

# 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 account and password to log in to HUAWEI CLOUD, as shown in the following figure.

HUAWEI ID login

Phone/Email/Login ID/HUAWEI CLOUD account name

Password

LOG IN

Register | Forgot password?

Use Another Account

**IAM User** | Federated User | Huawei Website Account | Huawei Enterprise Partner | HUAWEI CLOUD Account

Your account and network information will be used to help improve your login experience. [Learn more](#)

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.

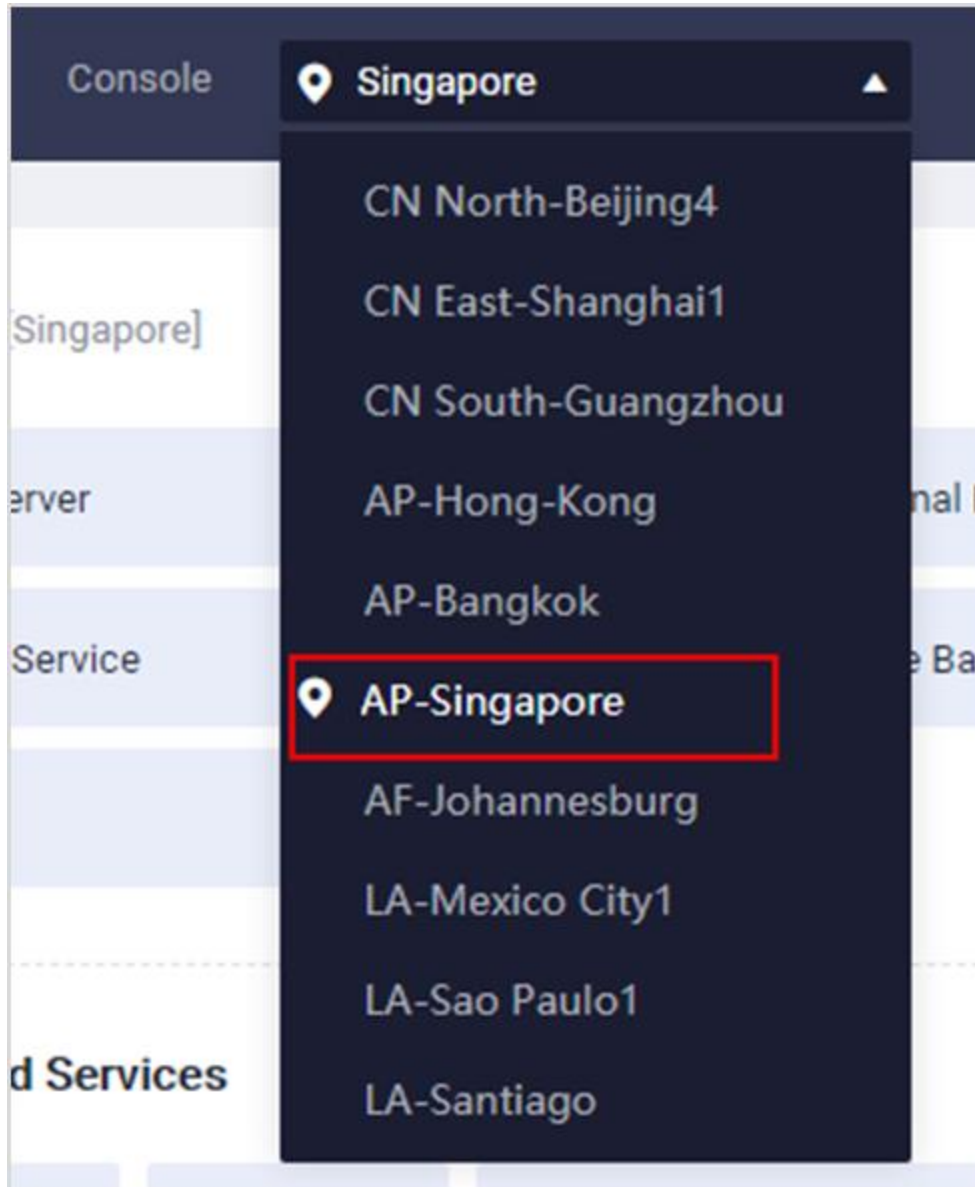
(HUAWEI CLOUD Lab Account (Click to Copy))

Account:	Sandbox-Voyager
Username:	Sandbox-user
Password:	*****


## 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.


 **HUAWEI CLOUD** | Console Singapore


Service List


 Elastic Cloud Server


 Relational Database Service


 Auto Scaling


 Bare Metal Server

 Elastic Volume Service

 Volume Backup Service

 **Virtual Private Cloud**

 Elastic Load Balance

 Elastic IP

2

2

1

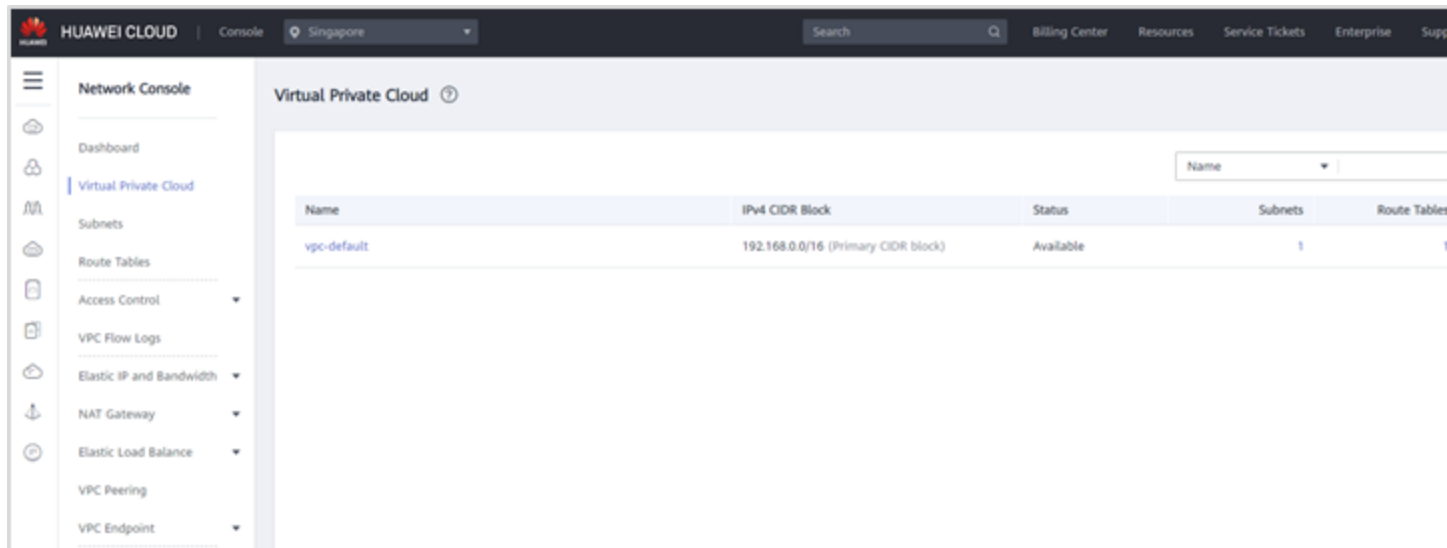
es

Auto Scaling

Image Management Service

0

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.

Create VPC ?

Basic Information

Region

AP-Singapore

Regions are geographic areas isolated from each other. Resources are region-specific and cannot be used across regions through internal network connections. To reduce latency and quick resource access, select the nearest region.

Name

vpc-default

IPv4 CIDR Block

192

168

0

0

/

16

Recommended: 10.0.0.0/8-24 (Select) 172.16.0.0/12-24 (Select) 192.168.0.0/16-24 (Select)

Advanced Settings Tag | Description

Default Subnet

Name

subnet-1273

IPv4 CIDR Block

192

168

0

0

/

24

Available IP Addresses: 251

The CIDR block cannot be modified after the subnet has been created.

IPv6 CIDR Block

☐ Enable

Associated Route Table

Default

Advanced Settings Gateway | DNS Server Address | Tag | Description

Free

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

HUAWEI CLOUD | Console | Singapore

Search | Billing Center | Resources | Service Tickets | Enterprise | Support | English

Network Console

Dashboard

Virtual Private Cloud

Subnets

Route Tables

Access Control

VPC Flow Logs

Elastic IP and Bandwidth

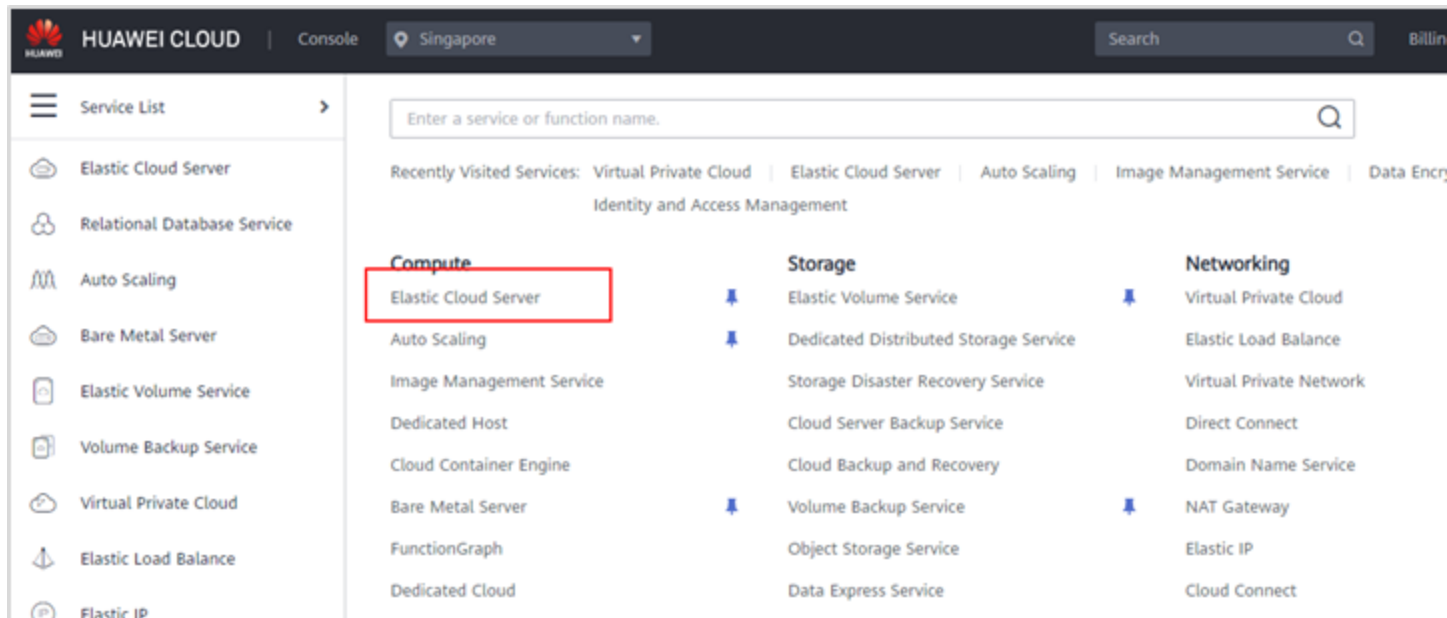
NAT Gateway

Virtual Private Cloud

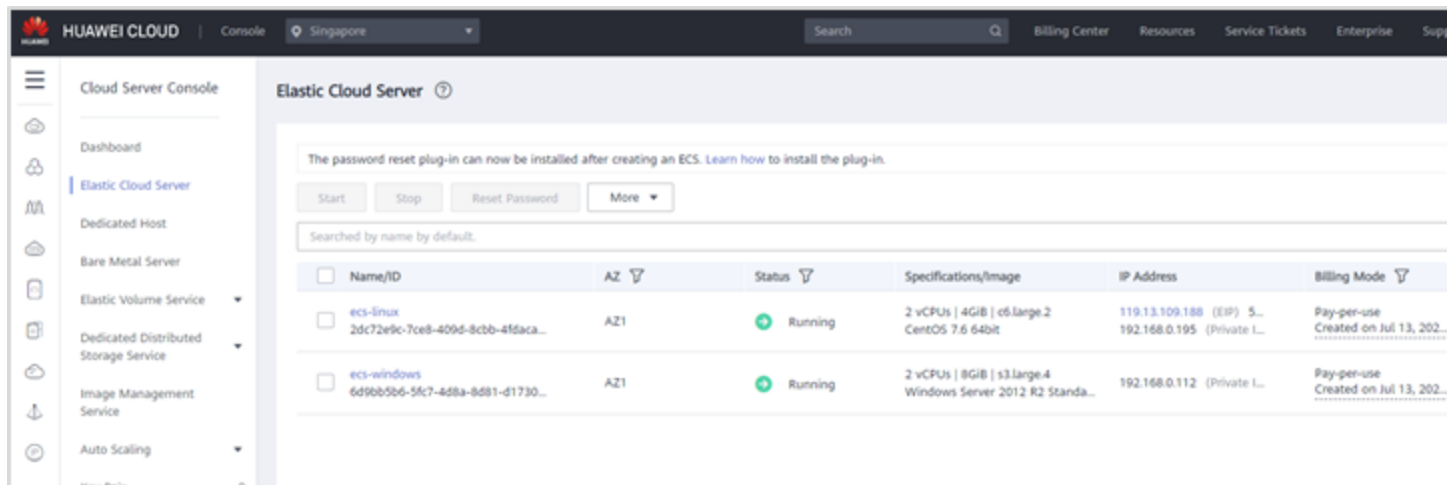
Name

Name	IPv4 CIDR Block	Status	Subnets	Route Tables	Operation
vpc-default	192.168.0.0/16 (Primary CIDR block)	Available	1	1	Edit CIDR Block   Delete

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 requirements)

