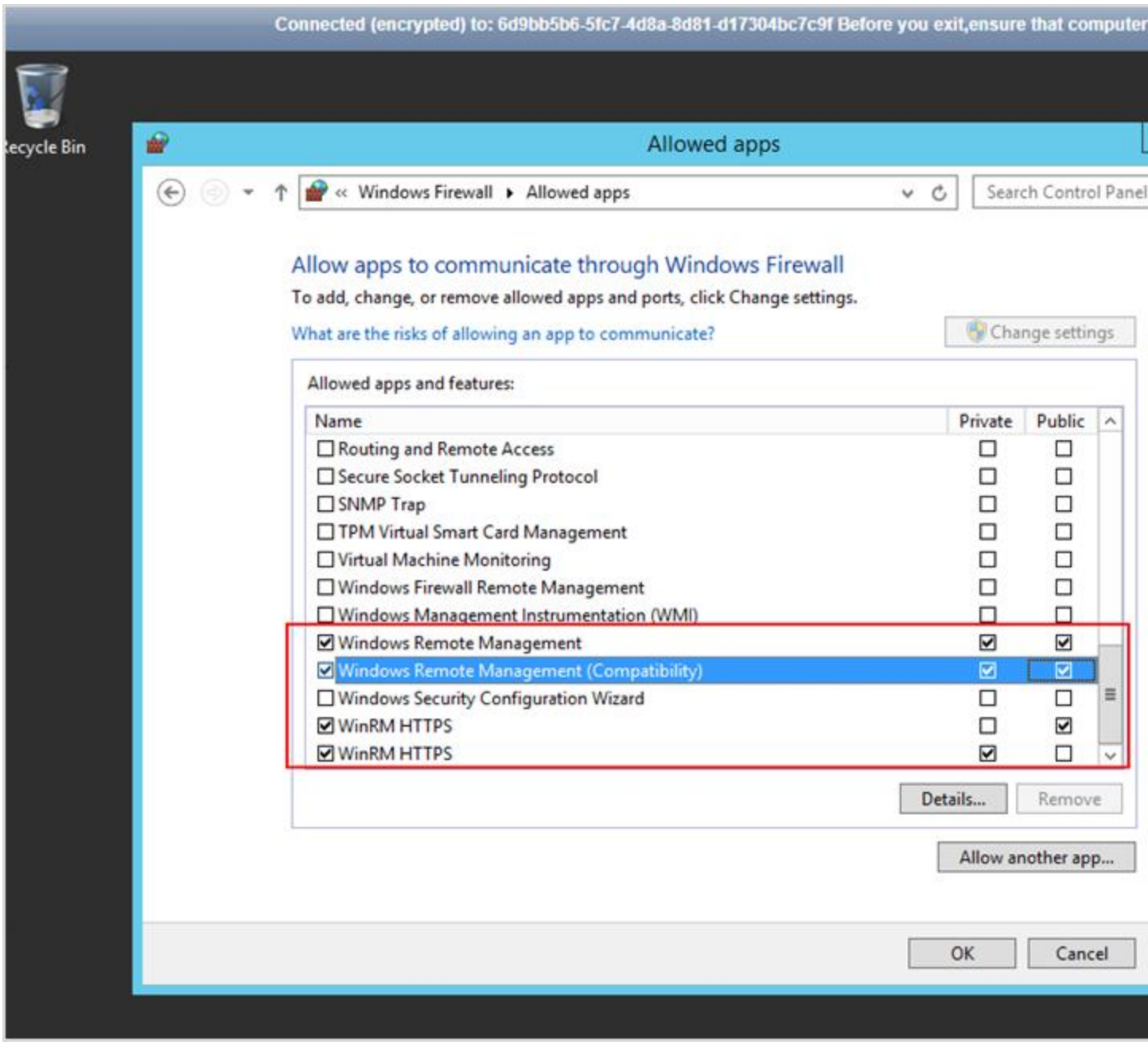


Step 3 Click **Start**, right-click **This PC**, and choose **Properties**.In the navigation pane to the left of the **System** page, click **Remote settings**. Select **Allow remote connections to this computer**. Cli ck **OK**. (The GUI varies somewhat depending on the OS version.)



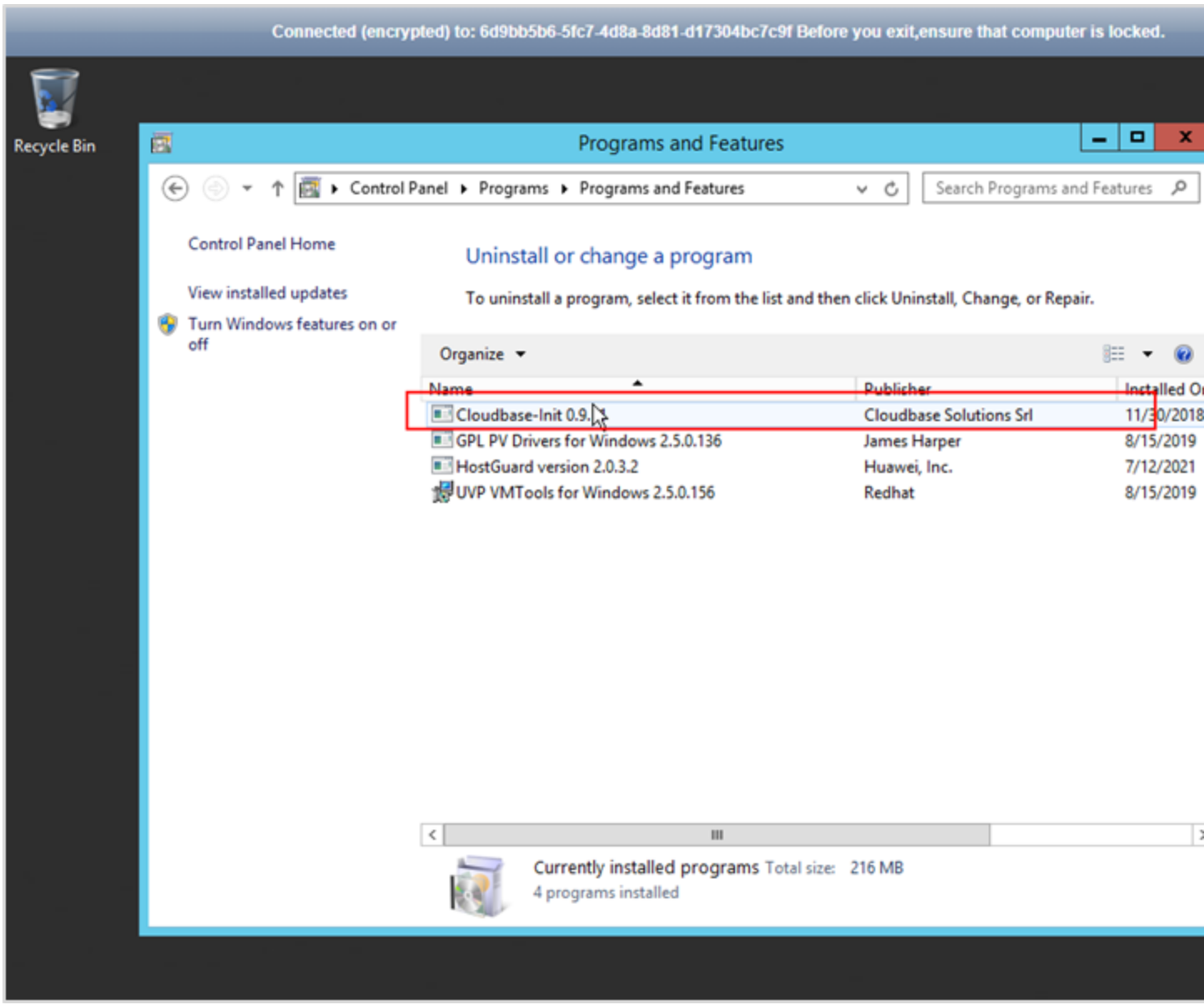
Step 4 Go to **Start > Control Panel** and navigate to **Windows Firewall**.In the left pane, select **All ow an app or feature through Windows Firewall**. Select apps that are allowed by Windows Fire wall for **Remote Desktop** based on your network requirements and click **OK**.

In this exercise, both the private and public networks are allowed by the firewall.



Step 5 Check whether Cloudbase-Init is installed on the ECS. If it is not, install it.

Go to Start > Control Panel > Programs and Features to check whether Cloudbase-Init has b een installed on the ECS.



Note:

· If Cloudbase-Init is not installed on the ECS, custom information cannot be injected into the new ECSs created from the private image. You will only be able to log in to the ECSs with the password specified in the image.

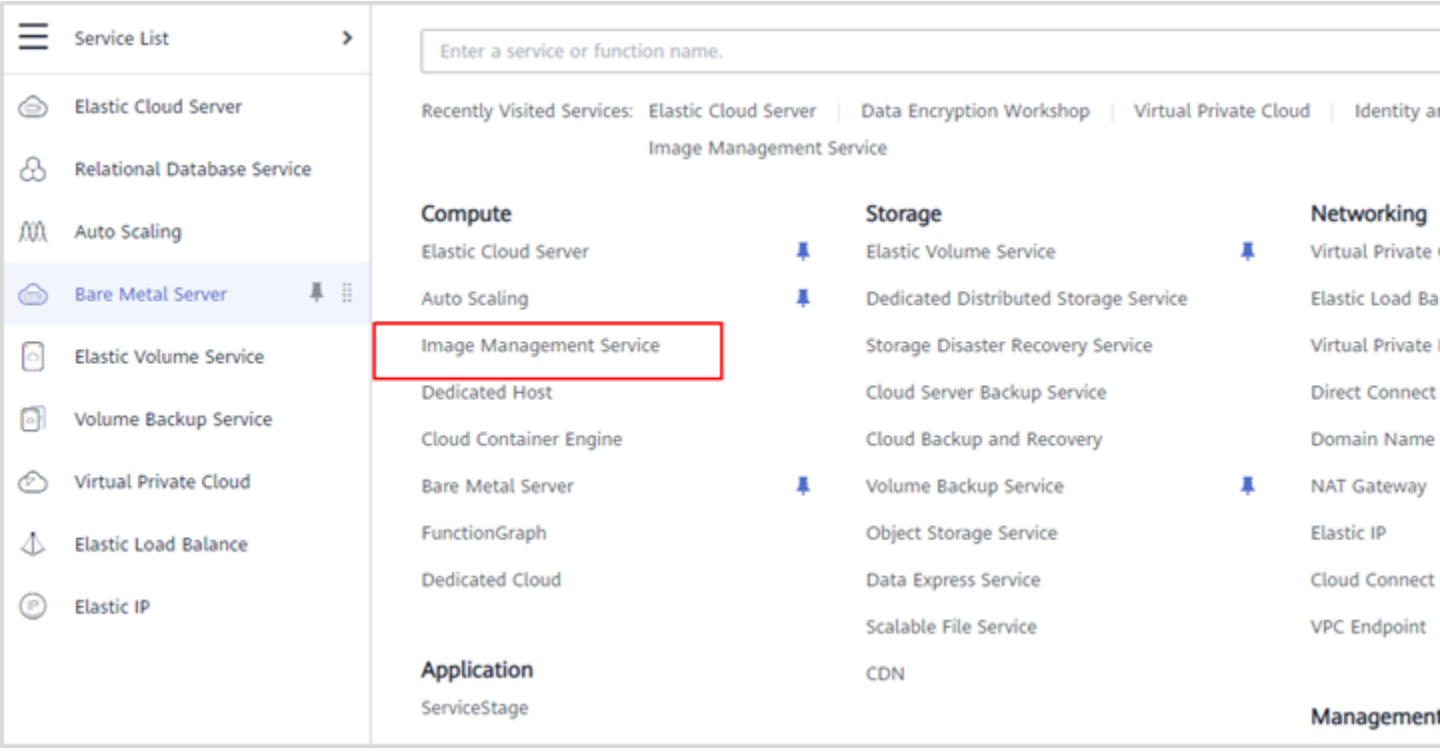
· For an ECS created from a public image, Cloudbase-Init has been installed on it by default. You do not need to manually install Cloudbase-Init for it.