HUAWEI CLOUD
Console

Search
Billing Center
Resources
Service Tickets
Enterprise
Support

Elastic Cloud Server

1 Configure Basic Settings
2 Configure Network
3 Configure Advanced Settings
4 Confirm

Billing Mode
Yearly/Monthly
Pay-per-use
Spot price

Region
AP-Singapore

AZ
Random
AZ1
AZ2
AZ3

CPU Architecture
x86
Kunpeng

Specifications
Latest generation
vCPUs
All
Memory
All
Flavor Name

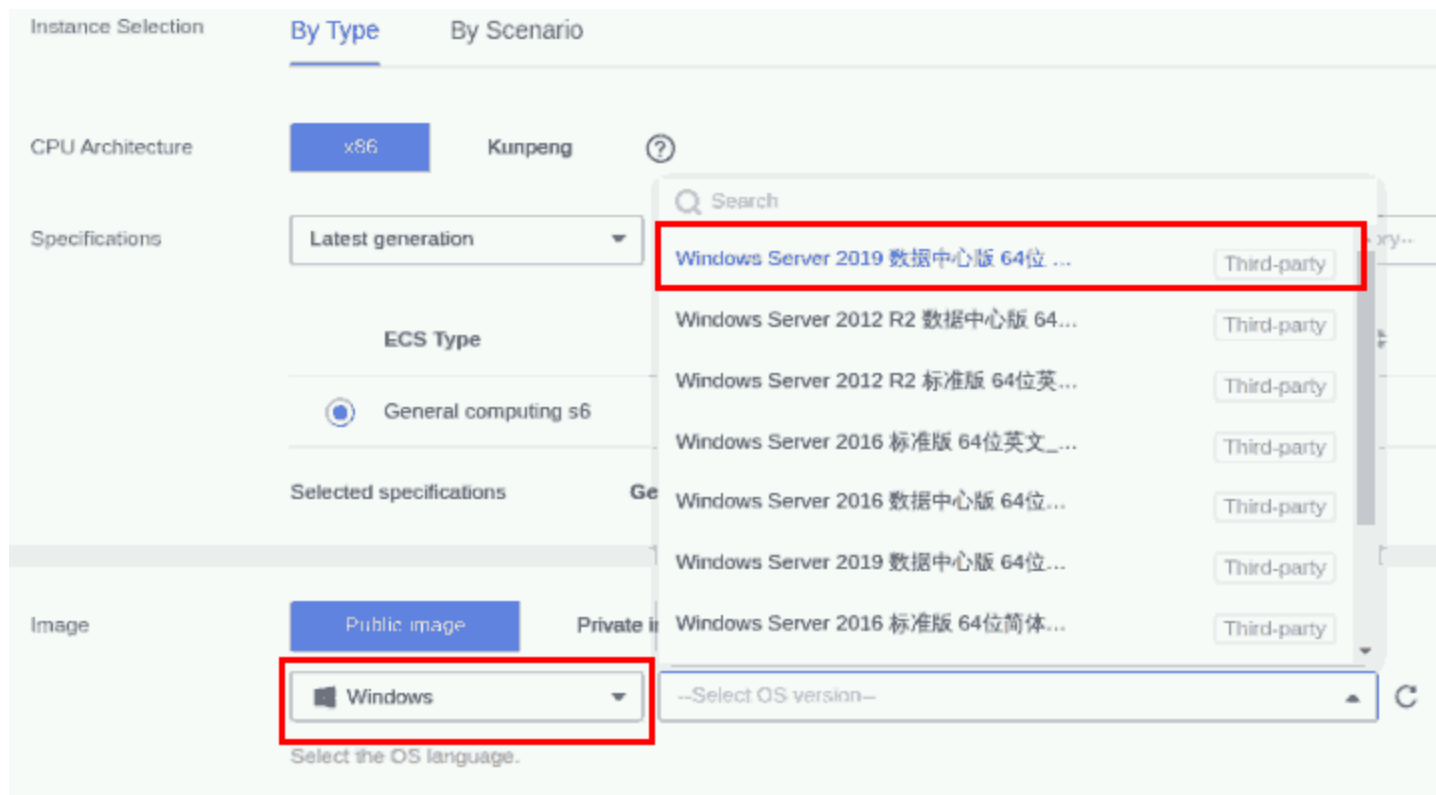
General computing-plus
General computing
Memory-optimized
Large-memory
Disk-intensive
Ultra-high I/O
GPU-accelerated
FPGA-accelerated
AI-accelerated

Flavor Name	vCPUs   Memory	CPU	Assured / Maximum Bandwidth
<input type="radio"/> s6.medium.2	1 vCPUs   2GiB	Intel Cascade Lake 2.6GHz	0.1 / 0.8 Gbit/s
<input type="radio"/> s6.medium.4	1 vCPUs   4GiB	Intel Cascade Lake 2.6GHz	0.1 / 0.8 Gbit/s
<input checked="" type="radio"/> s6.large.2	2 vCPUs   4GiB	Intel Cascade Lake 2.6GHz	0.2 / 1.5 Gbit/s
<input type="radio"/> s6.large.4	2 vCPUs   8GiB	Intel Cascade Lake 2.6GHz	0.2 / 1.5 Gbit/s
<input type="radio"/> s6.xlarge.2	4 vCPUs   8GiB	Intel Cascade Lake 2.6GHz	0.35 / 2 Gbit/s
<input type="radio"/> s6.xlarge.4	4 vCPUs   16GiB	Intel Cascade Lake 2.6GHz	0.35 / 2 Gbit/s

Quantity
1

ECS Price
\$0.0724 USD/hour

- **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**



Network: vpc-default(192.168.0.0/16) ▼ ↻ subnet-b820(192.168.0.0/24) ▼ ↻ Automatically-assigned IP address ▼

[Create VPC](#)

Extension NIC: ⊕ Add NIC You can add 1 more NICs.

---

Security Group: Sys-default (d751e5b1-ed80-4a6d-87ec-32b46df2122a) ⓘ ▼ ↻ Create Security Group ⓘ

Similar to a firewall, a security group logically controls network access.

Security Group Rules ▼

---

EIP: ☐ Auto assign ☐ Use existing ☒ Not required ⓘ

An ECS without an EIP cannot access the Internet. However, it can still be used as a service ECS deployed in a cluster or on a private network.

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.


## Instance Management

ECS Name

ecs-windows

☐ Allow duplicate name

When you purchase multiple ECSs, they are named based on automatic or custom naming rules. [Learn more](#) 

Login Mode 

Password

Key pair

Set password later

Keep the password secure. If you forget the password, you can log in to the ECS console and change it.

Username

root

Password

.....


Tag 

TMS's predefined tags are recommended for adding the same tag to different cloud resources. [Create predefined tags](#)  

[+ Add Tag](#)

Tags you can still add: 10

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

Enterprise Project --Select--  [Create Enterprise Project](#)

Quantity -- 1 + You can create a maximum of 19 ECSs. [Learn how to increase quota.](#)

Agreement ☒ I have read and agree to the Service Level Agreement and Image Disclaimer.

ECS Price **\$0.13 USD**/hour  
This price is an estimate and may differ from the final price. [Pricing details](#)

Cloud Server Console

Dashboard


Elastic Cloud Server

Dedicated Host

Bare Metal Server

Elastic Volume Service

Dedicated Distributed Storage Service

Elastic Cloud Server 

The password reset plug-in can now be installed after creating an ECS. [Learn how to install the plug-in.](#)


Start

Stop

Reset Password

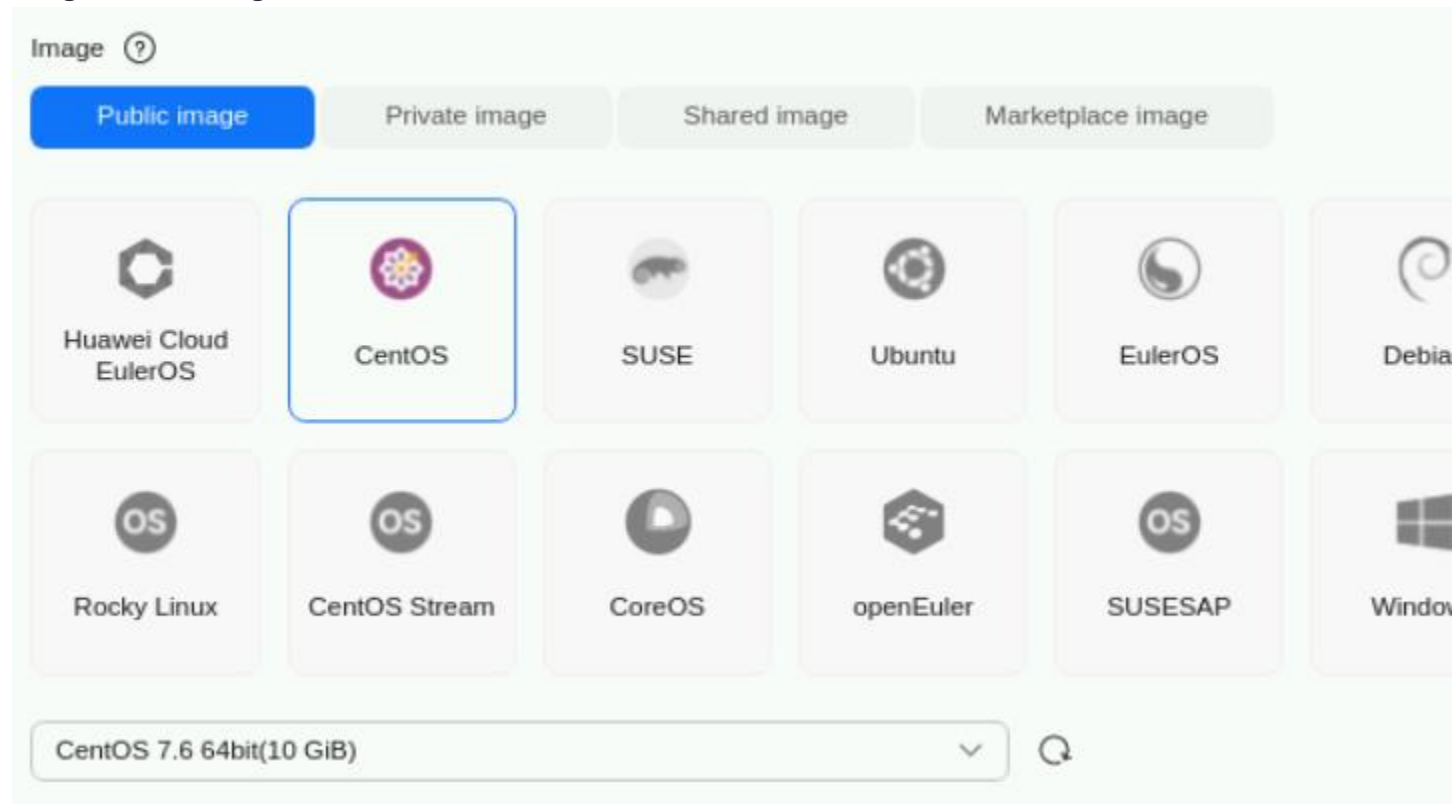
More

Searched by name by default.

<input type="checkbox"/>	Name/ID	AZ	Status	Specifications/Image	IP Address	Billing Mode
<input type="checkbox"/>	ecs-windows 6d9bb5b6-5fc7-4d8a-8d81-d1730...	AZ1	 Running	2 vCPUs   4GiB   s6.large.2 Windows Server 2012 R2 Standa...	192.168.0.112 (Private I...	Pay-per-use Created on Jul 13, 20...

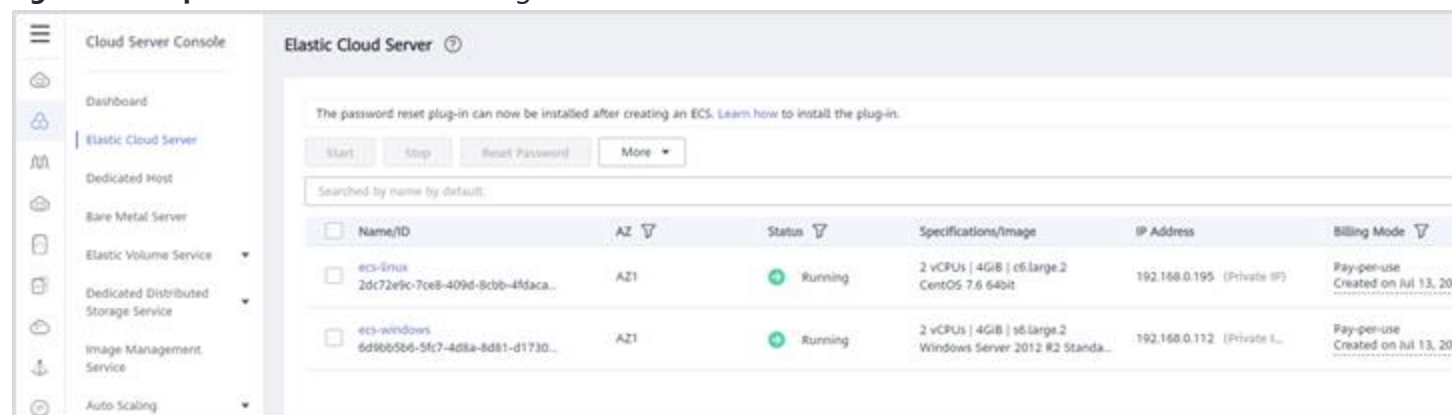
Step 12 Create a Linux ECS. Configure the parameters the same as creating the Windows ECS, except for **ECS Name**, **Image**, and **Login Mode** (choose Password, EIP: Auto assign).

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



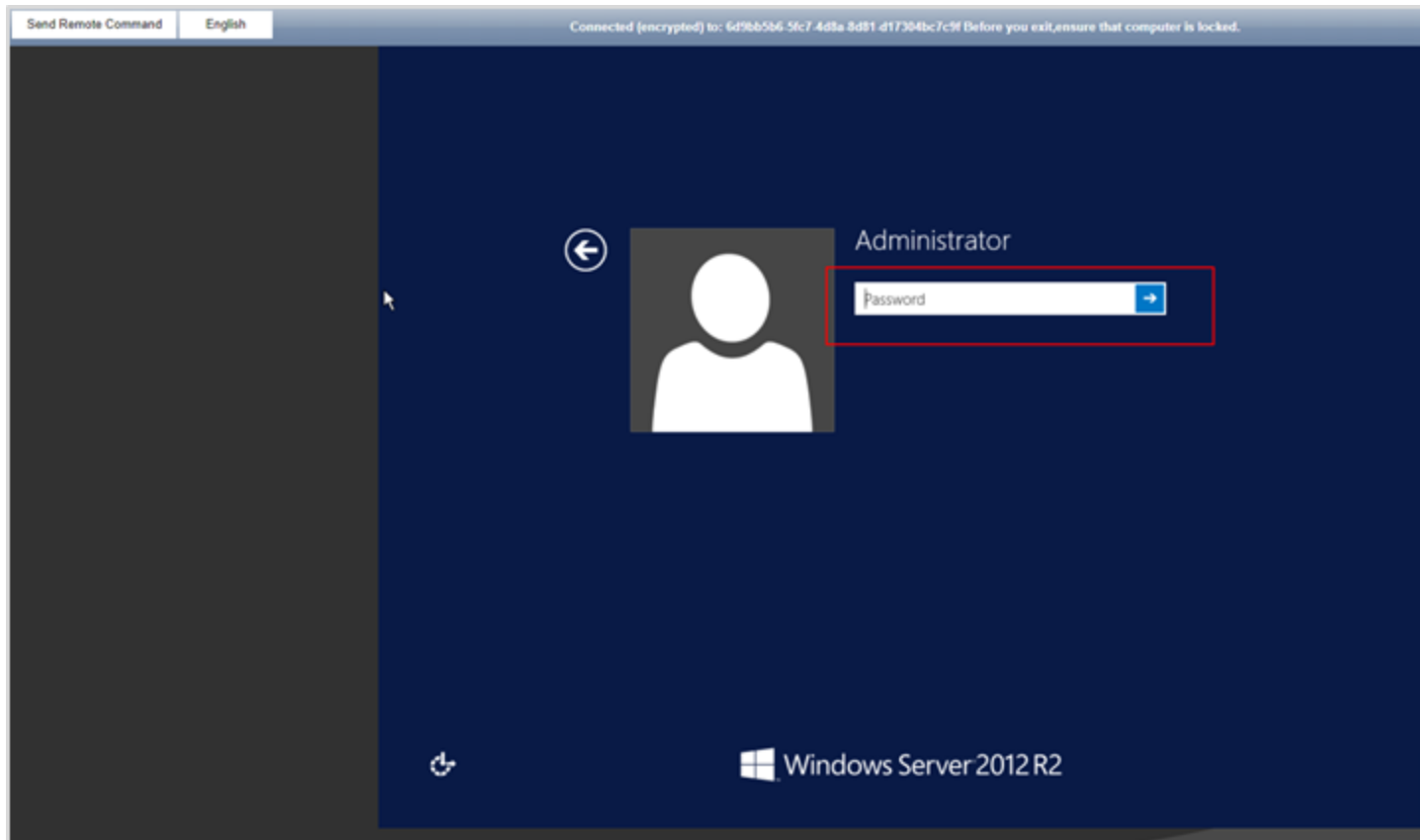
## 1.2 Logging In to an ECS

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

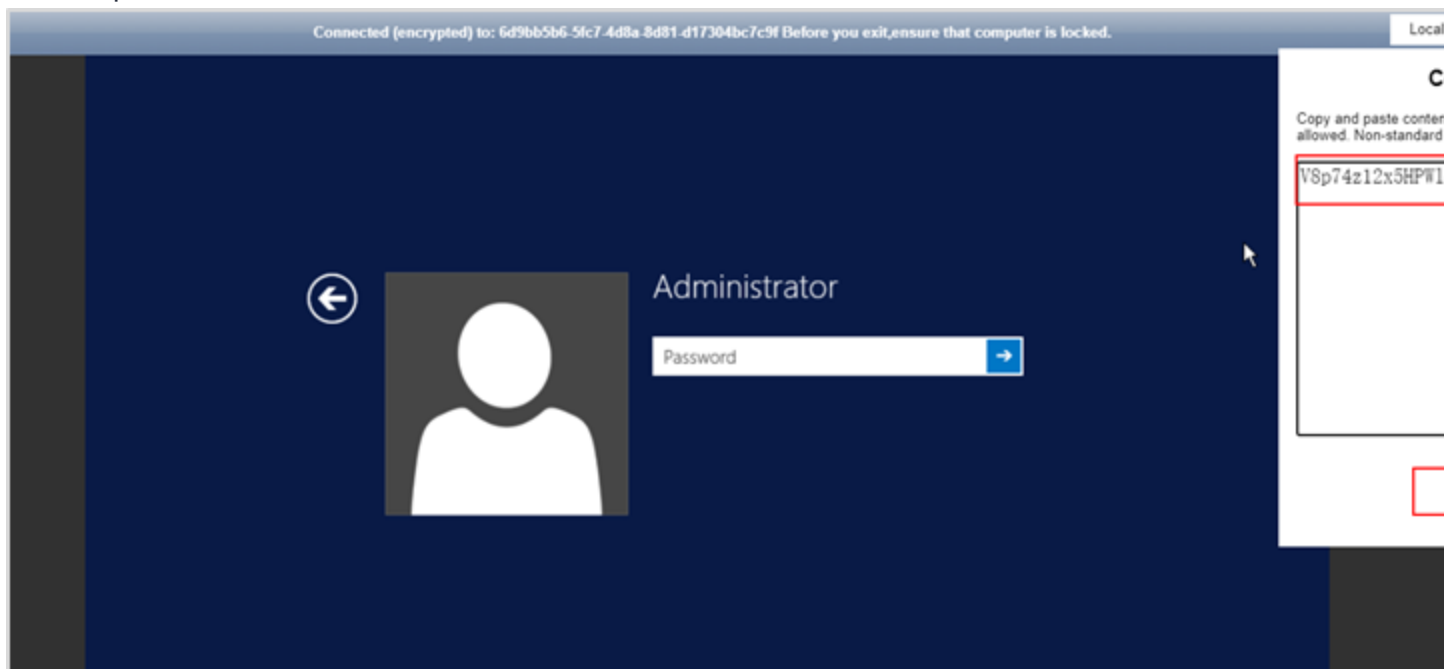


Step 2 Locate the row containing **ecs-windows**, click **Remote Login**, and click **Log In**.

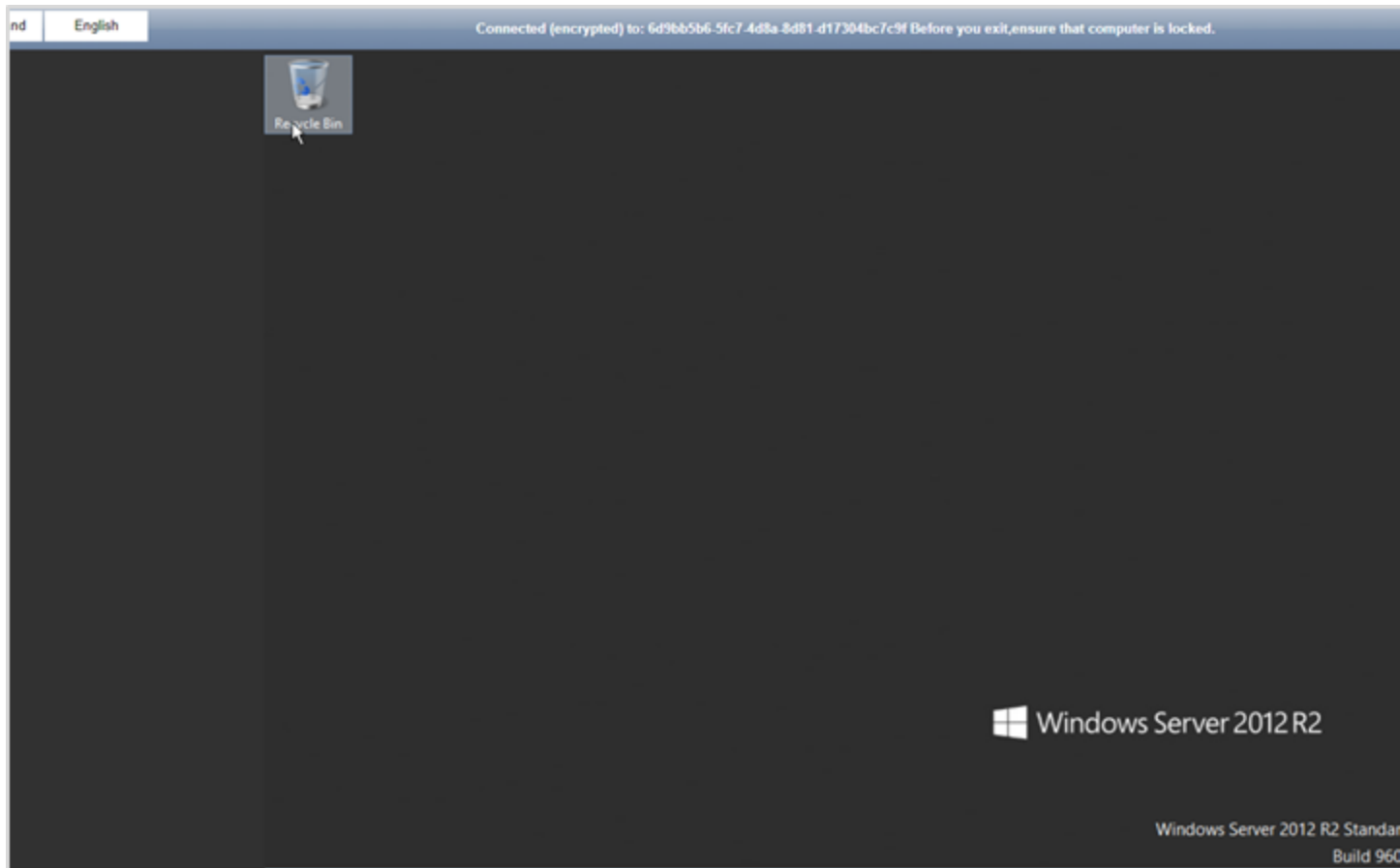
If Press Ctrl+Alt+Delete to sign in is displayed, click Send CtrlAltDel in the upper part of the remote login page.



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 login tools (SSH tool) to log in to the ECS. You can choose **Remote Login** in the row containing **ecs-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-linux 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 Service is displayed, the ECS login was successful.

```
CentOS Linux 7 (Core)
Kernel 3.10.0-1160.15.2.el7.x86_64 on an x86_64

ecs-linux login: root
Password:

Welcome to Huawei Cloud Service

[root@ecs-linux ~]#
```

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

### 1.3 Modifying Windows ECS Specifications

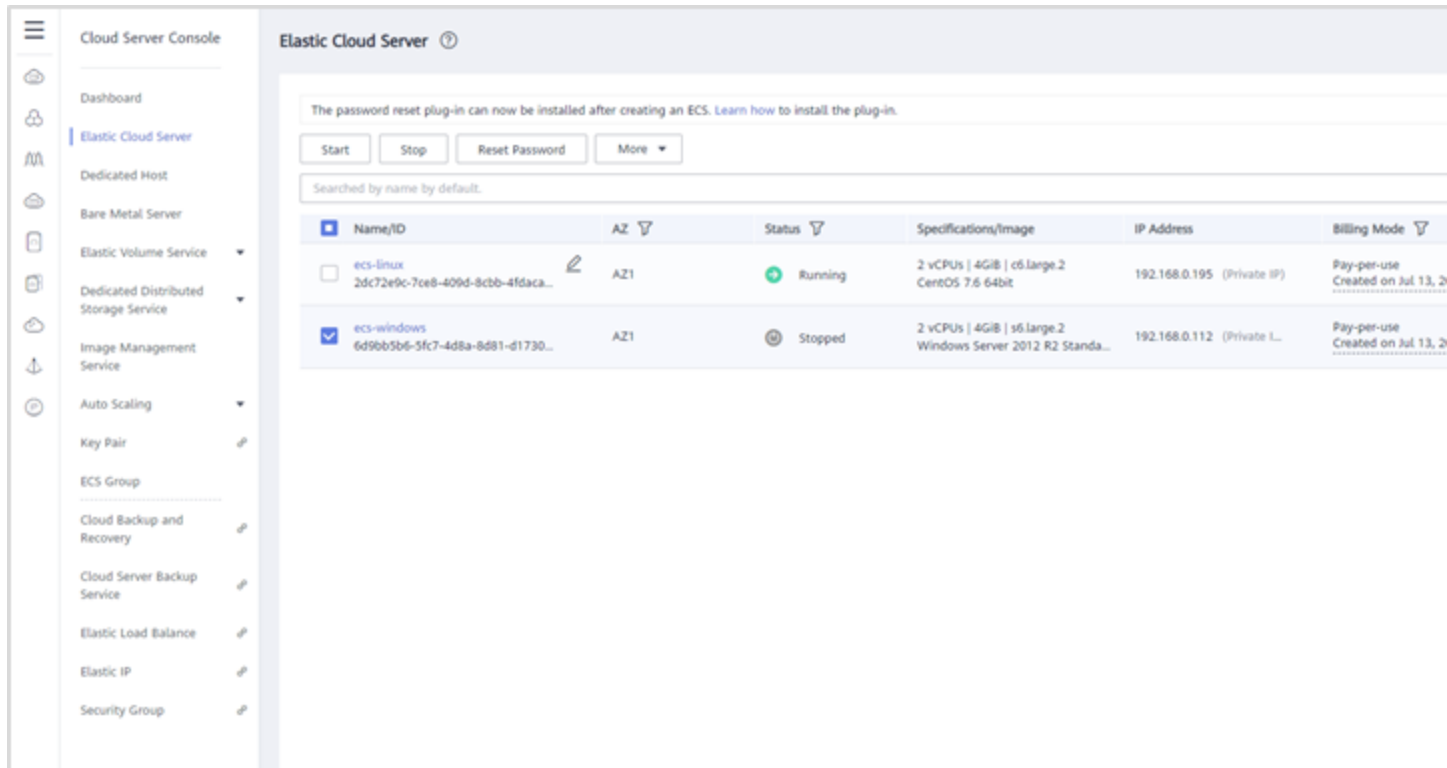
Step 1 On the **Elastic Cloud Server** page, view the status of the target Windows ECS.