· For an ECS created using an external image file, you need to install Cloudbase-Init for the ECS before you use it to create a private image. For details, see Installing and Configuring Cloudbase-Init (https://support.huaweicloud.com/intl/en-us/usermanual-ims/en-us_topic_0030730602.html).

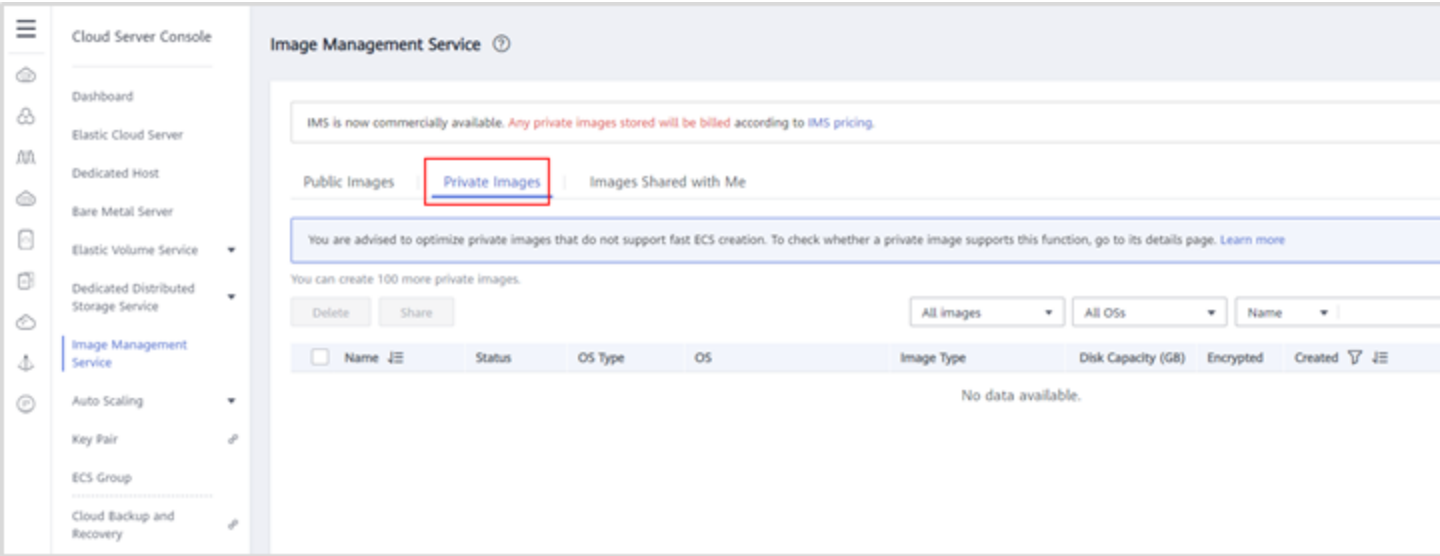
In this exercise, the ECS is created from the public image windows2012 R2, which has Cloudbase-Init installed by default.

2.2 Creating a Windows Private Image

Step 1 Go back to the management console and in **Service List** choose **Compute > Image Management Service**.

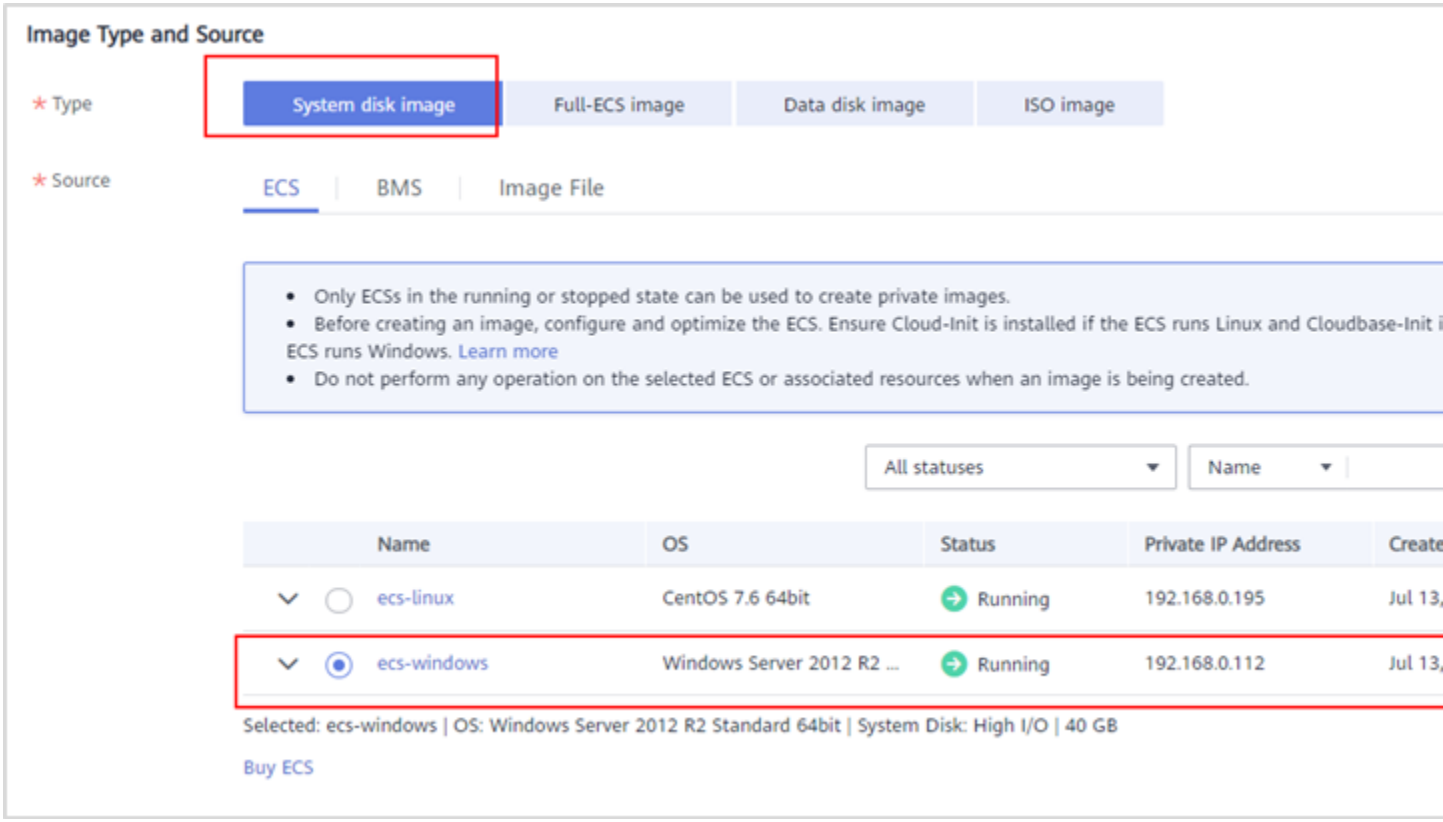


Step 2 On the Image Management Service page, click **Create Image**.

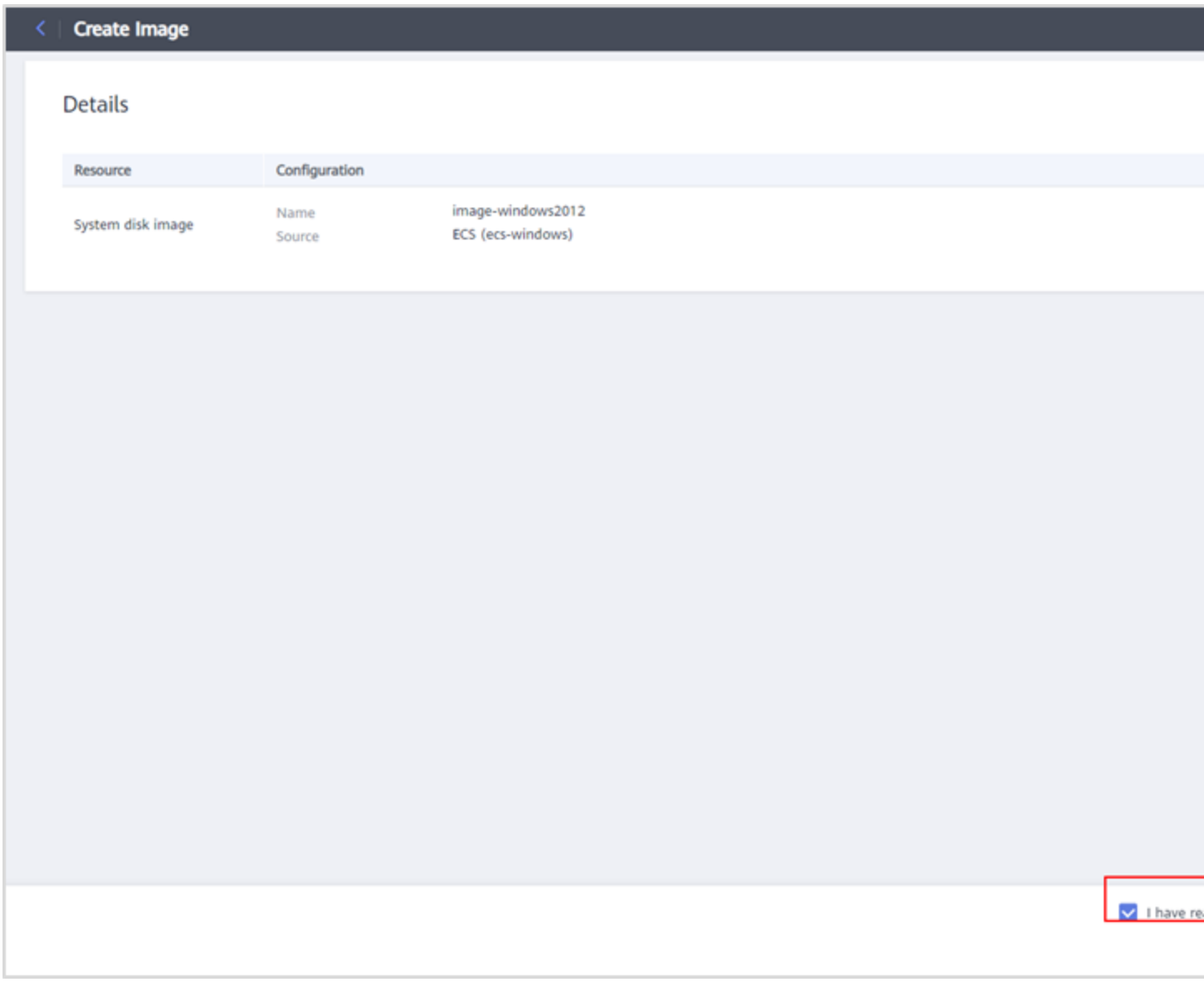


Step 3 On the **Create Image** page, set the following parameters and click **Next**.(Retain the defaults for the rest of the parameters.)