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

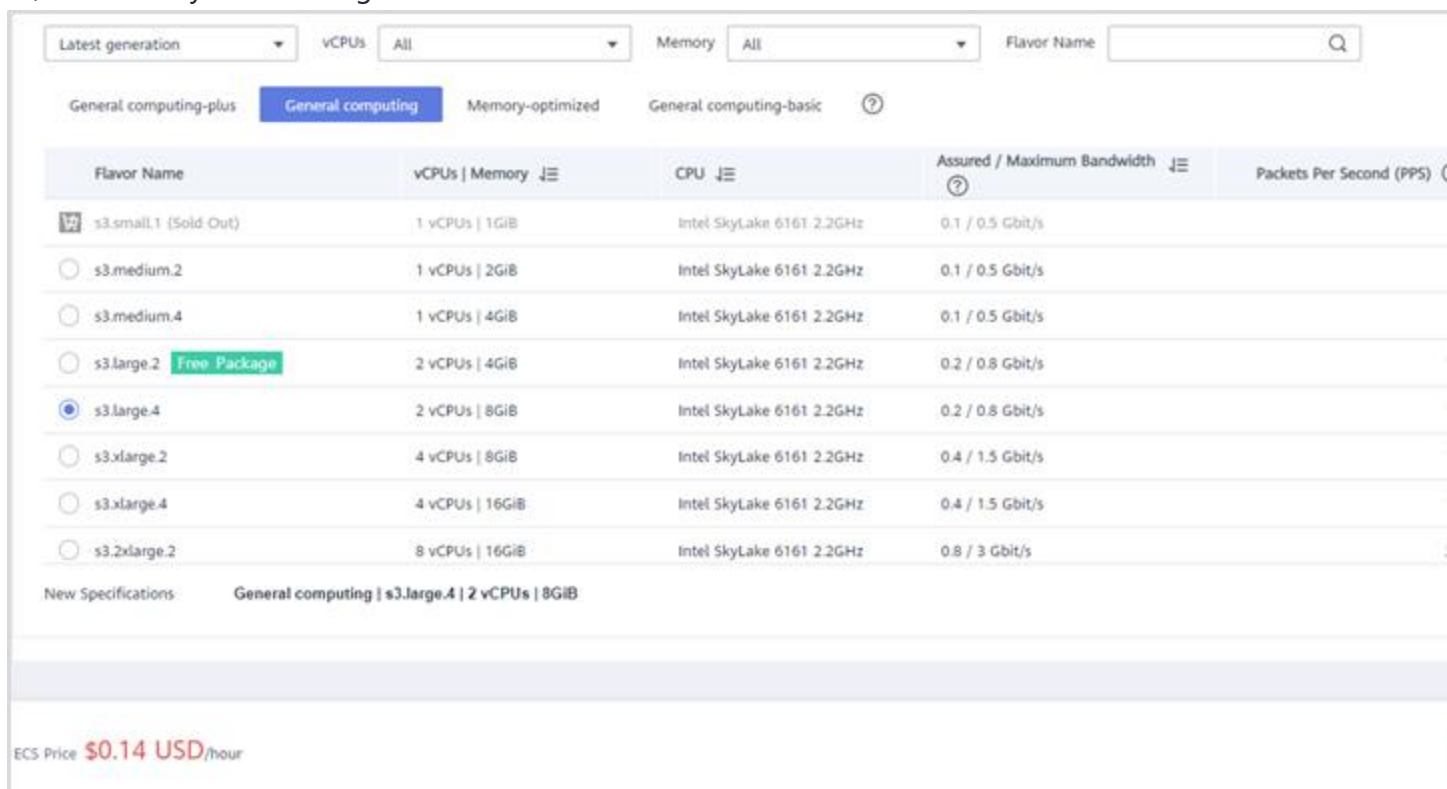
The screenshot shows the 'Elastic Cloud Server' page in the Cloud Server Console. A notification at the top states: 'The password reset plug-in can now be installed after creating an ECS. Learn how to install the plug-in.' Below this are buttons for 'Start', 'Stop' (highlighted with a red box), 'Reset Password', and 'More'. A search bar indicates 'Searched by name by default.' The table below lists the ECS instances:

Name/ID	AZ	Status	Specifications/Image	IP Address	Billing Mode
ecs-linux 2dc72e9c-7ce8-409d-9cbb-4fdaca...	AZ1	Running	2 vCPUs   4GiB   c6.large.2 CentOS 7.6 64bit	192.168.0.195 (Private IP)	Pay-per-use Created on Jul 13, 202...
ecs-windows 6d9bb5b6-5fc7-4d8a-8d81-d1730...	AZ1	Running	2 vCPUs   4GiB   s6.large.2 Windows Server 2012 R2 Standa...	192.168.0.112 (Private L...	Pay-per-use Created on Jul 13, 202...

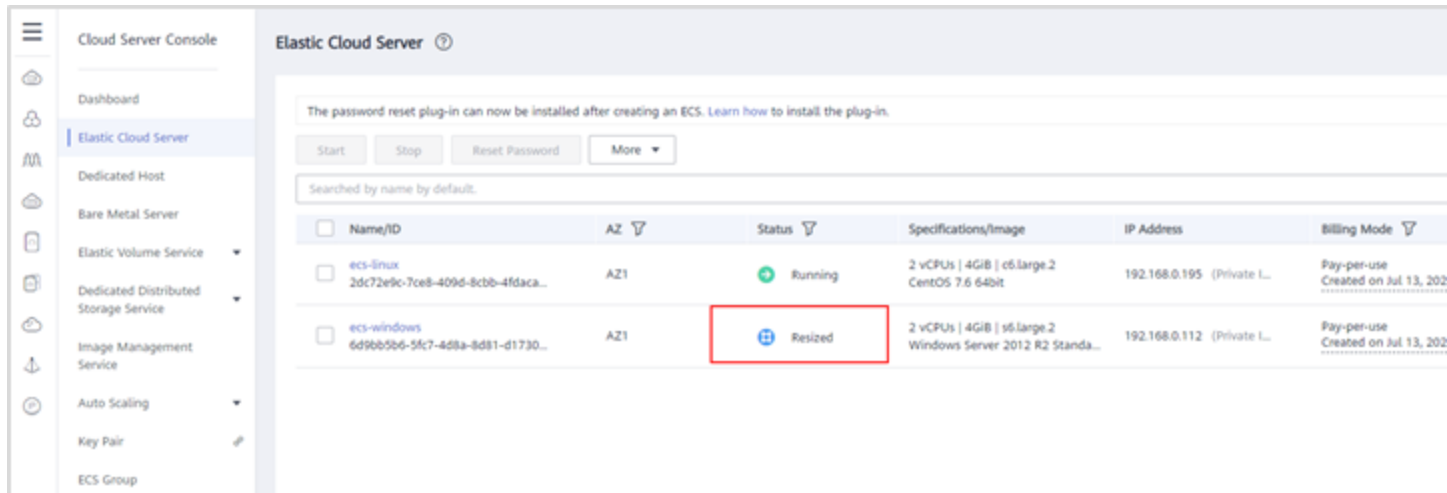
Step 3 After the ECS has stopped, click **More** in the **Operation** column of this ECS and choose **Modify Specifications**.



Step 4 In the **Modify Specifications** dialog box, select the desired ECS type, vCPUs, and memory size based on service requirements. In this exercise, 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**.

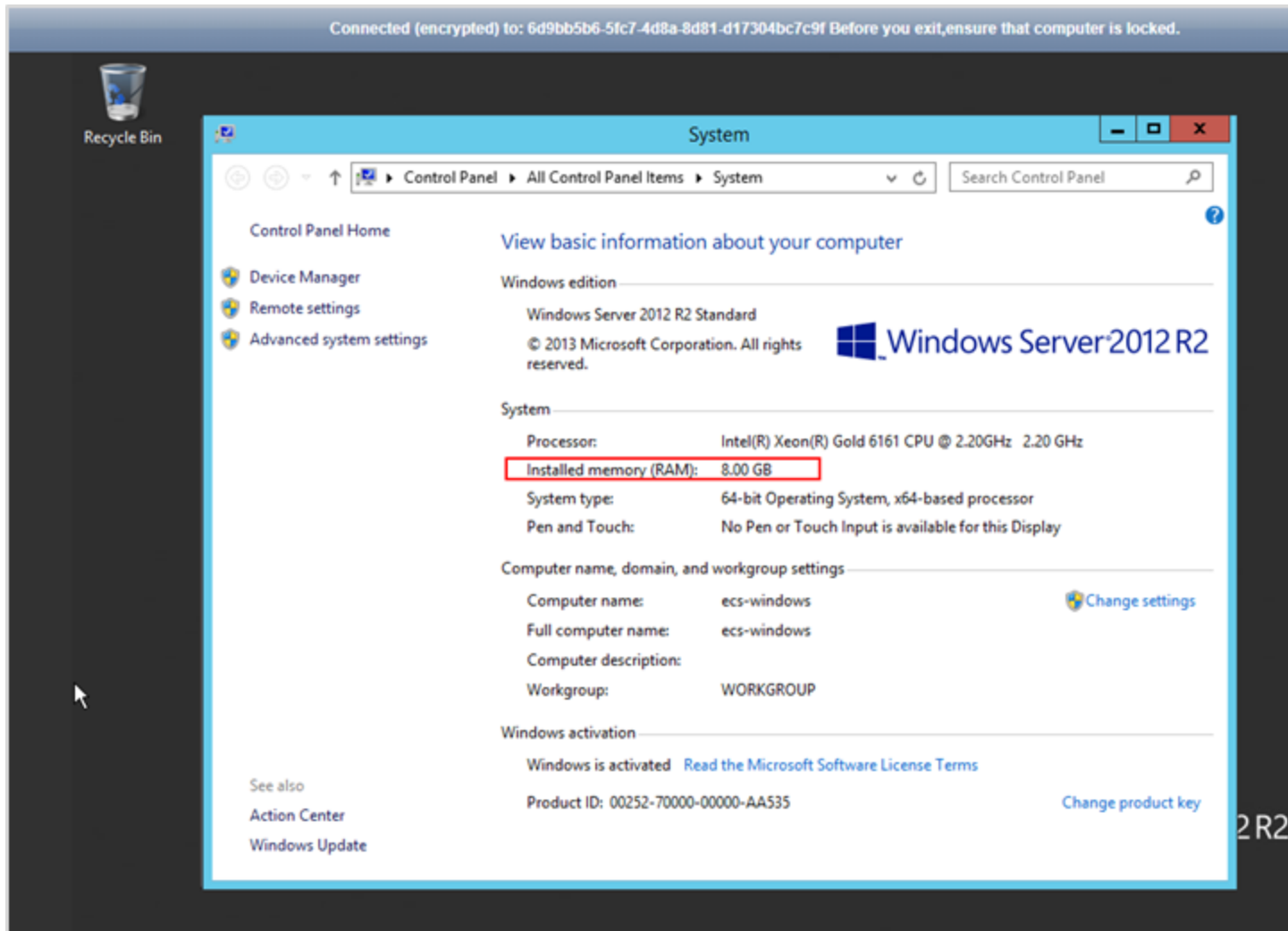


The screenshot displays the Elastic Cloud Server console. On the left is a navigation menu with options like Dashboard, Elastic Cloud Server, Dedicated Host, Bare Metal Server, Elastic Volume Service, Dedicated Distributed Storage Service, Image Management Service, Auto Scaling, Key Pair, and ECS Group. The main panel is titled 'Elastic Cloud Server' and contains a table of ECS instances. Above the table are buttons for Start, Stop, Reset Password, and a More dropdown. A search bar indicates 'Searched by name by default.' The table has columns for Name/ID, AZ, Status, Specifications/Image, IP Address, and Billing Mode. Two instances are listed: 'ecs-linux' with status 'Running' and 'ecs-windows' with status 'Resized'. The 'Resized' status for the 'ecs-windows' instance is highlighted with a red rectangular box.

Name/ID	AZ	Status	Specifications/Image	IP Address	Billing Mode
ecs-linux 2dc72e9c-7ce8-409d-8cbb-4fdaca...	AZ1	Running	2 vCPUs   4GiB   c6.large.2 CentOS 7.6 64bit	192.168.0.195 (Private L...	Pay-per-use Created on Jul 13, 202...
ecs-windows 6d9bb5b6-5fc7-4d8a-8d81-d1730...	AZ1	Resized	2 vCPUs   4GiB   s6.large.2 Windows Server 2012 R2 Standa...	192.168.0.112 (Private L...	Pay-per-use Created on Jul 13, 202...

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.

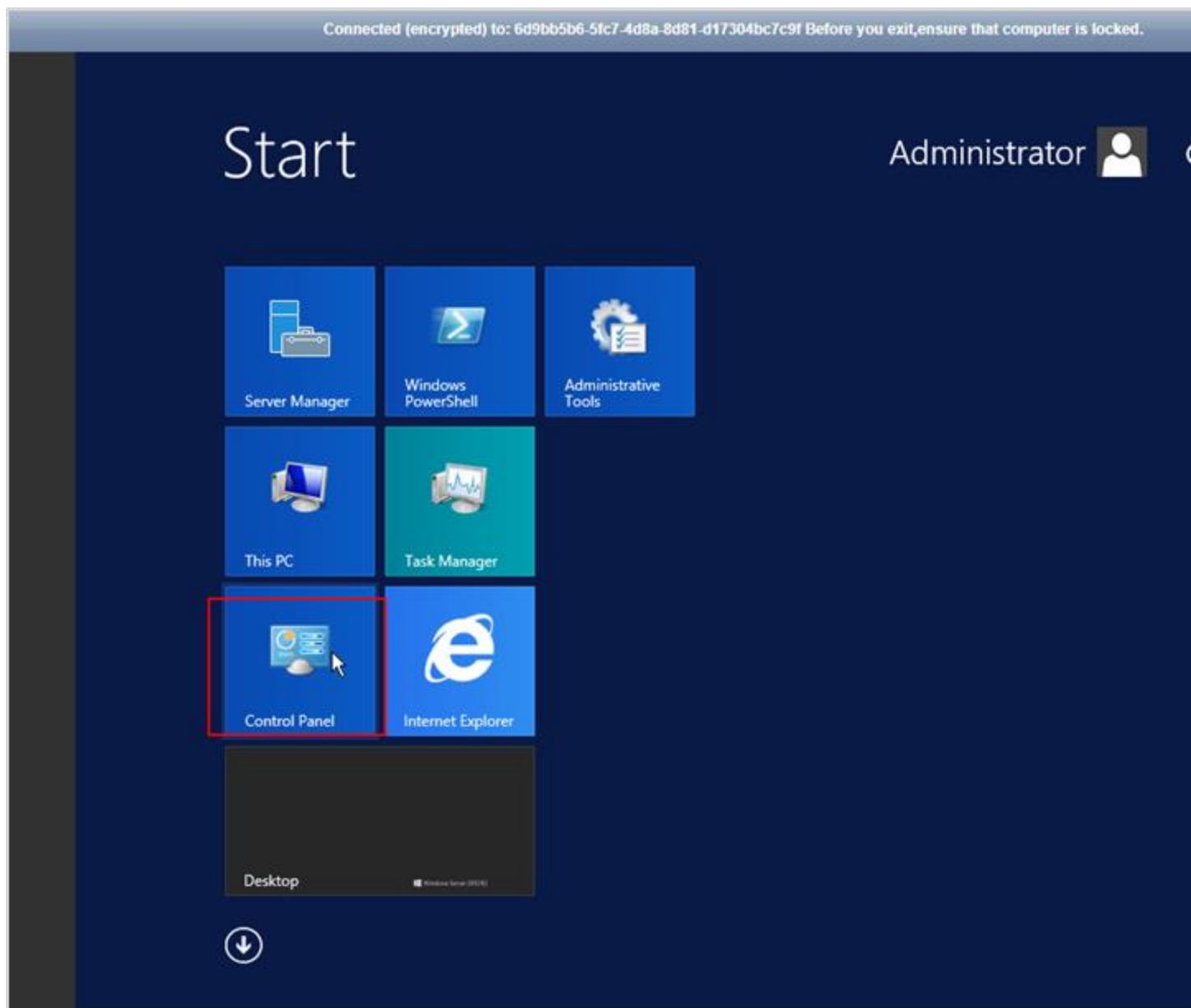
### 2.1 Configuring a Windows ECS

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

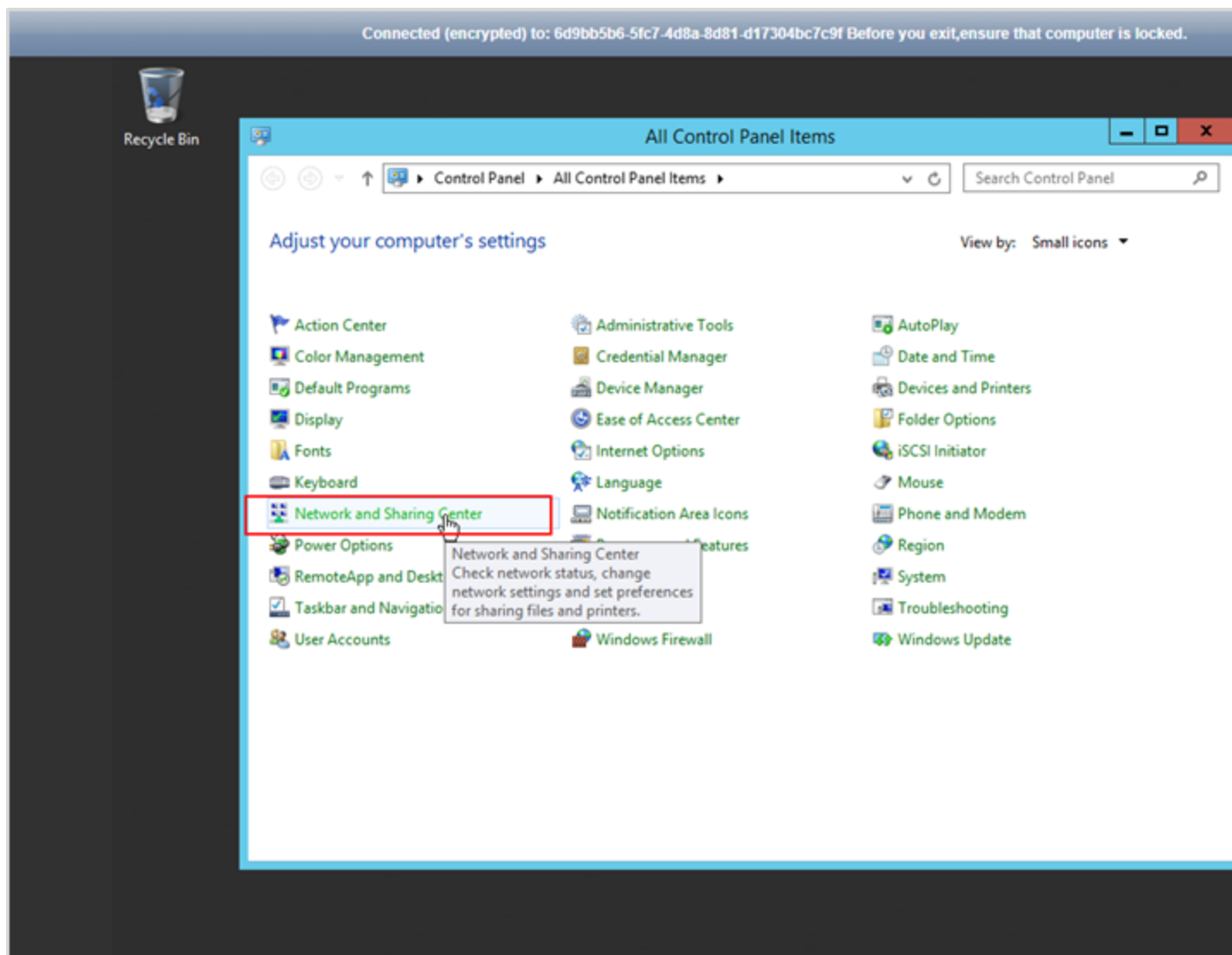
Step 1 Remotely log in to the ECS.

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

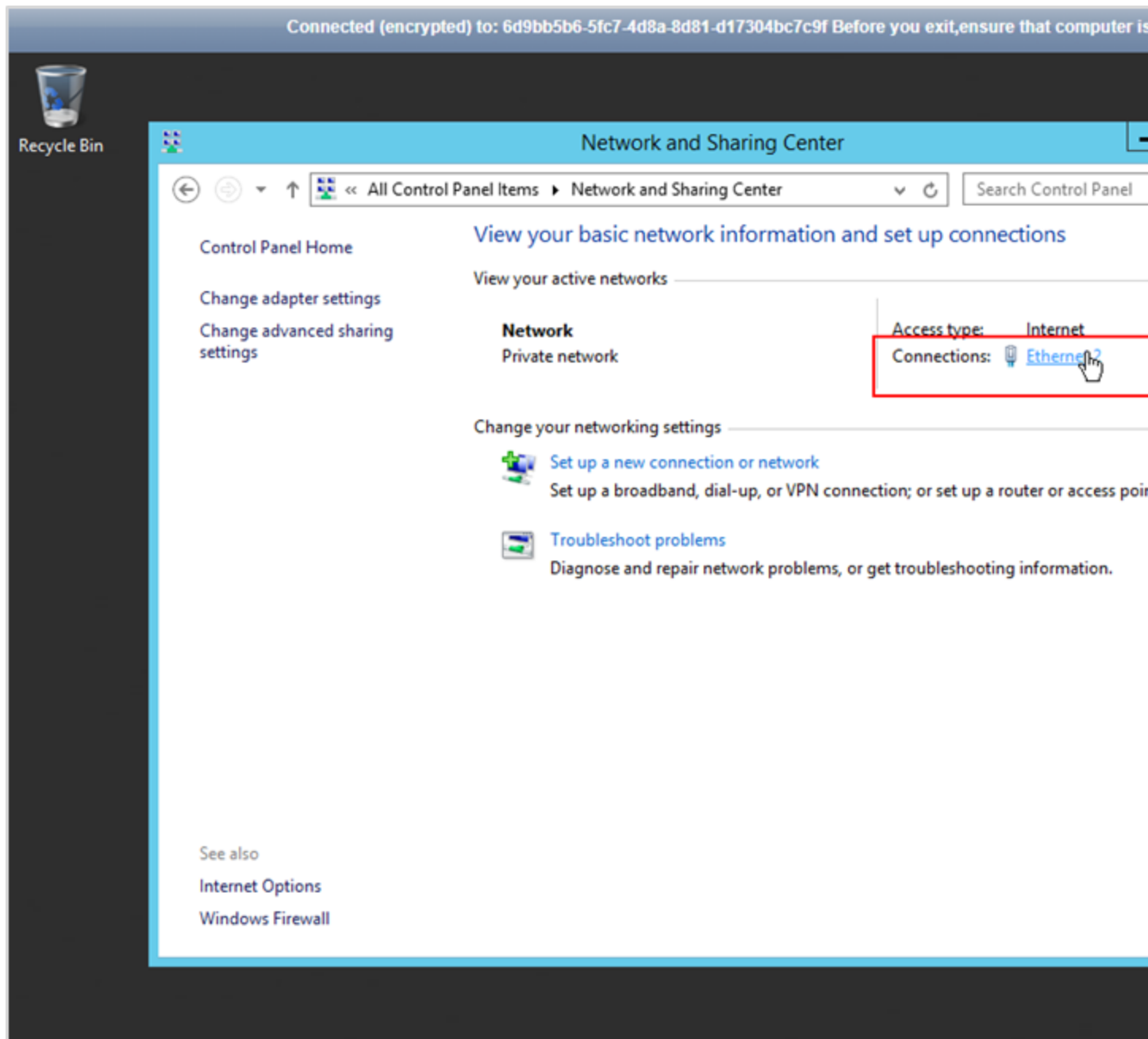
**1. Choose Start > Control Panel.** (The GUI varies somewhat depending on the OS version.)



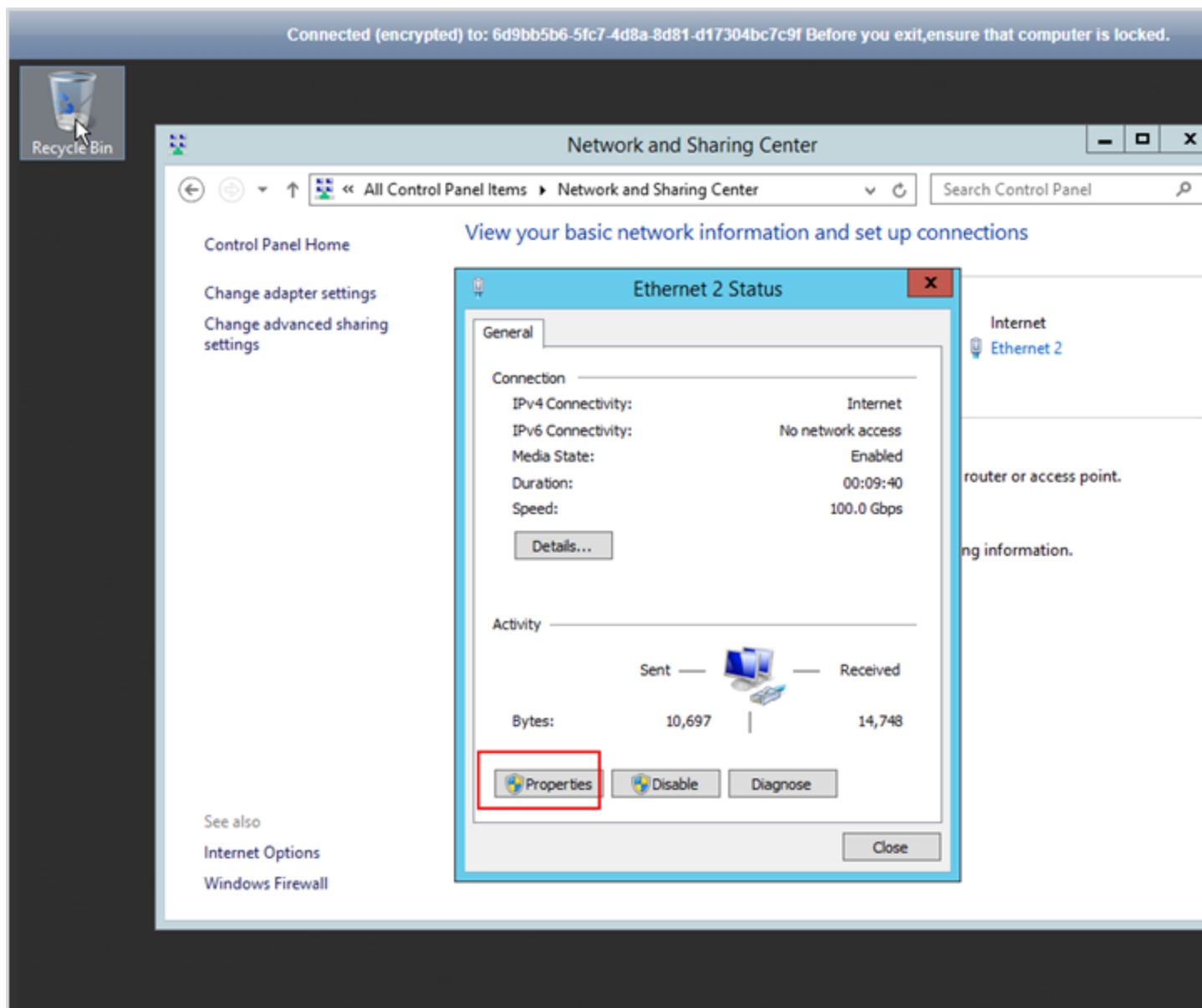
2. Click Network and Sharing Center.