- **Region**: **AP-Singapore**
- **Type**: **System disk image**
- **Source**: Select a Windows ECS, for example, **ecs-windows.**
- **Name**: Enter a name, for example, **image-windows2012.**

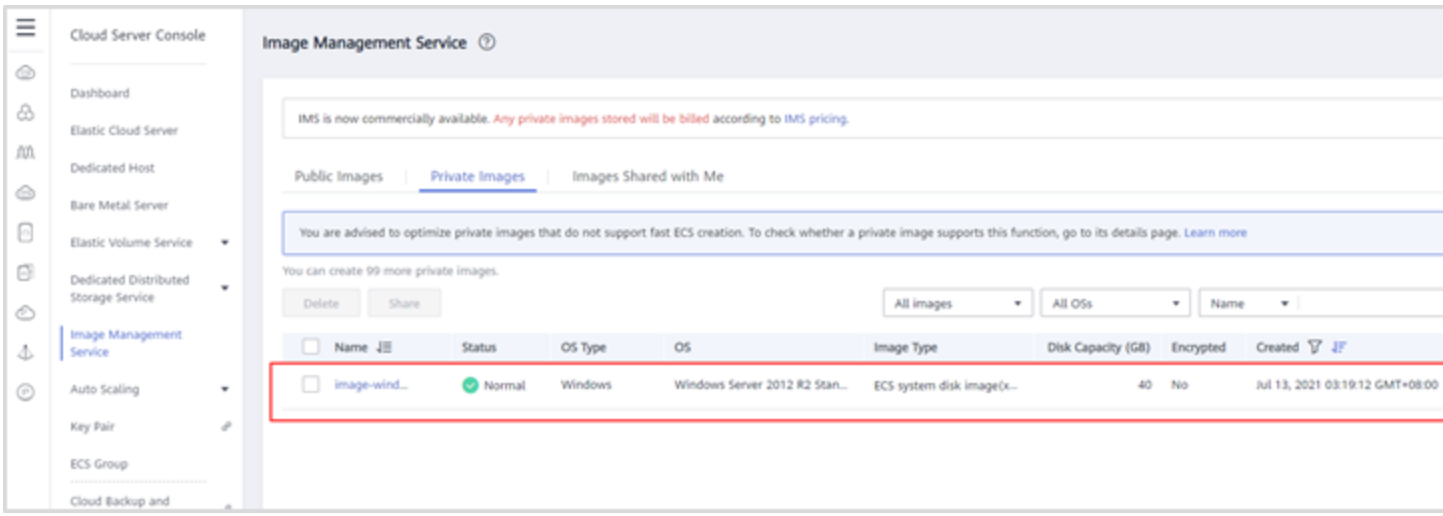


Step 4 Confirm the settings. Then, select **I have read and agree to the Image Disclaimer** and clic k **Submit**.



Step 5 Switch back to the **Private Images** tab page to view the image status.

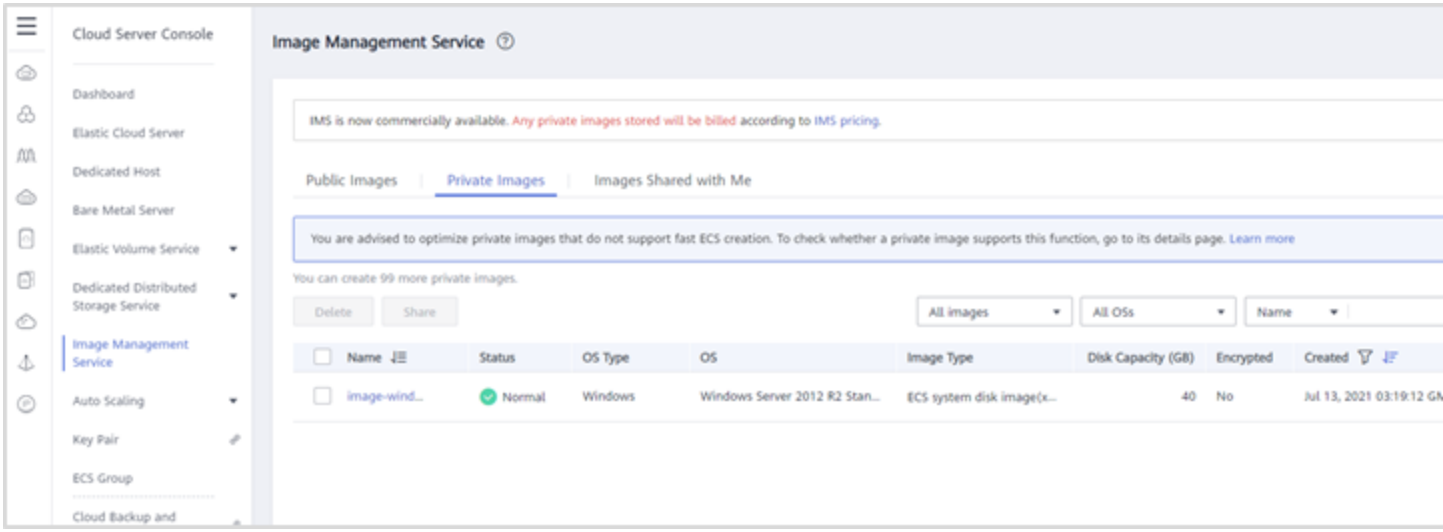
The time required for creating an image depends on the image size. Generally, it takes about 10 to 20 minutes. When the image creation completes, its status changes to Normal.



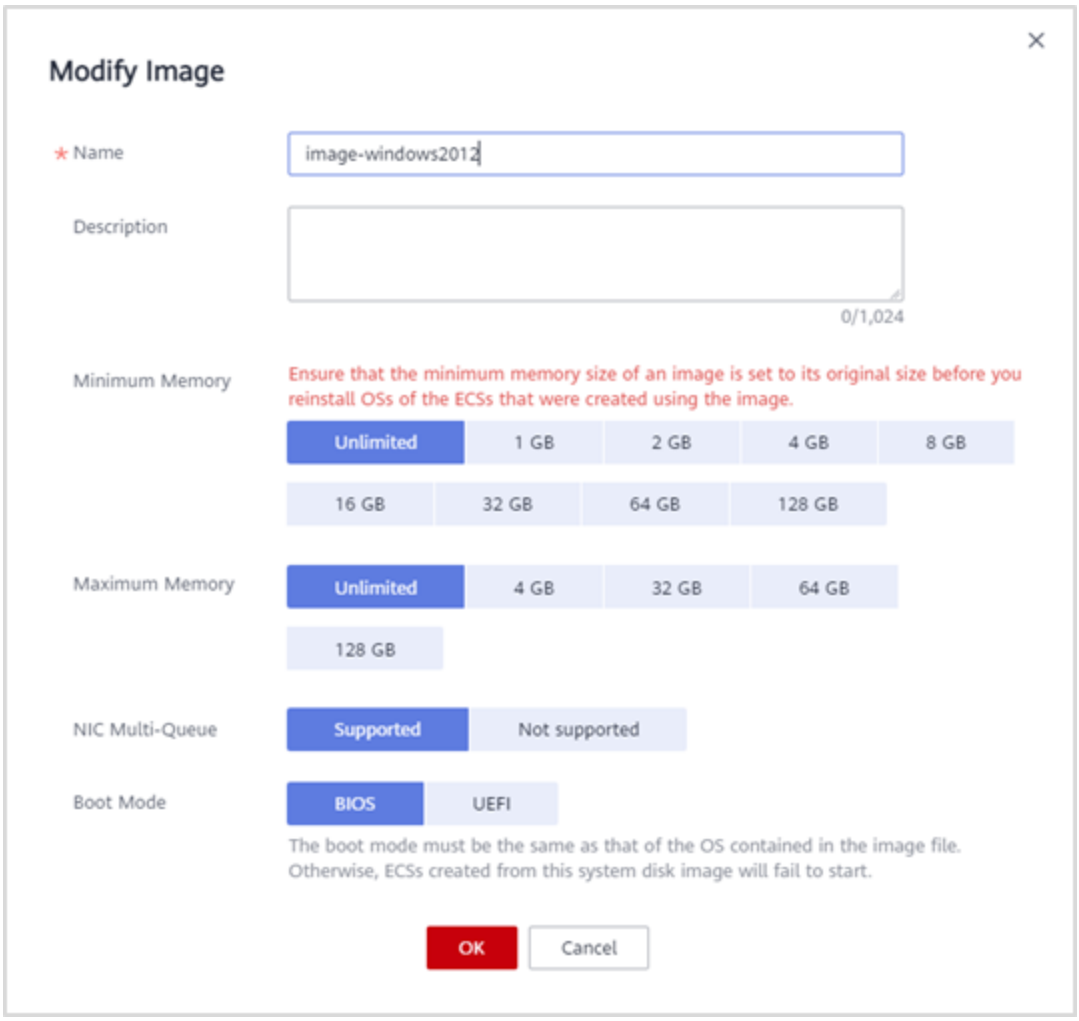
2.3 Modifying Image Information

Step 1 Locate the row that contains the image to be modified and click **Modify** in the **Operatio**

n column.

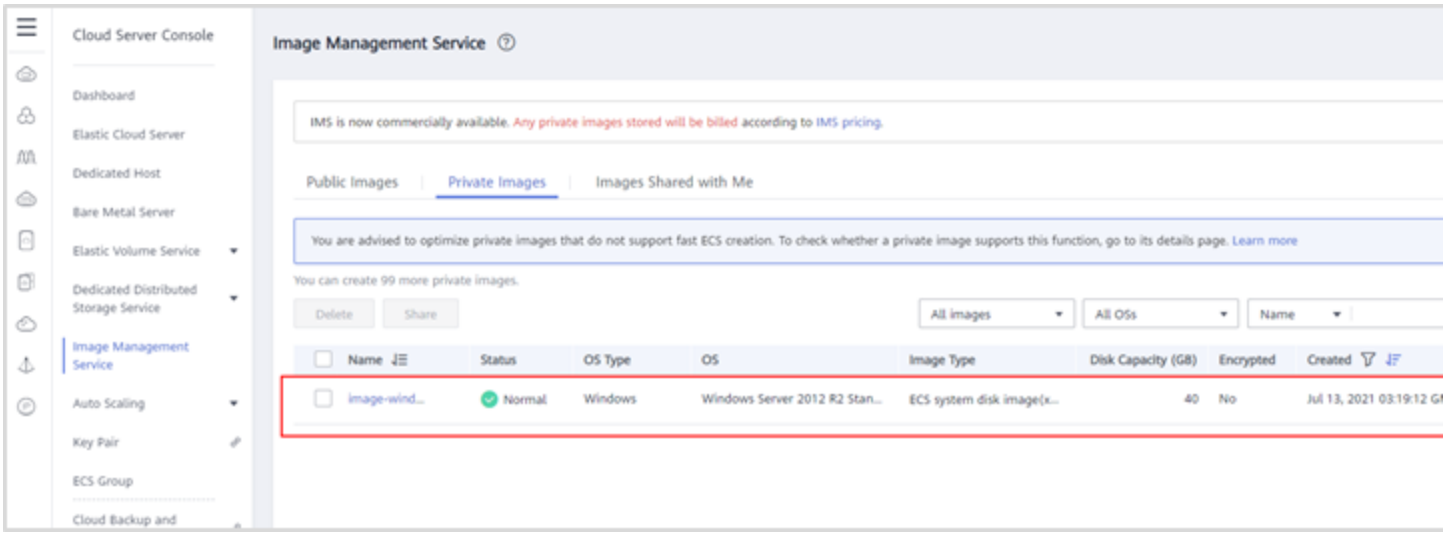


Step 2 You can modify the image name, memory, and other details.

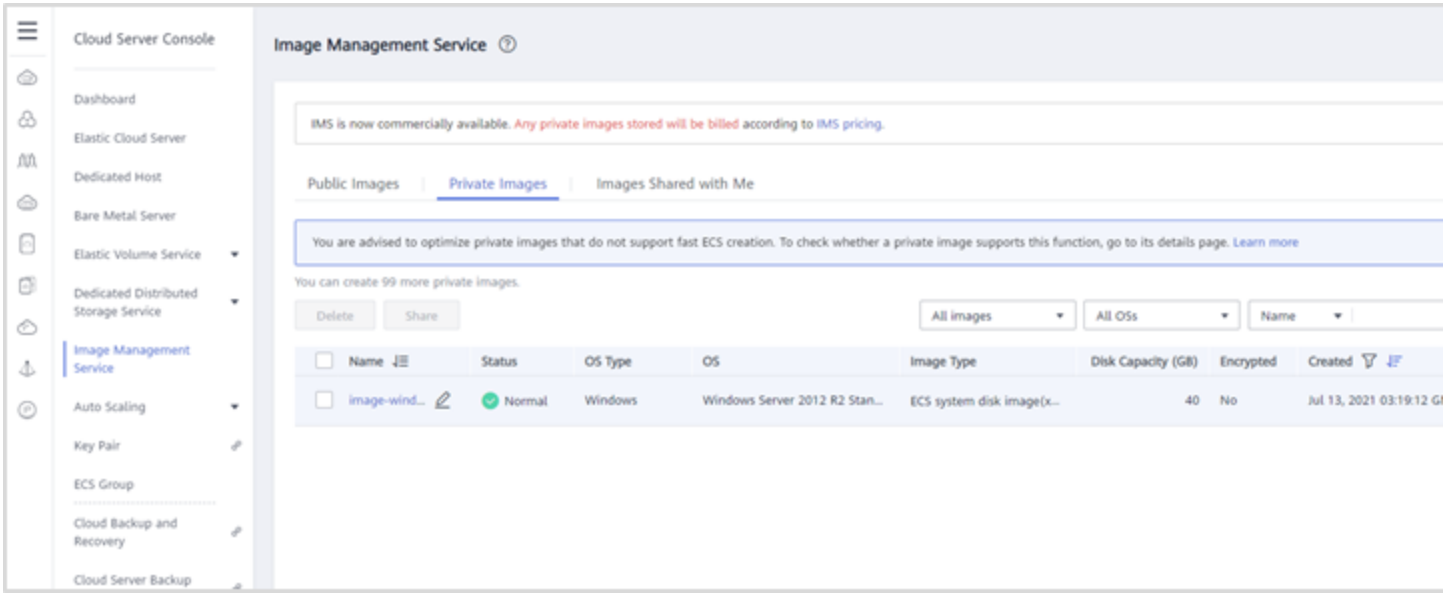


2.4 Replicating an Image Within a Region

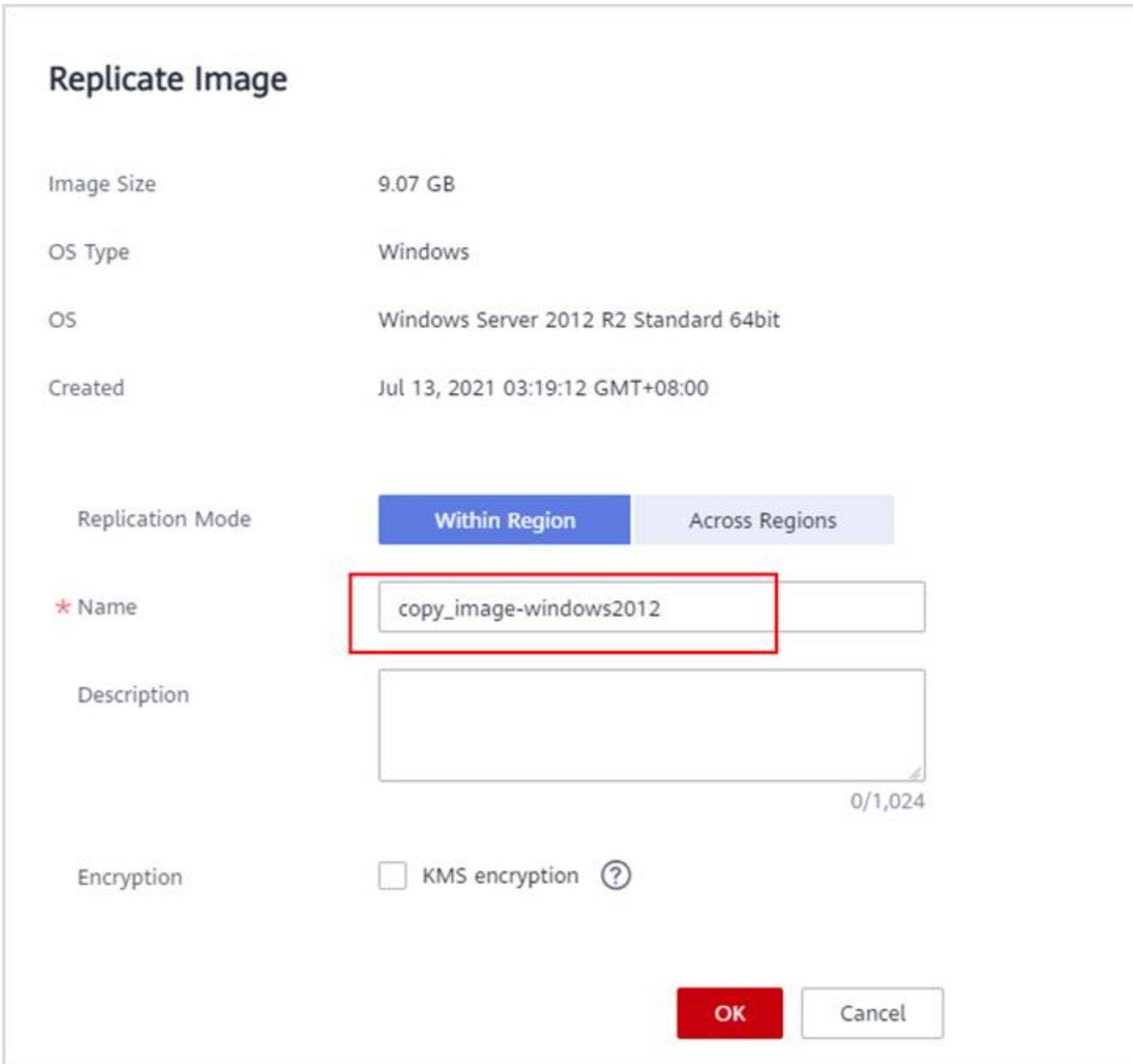
Step 1 On the **Image Management Service** page, click **Private Image** to display the image list.



Step 2 Locate the row that contains the image to be replicated and in the **Operation** column cho ose **More > Replicate**.

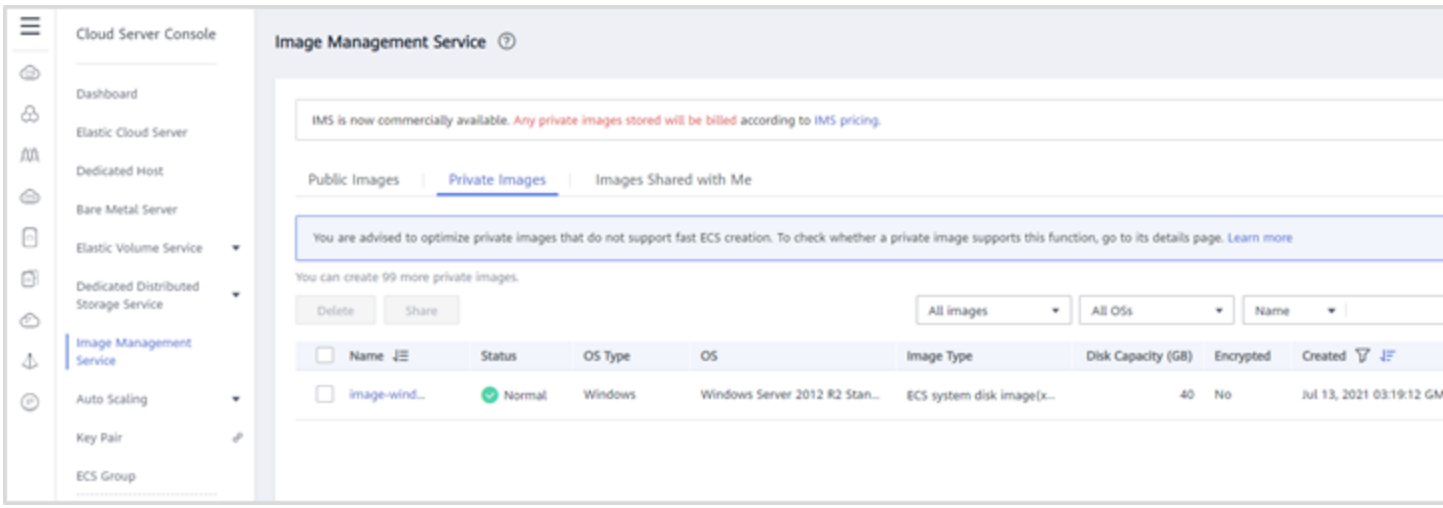


Step 3 In the displayed **Replicate Image** dialog box, enter a new name for the image and click **O K**. (Do not select **KMS encryption**.)