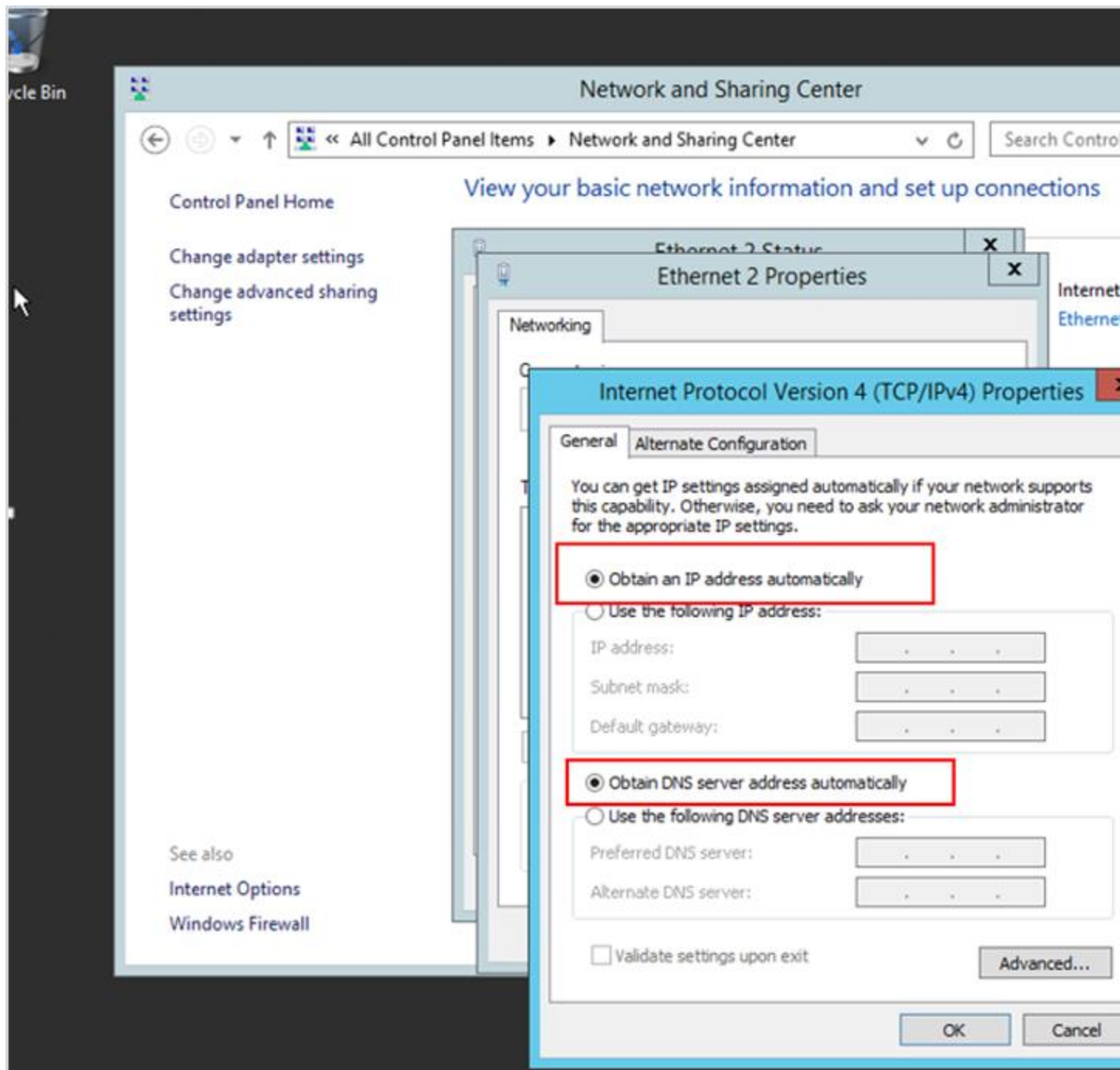
3. Click a network connection, for example, Ethernet 2.



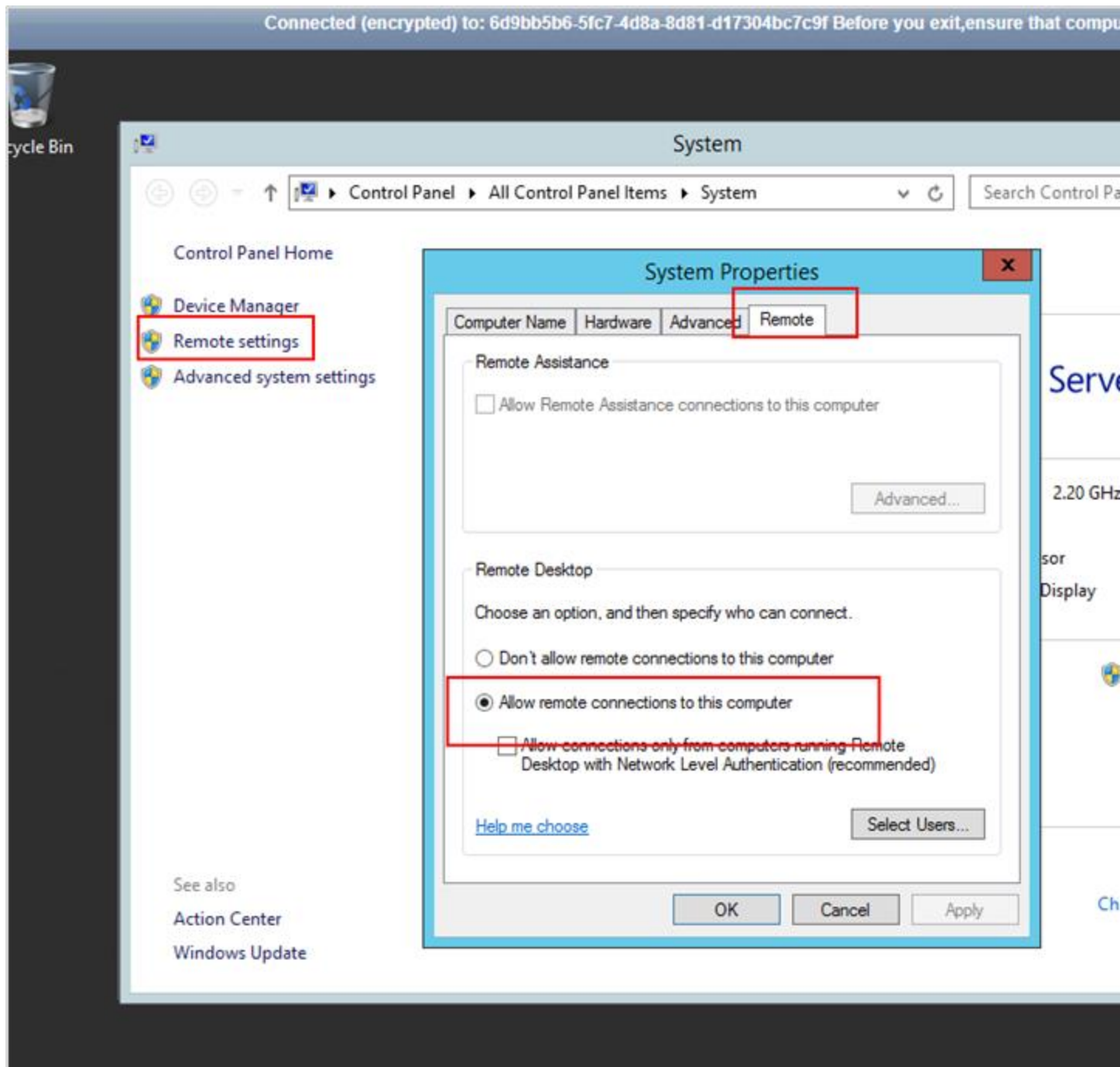
4. Click Properties, select Internet Protocol Version 4 (TCP/IPv4), and click Properties.



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

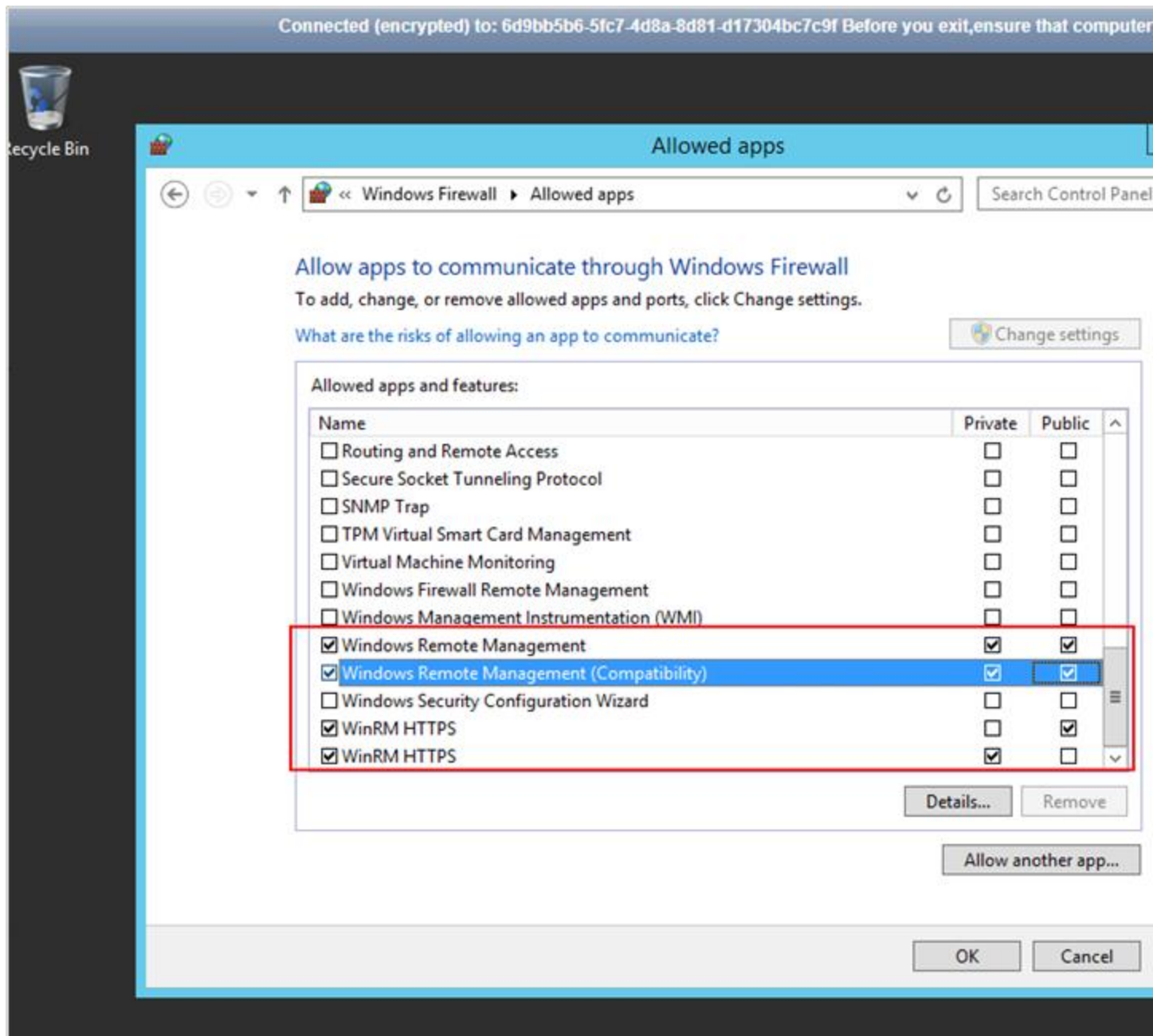


Step 3 Click **Start**, right-click **This PC**, and choose **Properties**. In the navigation pane to the left of the **System** page, click **Remote settings**. Select **Allow remote connections to this computer**. Click **OK**. (The GUI varies somewhat depending on the OS version.)



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

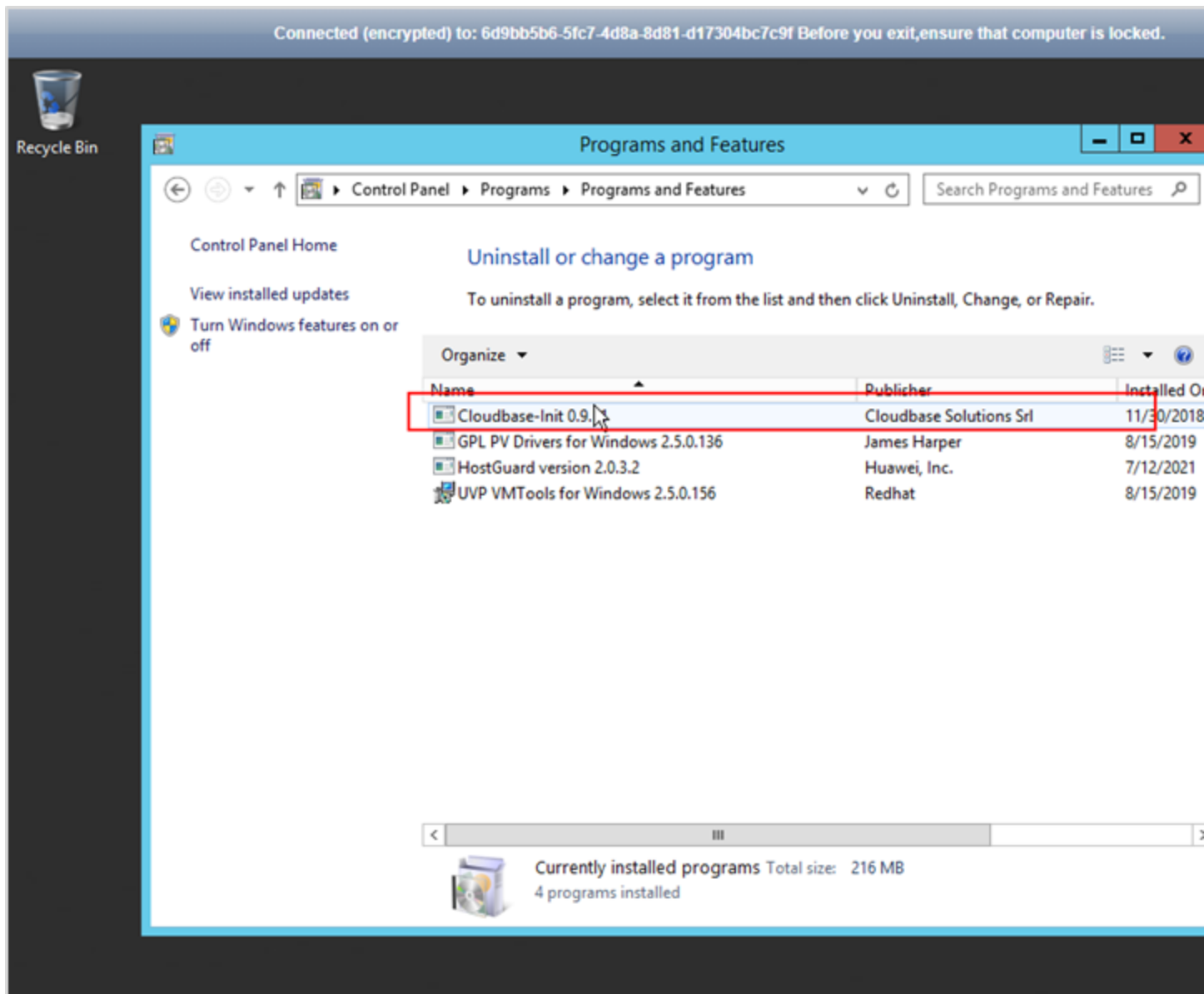
**In this exercise, both the private and public networks are allowed by the firewall.**