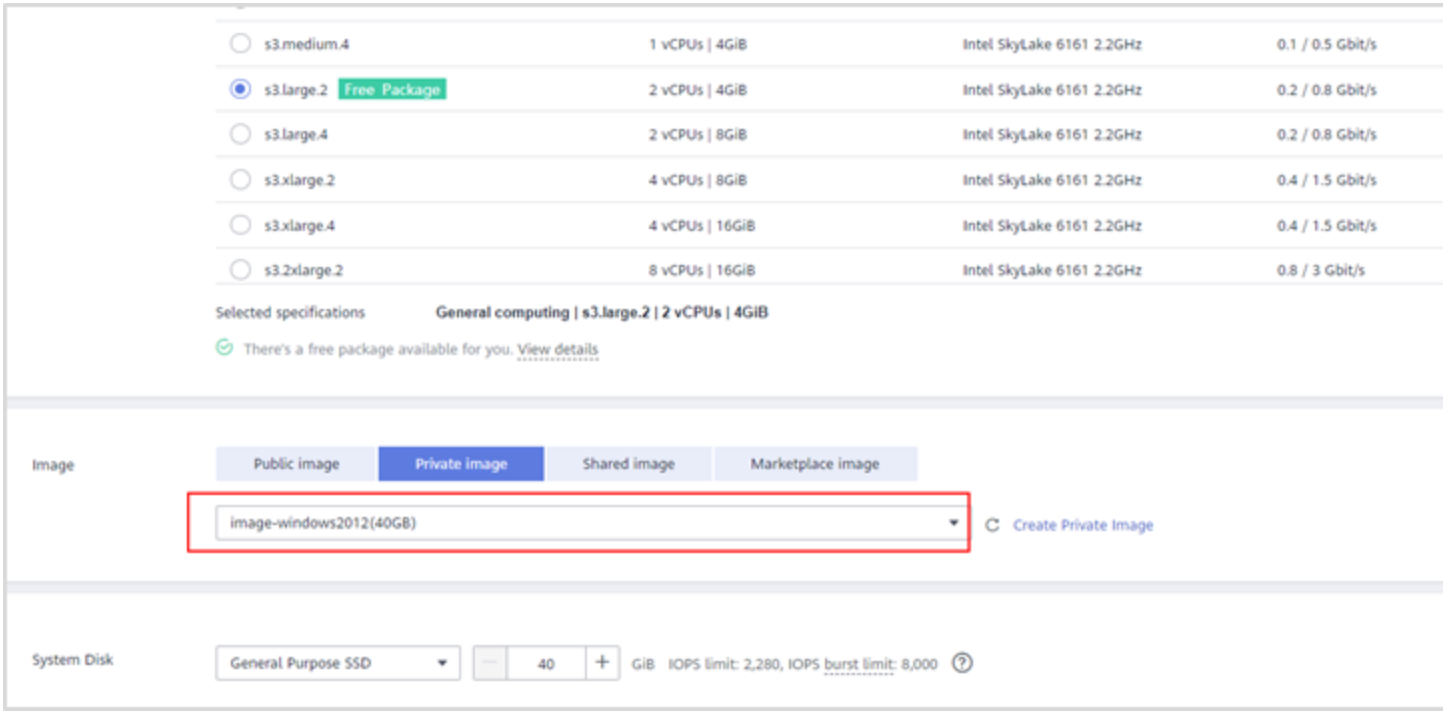


2.5 Applying for an ECS Using a Private Image

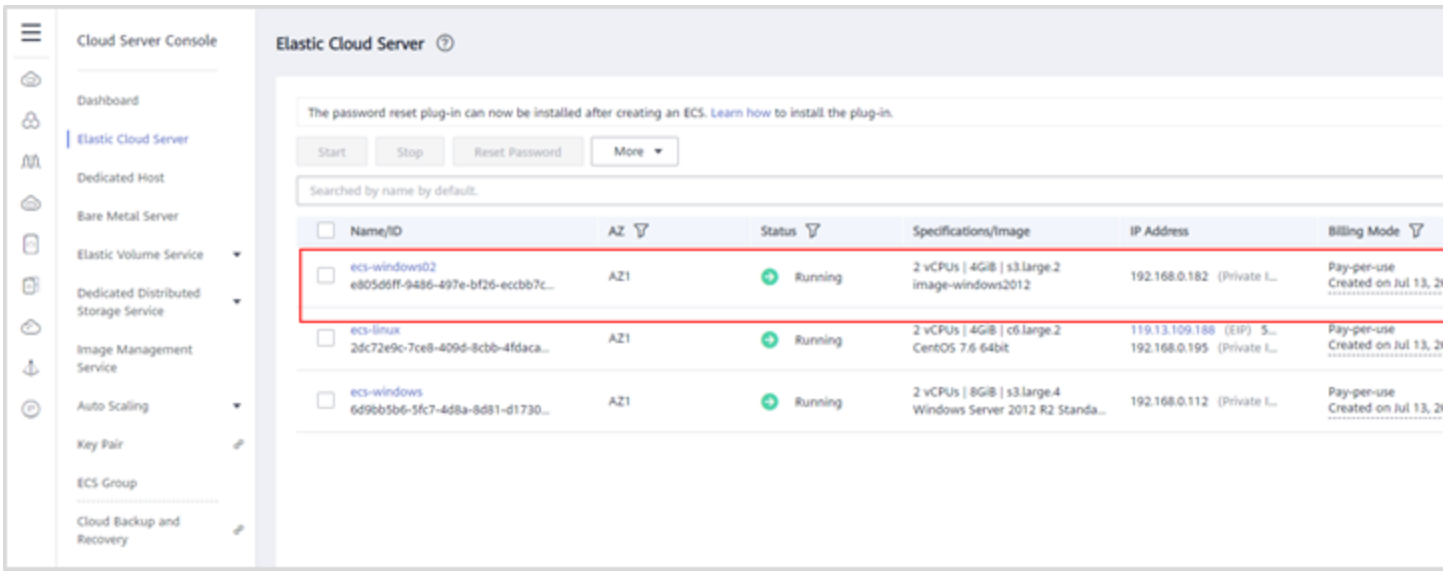
Step 1 On the **Private Images** tab page, locate the image and click **Apply for Server** in the **Operation** column.



Step 2 On the ECS purchase page, ensure that the private image is selected.



Step 3 Go back to the ECS list to view the ECS created using the private image.



If you have created and configured a Linux ECS based on your service requirements (for exa mple, by installing software and setting up an application environment), you can create a sys tem disk image based on this configured ECS. Then, all new ECSs created from this image wil l have the same software and environment preinstalled.

To create a Linux system disk image using an ECS, you need to configure a Linux ECS and then us e it to create a system disk image.

3.1 Configuring a Linux ECS

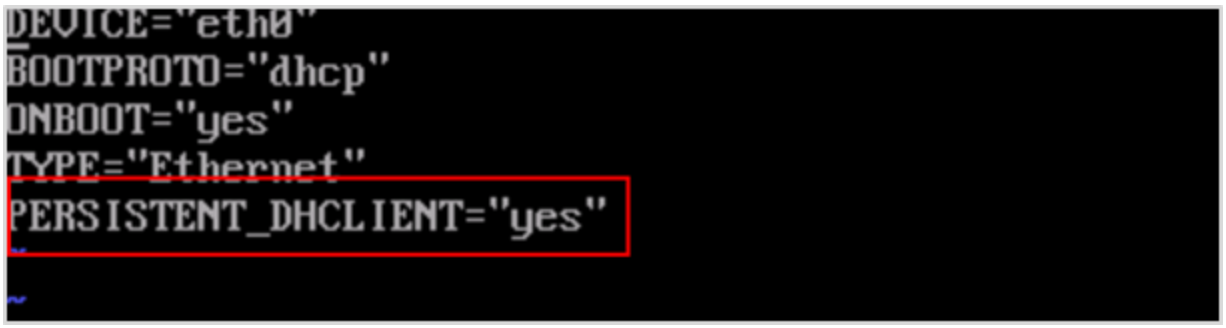
Take the ecs-linux ECS you created as an example.

Step 1 Remotely log in to the ECS.

Step 2 Check whether DHCP is configured for the ECS NICs. If it is not, configure it.

For CentOS, you can configure DHCP by adding PERSISTENT_DHCLIENT="y" to the /etc/sysc onfig/network-scripts/ifcfg-ethX configuration file using the vi editor.

```
vi   /etc/sysconfig/network-scripts/ifcfg-eth0
```



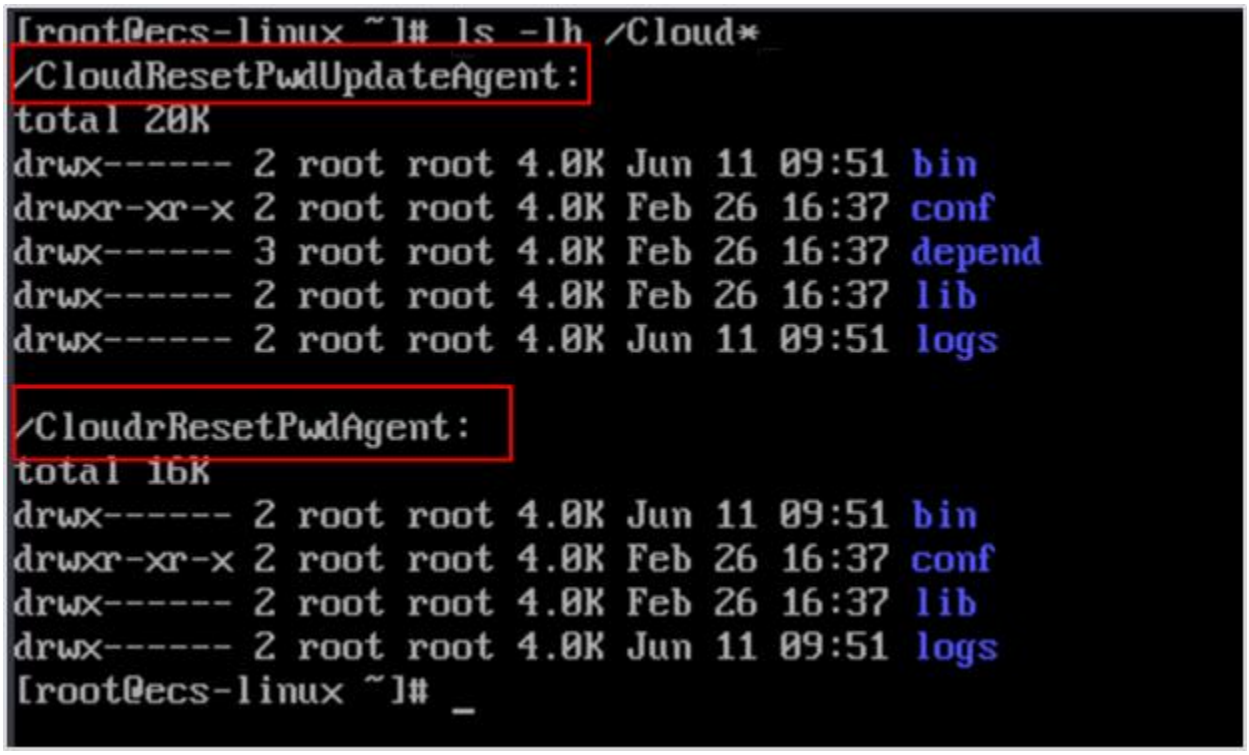
Step 3 Check whether the one-click password reset plug-in has been installed on the ECS. If it is not, install it.

Note: To ensure that you can reset the passwords of the new ECSs created from a private image, you are advised to install the one-click password reset plug-in (CloudResetPwdAgent) on the ECS used to create the image. For details, see Installing the One-Click Password Reset Plug-In (https://support.huaweicloud.com/intl/en-us/usermanual-ims/ims_01_0408.html).

- In this exercise, the ECS is created from a public image. Therefore, the one-click password reset plug-in has been installed on it by default. You do not need to manually install it. You can run the following command to check whether CloudResetPwdAgent has been installed:

```
ls -lh /Cloud*
```

- If the following information is displayed, the plug-in has been installed:



Step 4 Check whether Cloud-Init is installed. If it is not, install it.

Note:

· If Cloud-Init is not installed on the ECS, custom information cannot be injected into the new ECSs created from the private image and you can only log in to the ECSs with the password specified in the image.

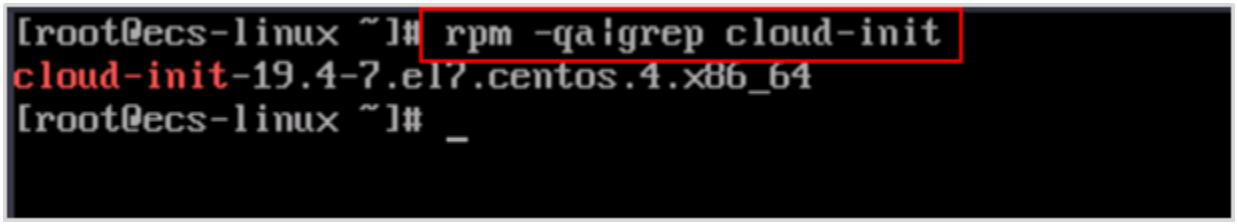
· For an ECS created from a public image, Cloud-Init has been installed on it by default. You do not need to manually install Cloud-Init for it.

· For an ECS created using an external image file, you need to install Cloud-Init for the ECS before you use it to create a private image. For details, see Installing Cloud-Init (https://support.huaweicloud.com/intl/en-us/usermanual-ims/en-us_topic_0030730603.html) and Configuring Cloud-Init (https://support.huaweicloud.com/intl/en-us/usermanual-ims/ims_01_0407.html).

In this exercise, the ECS is created from the public image CentOS 7.6 64bit(40GB). Cloud-Init has been installed on it by default. You can run the following command to check whether Cloud-Init has been installed:

```
rpm -qa |grep cloud-init
```

· If information similar to the following is displayed, Cloud-Init has been installed:



· If no command output is displayed, Cloud-Init is not installed. Run the following commands to install it (before the installation, make sure an EIP is bound to the ECS so that the ECS can access the Internet):

```
Yum install https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm

yum install cloud-init
```

```
[root@ecs-linux ~]# yum install https://archives.fedoraproject.org/pub/epel/7/x86_64/Packages/e/epel-re
Loaded plugins: fastestmirror
epel-release-7-13.noarch.rpm
Examining /var/tmp/yum-root-JXrOZa/epel-release-7-13.noarch.rpm: epel-release-7-13.noarch
/var/tmp/yum-root-JXrOZa/epel-release-7-13.noarch.rpm: does not update installed package.
Error: Nothing to do
[root@ecs-linux ~]# yum install cloud-init
Loaded plugins: fastestmirror
Determining fastest mirrors
base
epel
extras
updates
(1/7): base/7/x86_64/group_gz
(2/7): epel/x86_64/updateinfo
(3/7): epel/x86_64/group_gz
(4/7): extras/7/x86_64/primary_db
(5/7): base/7/x86_64/primary_db                51% [====================                ] 1.5 MB
```

Step 5 Delete files from the network rule directory.