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 been installed on the ECS.**





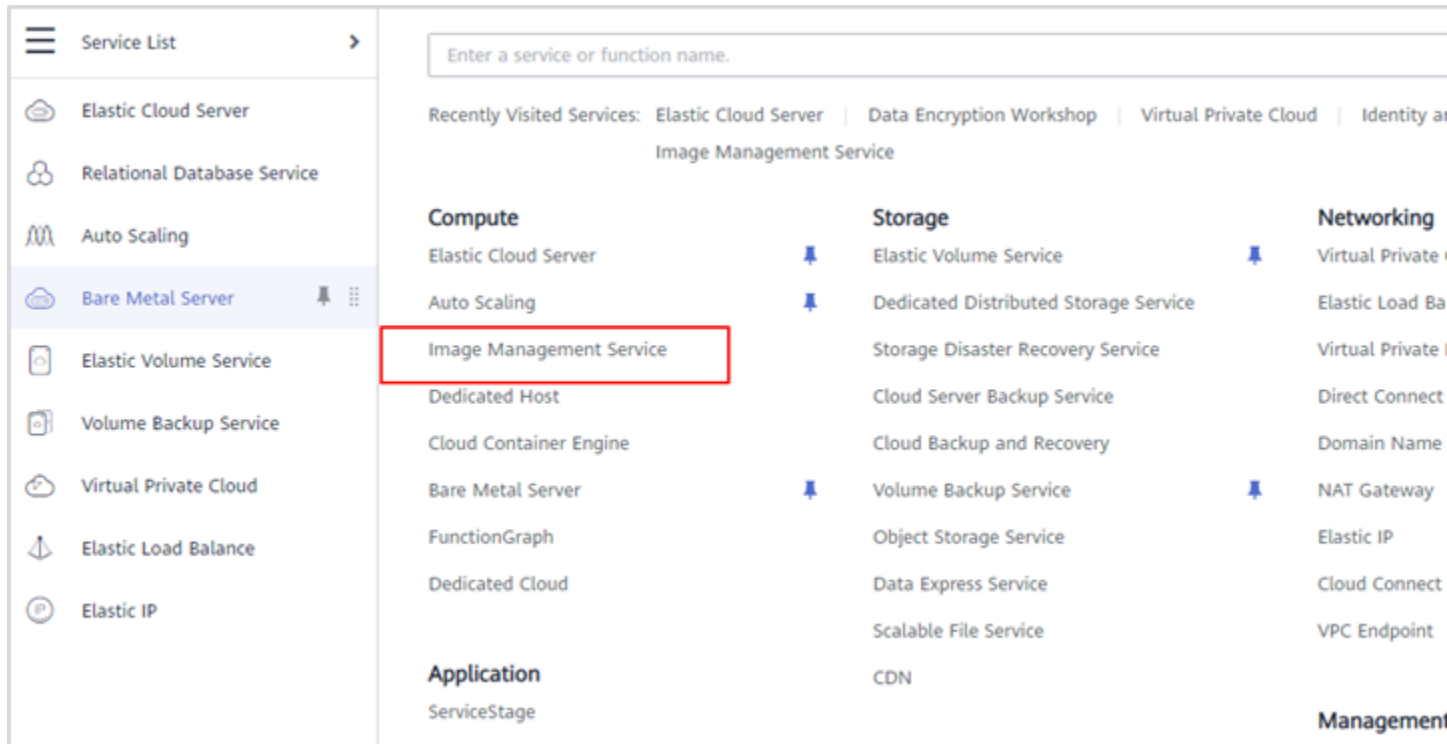
**Note:**

- 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](https://support.huaweicloud.com/intl/en-us/usermanual-ims/en-us_topic_0030730602.html)).

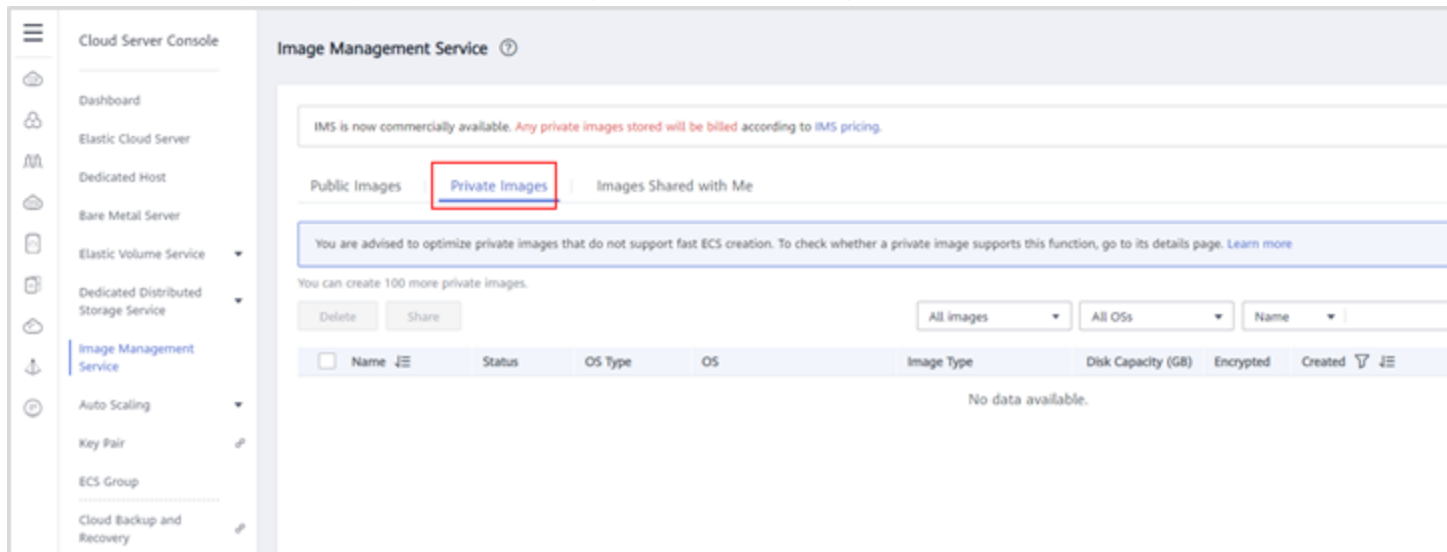
In this exercise, the ECS is created from the public image windows2012 R2, which has Cloudbase-Init installed by default.

## 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**.

**Image Type and Source**

★ Type System disk image Full-ECS image Data disk image ISO image

★ Source ECS BMS Image File

- Only ECSs in the running or stopped state can be used to create private images.
- Before creating an image, configure and optimize the ECS. Ensure Cloud-Init is installed if the ECS runs Linux and Cloudbase-Init if the ECS runs Windows. [Learn more](#)
- Do not perform any operation on the selected ECS or associated resources when an image is being created.

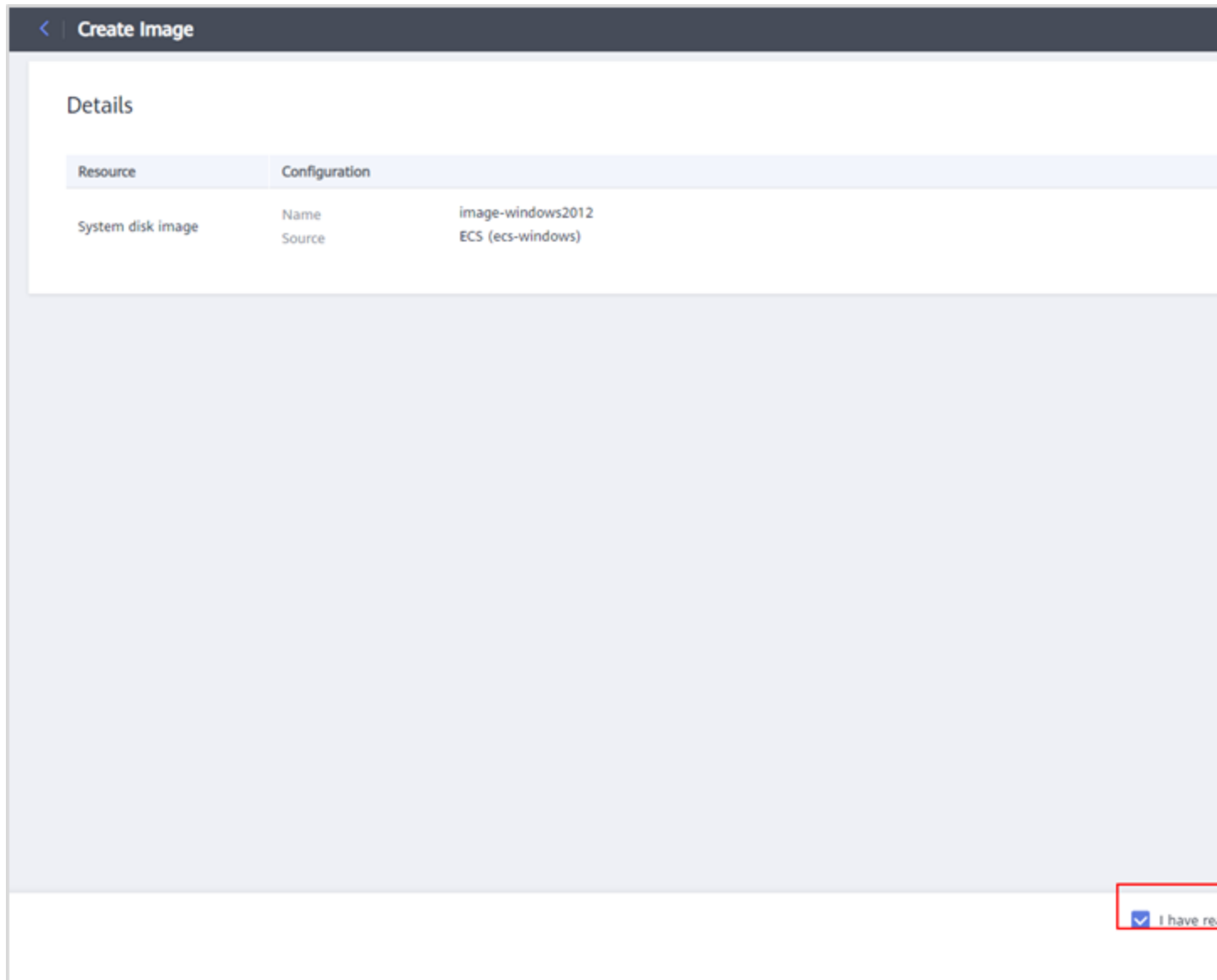
All statuses ▼ Name ▼

	Name	OS	Status	Private IP Address	Create
▼ ○	ecs-linux	CentOS 7.6 64bit	→ Running	192.168.0.195	Jul 13,
▼ ●	ecs-windows	Windows Server 2012 R2 ...	→ Running	192.168.0.112	Jul 13,

Selected: ecs-windows | OS: Windows Server 2012 R2 Standard 64bit | System Disk: High I/O | 40 GB

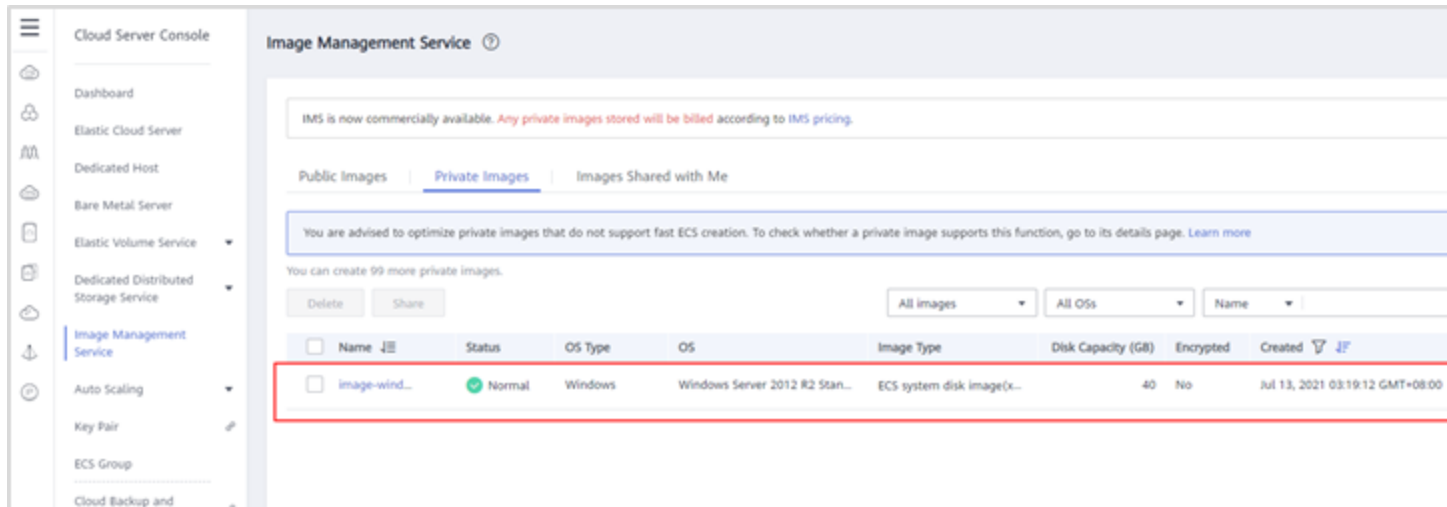
[Buy ECS](#)

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



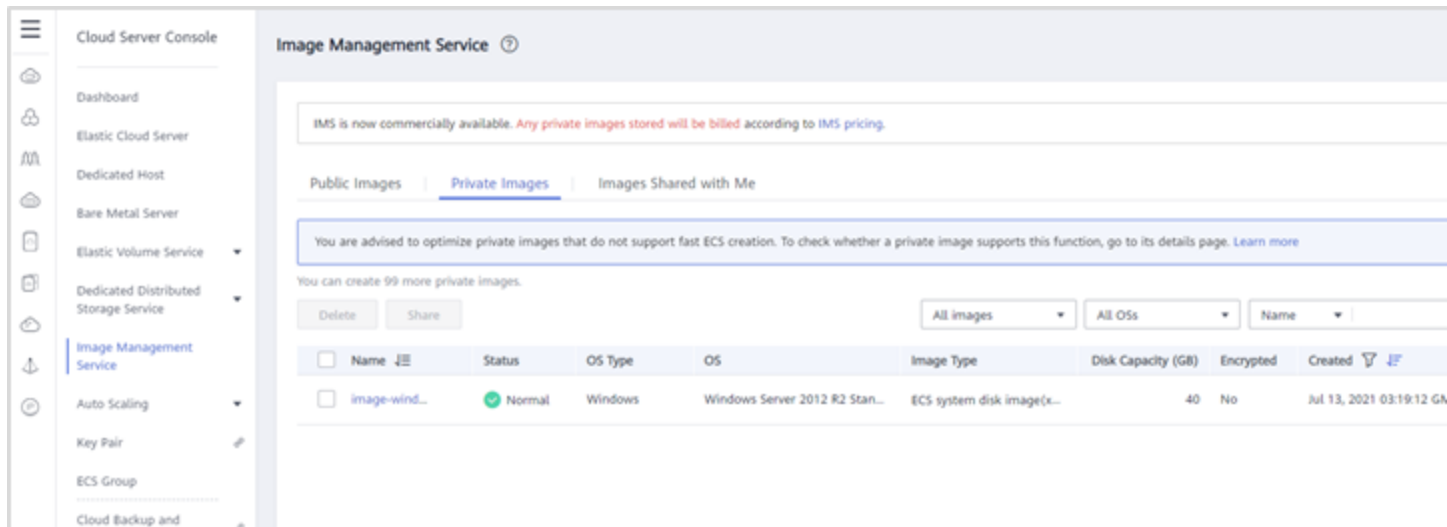
Step 5 Switch back to the **Private Images** tab page to view the image status.