Note: To prevent NIC name drift on the new ECSs created from a private image, you need to delete network rule files of the ECS used to create the image.

Run the following command to check if there is a network rule file on the ESC:

```
ls -l /etc/udev/rules.d
```

If information similar to the following is displayed, no network rule files exist:

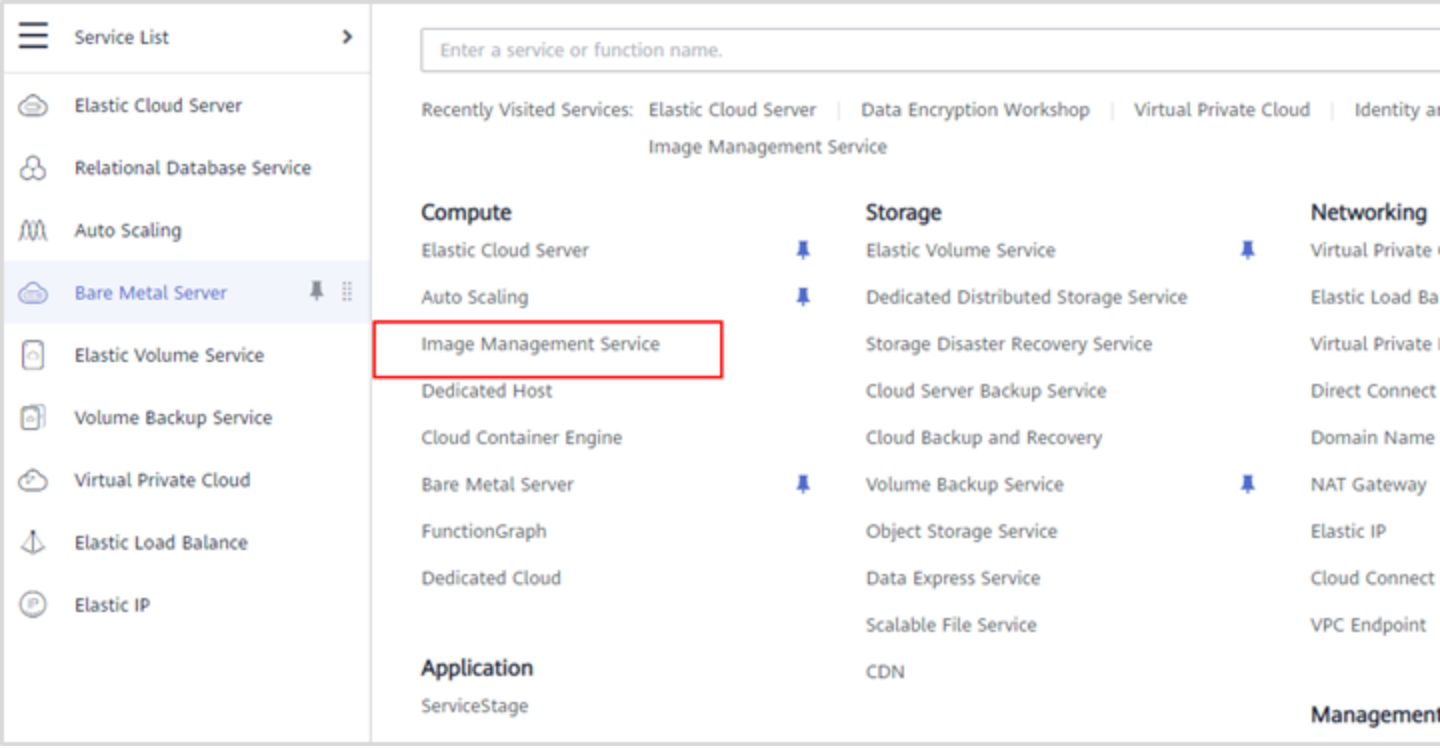
```
[root@ecs-linux ~]# ls -l /etc/udev/rules.d
total 0
```

Note:

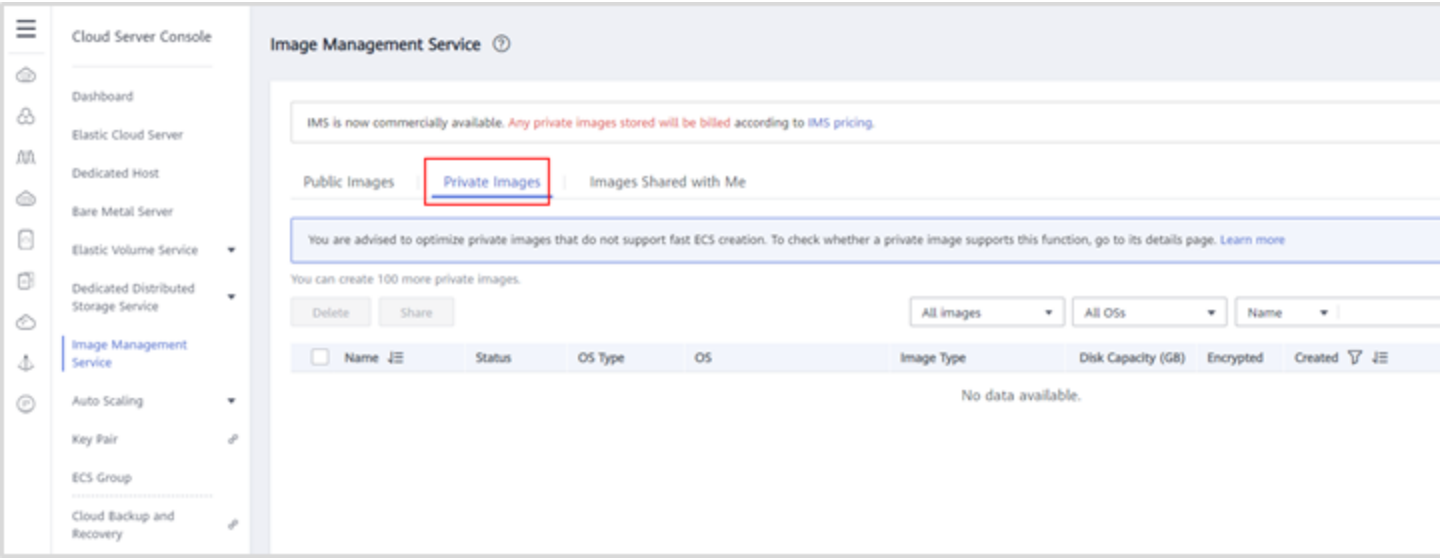
- An ECS created from a public image does not have network rule files by default.
- An ECS created using an external image file may have network rule files, delete the files by following the instructions provided in Deleting Files from the Network Rule Directory (https://support.huaweicloud.com/intl/en-us/usermanual-imss/ims_01_0406.html).

3.2 Creating a Linux Private Image

Step 1 Go back to the management console and in **Service List** choose **Compute > Image Management Service**.

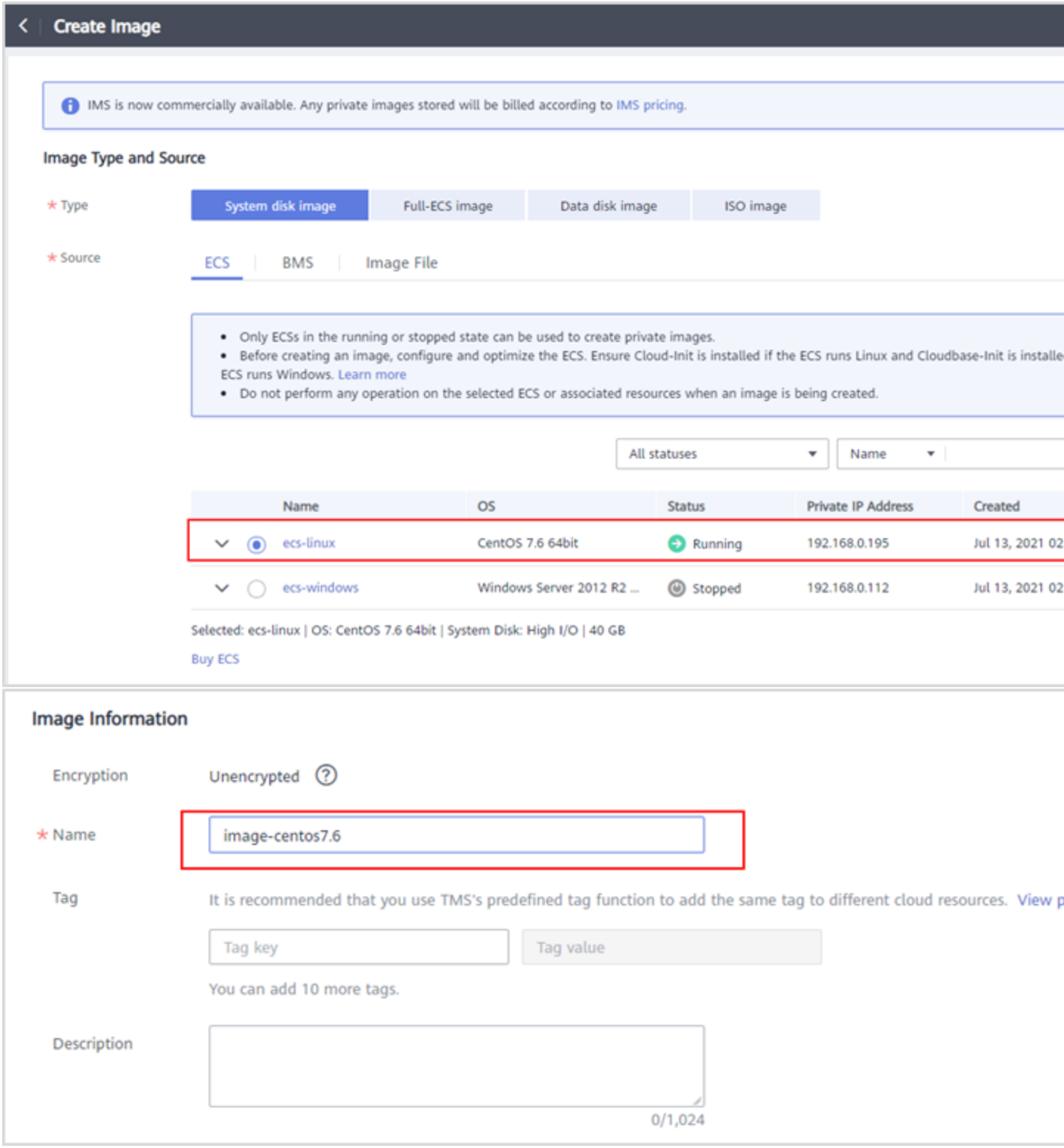


Step 2 On the Image Management Service page, click **Create Image**.



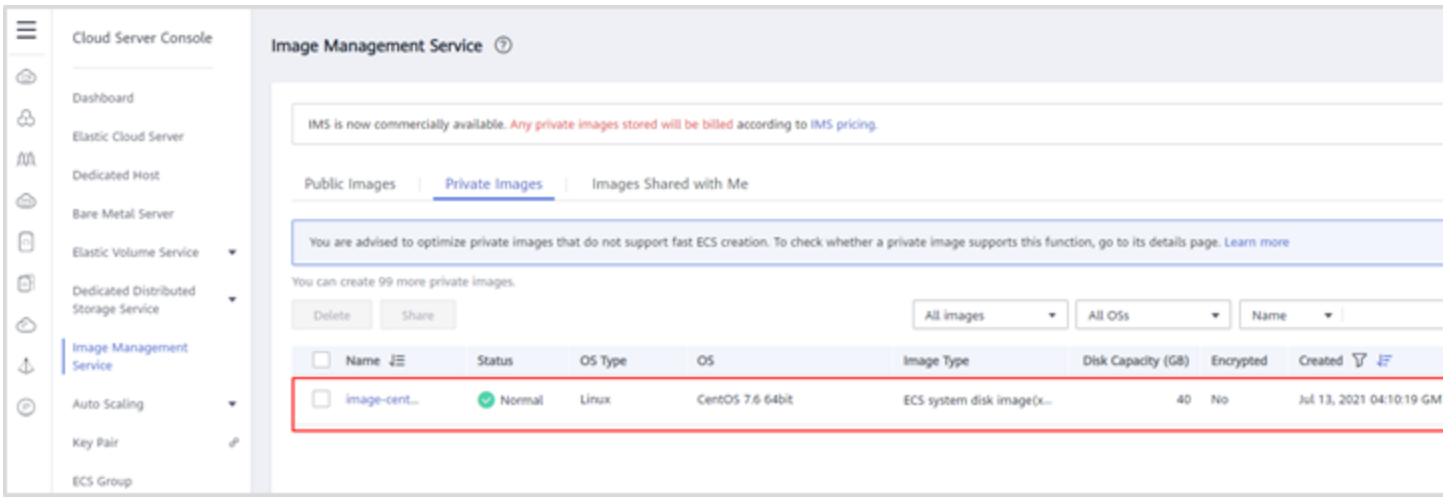
Step 3 Set the following parameters on the **Create Image** page and click **Next**.

- **Type**: **System disk image**
- **Source**: Select a Linux ECS, for example, **ecs-linux.**
- **Name**: Enter a name, for example, **image-centos7.6**



Step 4 Confirm the settings. Then, select I have read and agree to the Image Disclaimer and clic k **Submit**.

Step 5 Switch back to the **Private Images** tab page to view the image status.



The time required for creating an image depends on the image size. Generally, it takes about 10 to 20 minutes. When the image creation completes, its status changes to Normal.

3.3 Sharing an Image

You can share your images with other users. Before sharing images with a user, you need to obtain their Project ID. You can share a single image or multiple images as needed.

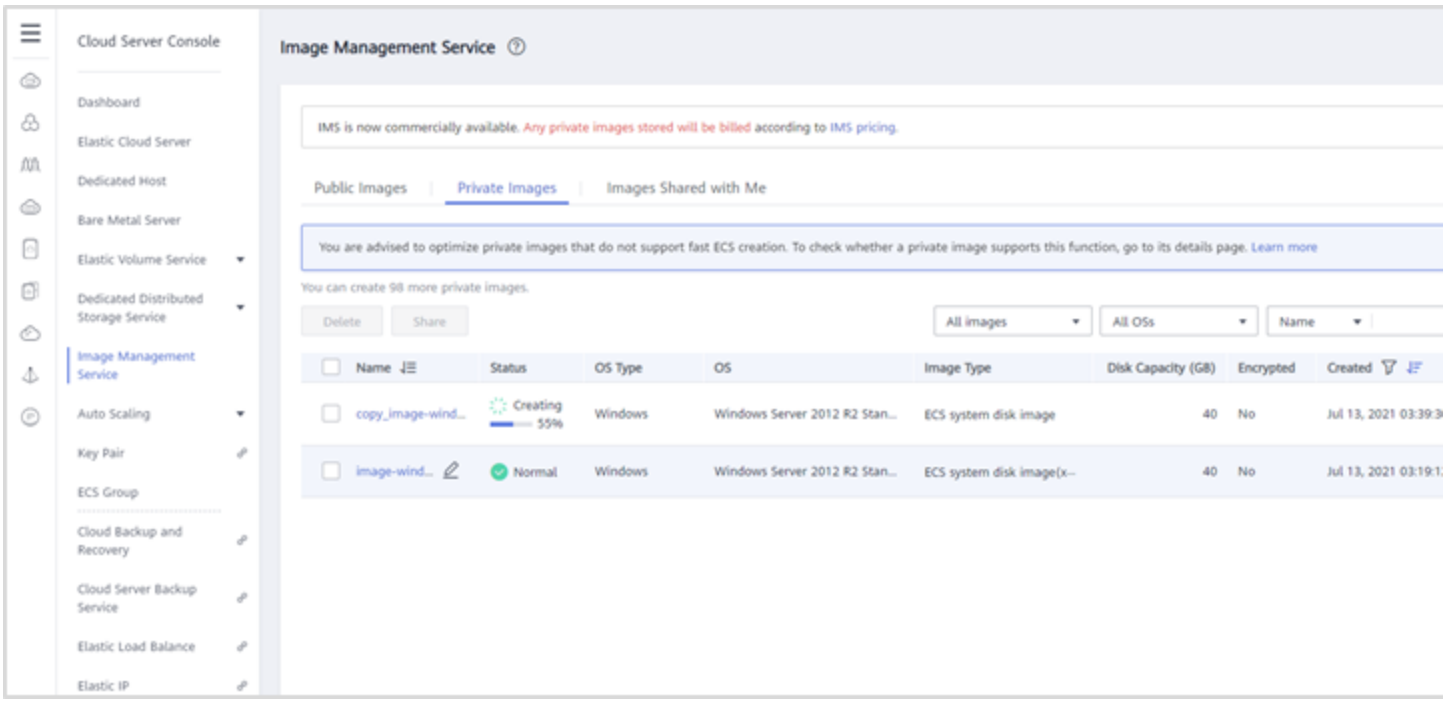
This document uses Windows ECS as an example. You need to use Linux ECS when performi ng operations.

Step 1 Before sharing image with yourself, you need to find your Huawei Cloud account project I D. Log in to the management console using your **Huawei Cloud account** (not SandBox user).

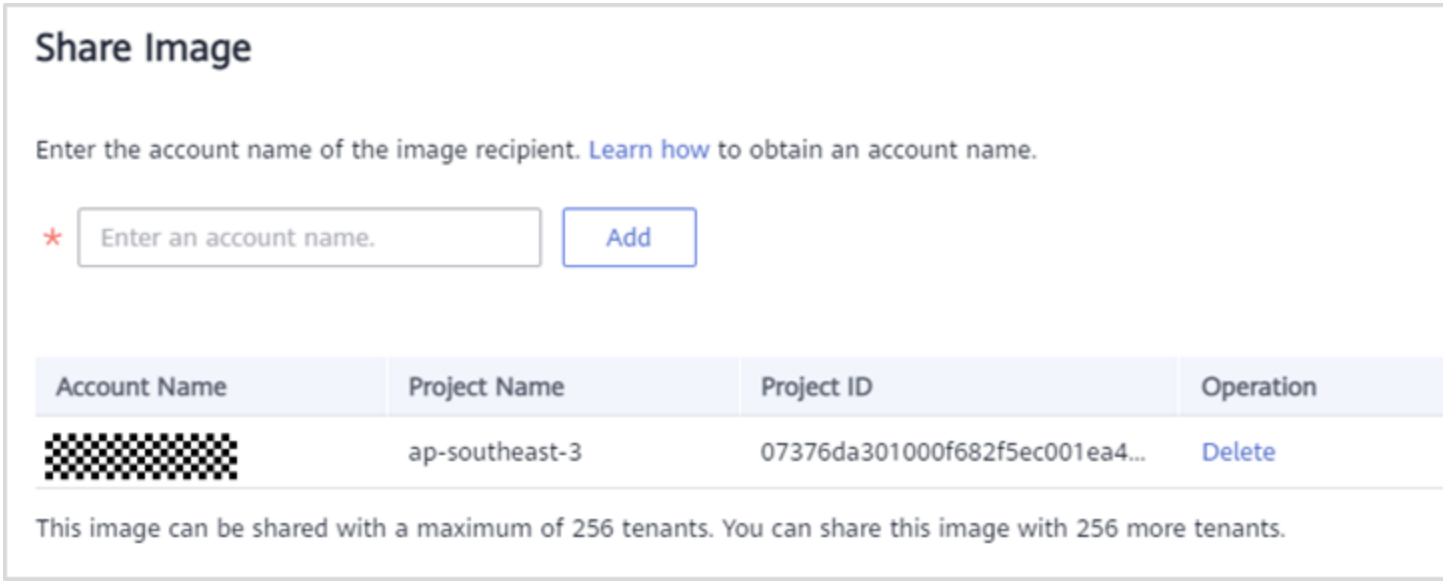
Step 2 Click the username in the upper right corner and select My Credentials from the drop-dow n list.

Step 3 On the My Credentials page, view the project ID in the project list. You should use Project I D of region “ AP-Singapore” .

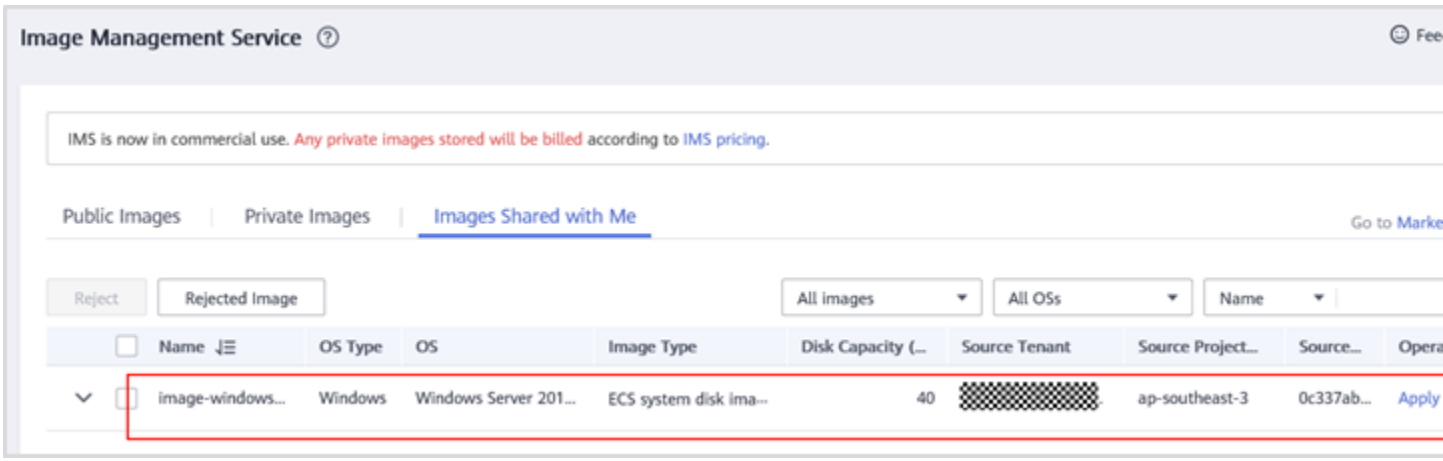
Step 4 Return to the SandBox console.Using SandBox account, on the **Private Images** tab page, s elect the private image to be shared and in the **Operation** column choose **More > Share**.



Step 5 In the **Share Image** dialog box, enter your Project ID and click **Add**. Click **OK**.

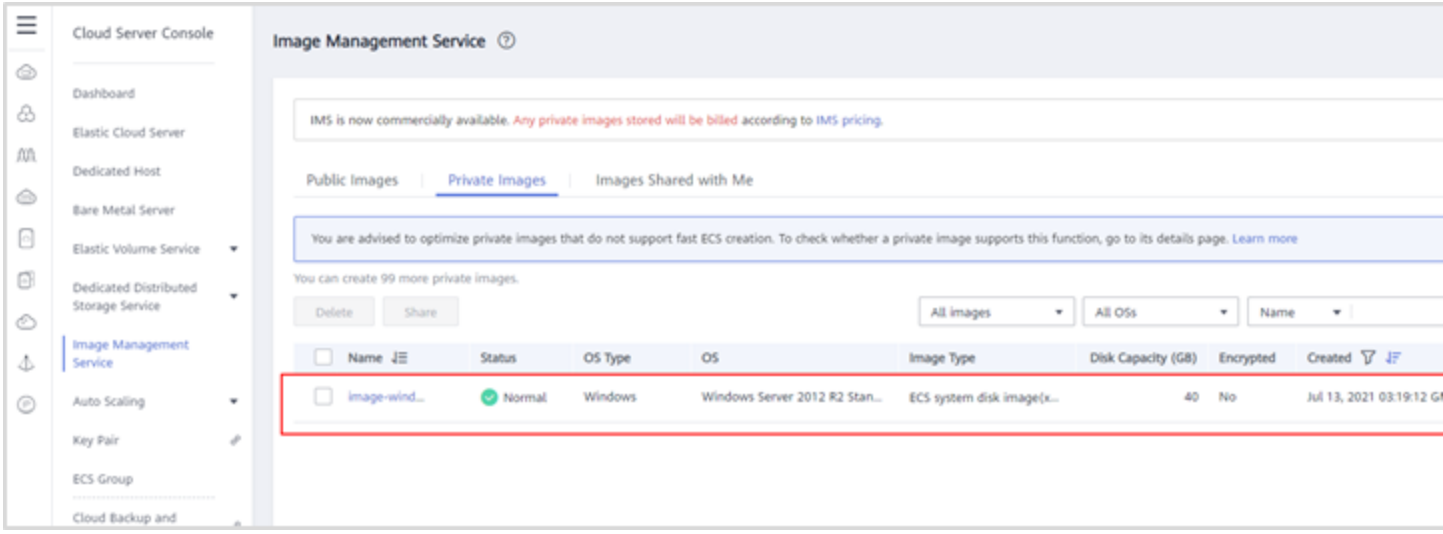


Step 6 Log in to the management console using your **Huawei Cloud account**(not SandBox User), go to the IMS console of “ AP-Singapore”, click the **Shared Images** tab, and click **Accept**.

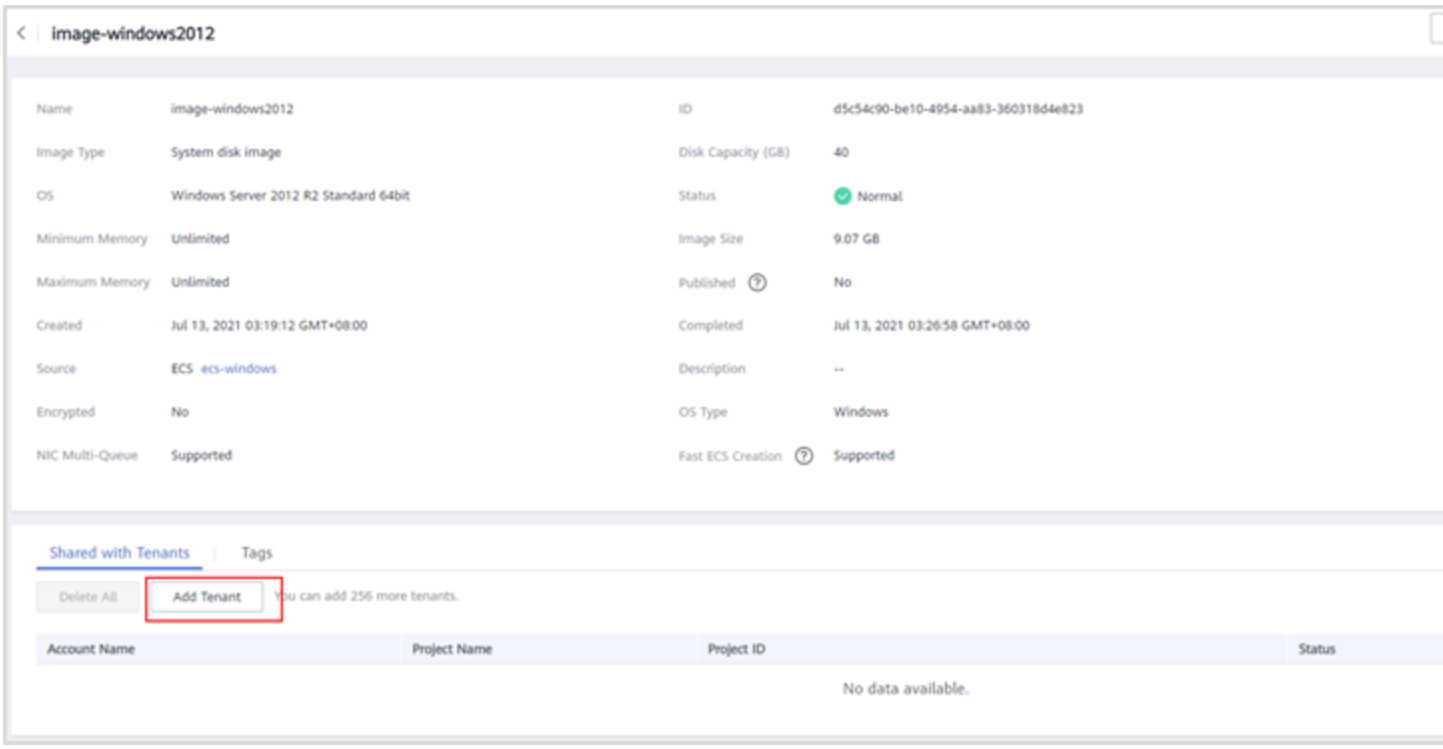


3.4 Adding Tenants Who Can Use Shared Images

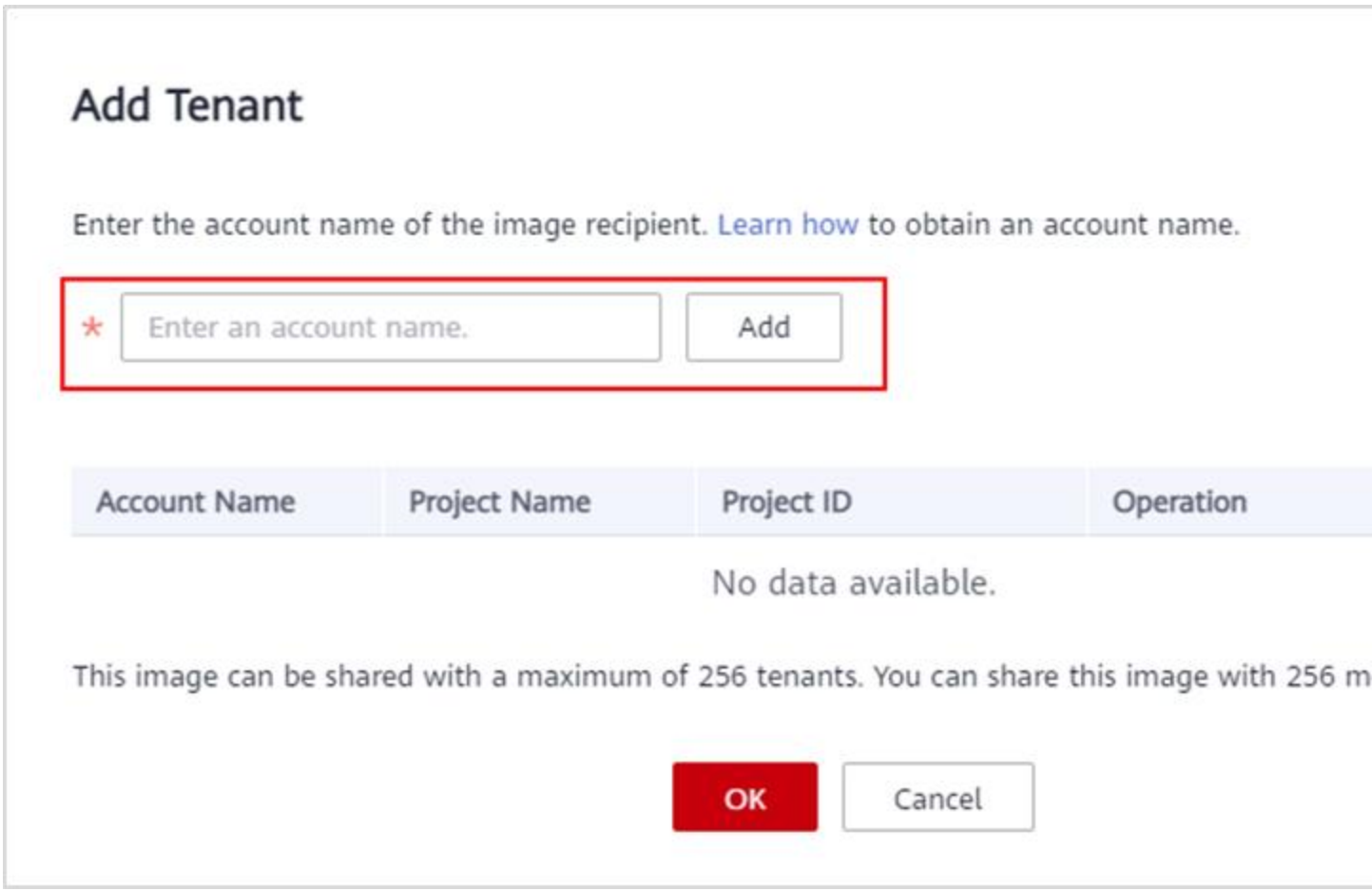
Step 1 Return to the SandBox console.On the **Image Management Service** page, click **Private Image** to display the image list.

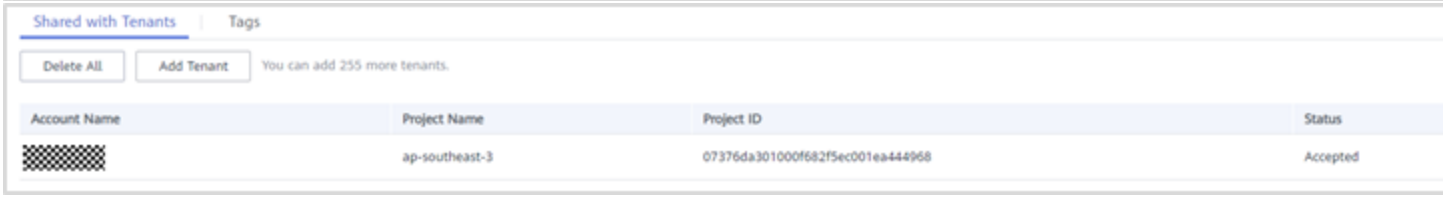


Step 2 Click the name of the image to be shared. On the **Shared with Tenants** tab page, click **Add Tenant**.



Step 3 In the **Add Tenant** dialog box, you can enter the Project ID and click **Add**. (If you want to s hare with yourself again, delete your account from list fisrt and then click Add)


Add Tenant
Enter the account name of the image recipient. Learn how to obtain an account name.
* Enter an account name.
Add
Account Name
Project Name
Project ID
Operation
No data available.
This image can be shared with a maximum of 256 tenants. You can share this image with 256 m
OK
Cancel


Shared with Tenants
Tags
Delete All
Add Tenant
You can add 255 more tenants.
Account Name
Project Name
Project ID
Status
ap-southeast-3
07376da301000f682f5ec001ea444968
Accepted