**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 **Operation** column.



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

×

Modify Image

★ Name

image-windows2012

Description

0/1,024

Minimum Memory

Ensure that the minimum memory size of an image is set to its original size before you reinstall OSs of the ECSs that were created using the image.

Unlimited

1 GB

2 GB

4 GB

8 GB

16 GB

32 GB

64 GB

128 GB

Maximum Memory

Unlimited

4 GB

32 GB

64 GB

128 GB

NIC Multi-Queue

Supported

Not supported

Boot Mode

BIOS

UEFI

The boot mode must be the same as that of the OS contained in the image file. Otherwise, ECSs created from this system disk image will fail to start.

OK

Cancel

## 2.4 Replicating an Image Within a Region

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

☰

Cloud Server Console

Dashboard

Elastic Cloud Server

Dedicated Host

Bare Metal Server

Elastic Volume Service

Dedicated Distributed Storage Service

Image Management Service

Auto Scaling

Key Pair

ECS Group

Cloud Backup and

Image Management Service ?

IMS is now commercially available. Any private images stored will be billed according to IMS pricing.

Public Images | Private Images | Images Shared with Me

You are advised to optimize private images that do not support fast ECS creation. To check whether a private image supports this function, go to its details page. [Learn more](#)

You can create 99 more private images.

Delete

Share

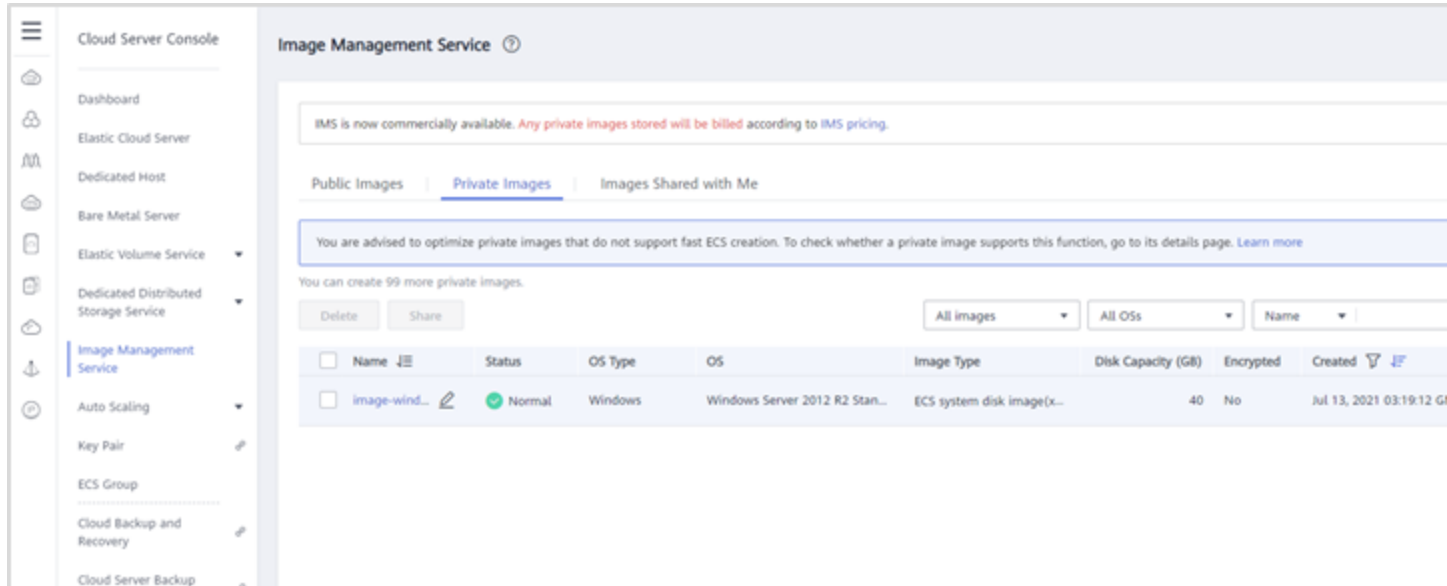
All images

All OSs

Name

<input type="checkbox"/>	Name	Status	OS Type	OS	Image Type	Disk Capacity (GB)	Encrypted	Created	
<input type="checkbox"/>	image-wind...	Normal	Windows	Windows Server 2012 R2 Stan...	ECS system disk image(x...	40	No	Jul 13, 2021 03:19:12 G	

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



The screenshot shows the Cloud Server Console interface. On the left is a sidebar with navigation links: Cloud Server Console, Dashboard, Elastic Cloud Server, Dedicated Host, Bare Metal Server, Elastic Volume Service, Dedicated Distributed Storage Service, Image Management Service (highlighted), Auto Scaling, Key Pair, ECS Group, Cloud Backup and Recovery, and Cloud Server Backup. The main panel is titled 'Image Management Service' and contains a notification about IMS being commercially available. Below this are tabs for 'Public Images', 'Private Images' (selected), and 'Images Shared with Me'. A message advises optimizing private images for fast ECS creation. Below the message, there are 'Delete' and 'Share' buttons, and filters for 'All images', 'All OSs', and 'Name'. A table lists private images with columns: Name, Status, OS Type, OS, Image Type, Disk Capacity (GB), Encrypted, and Created. One image is listed: 'image-wind...' with a status of 'Normal', OS Type 'Windows', OS 'Windows Server 2012 R2 Stan...', Image Type 'ECS system disk image(x...', Disk Capacity '40', Encrypted 'No', and Created 'Jul 13, 2021 03:19:12 G'.

<input type="checkbox"/>	Name	Status	OS Type	OS	Image Type	Disk Capacity (GB)	Encrypted	Created
<input type="checkbox"/>	image-wind...	Normal	Windows	Windows Server 2012 R2 Stan...	ECS system disk image(x...	40	No	Jul 13, 2021 03:19:12 G

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

## Replicate Image

Image Size 9.07 GB

OS Type Windows

OS Windows Server 2012 R2 Standard 64bit

Created Jul 13, 2021 03:19:12 GMT+08:00

Replication Mode **Within Region** Across Regions

\* Name copy\_image-windows2012

Description 0/1,024

Encryption ☐ KMS encryption ?

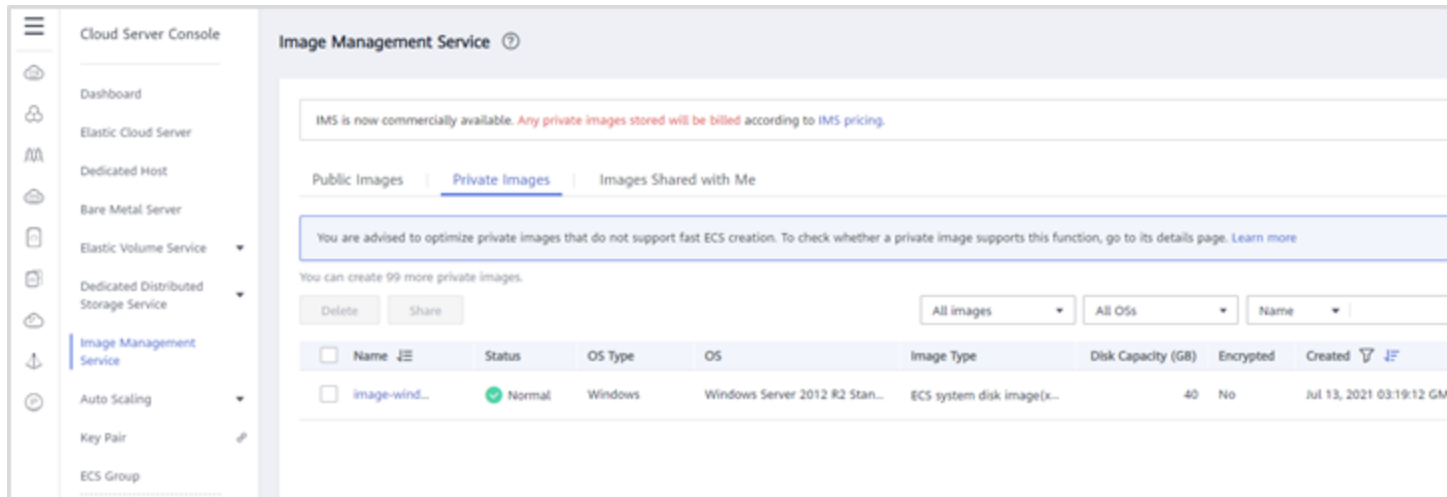
**OK** Cancel

<input type="checkbox"/>	Name	Status	OS Type	OS	Image Type	Disk Capacity (GB)	Encrypted	Created
<input type="checkbox"/>	copy_image-wind...	<div><div></div>Creating 20%</div>	Windows	Windows Server 2012 R2 Stan...	ECS system disk image	40	No	Jul 13, 2021 03:39:30 GMT+08:00
<input type="checkbox"/>	image-wind...	<div><div></div>Normal</div>	Windows	Windows Server 2012 R2 Stan...	ECS system disk image(x...	40	No	Jul 13, 2021 03:19:12 GMT+08:00

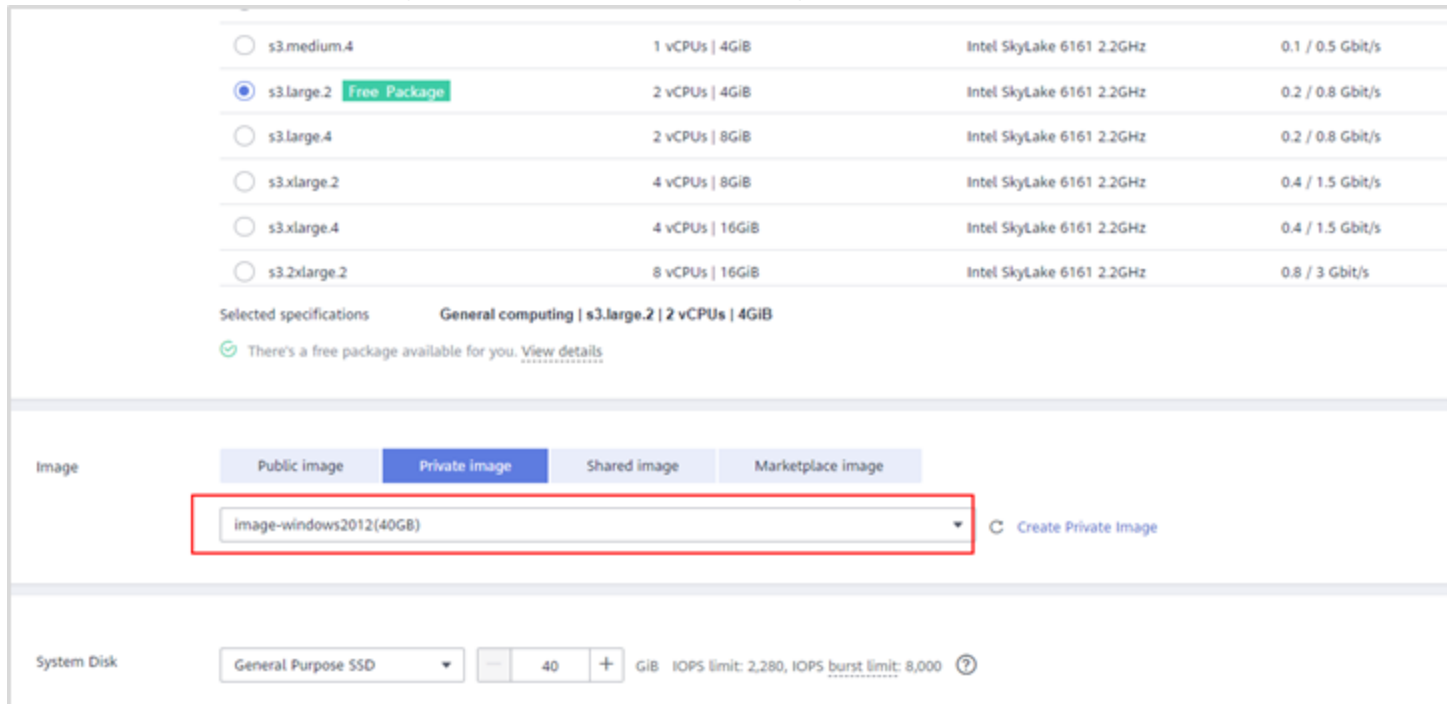
### 2.5 Applying for an ECS Using a Private Image

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

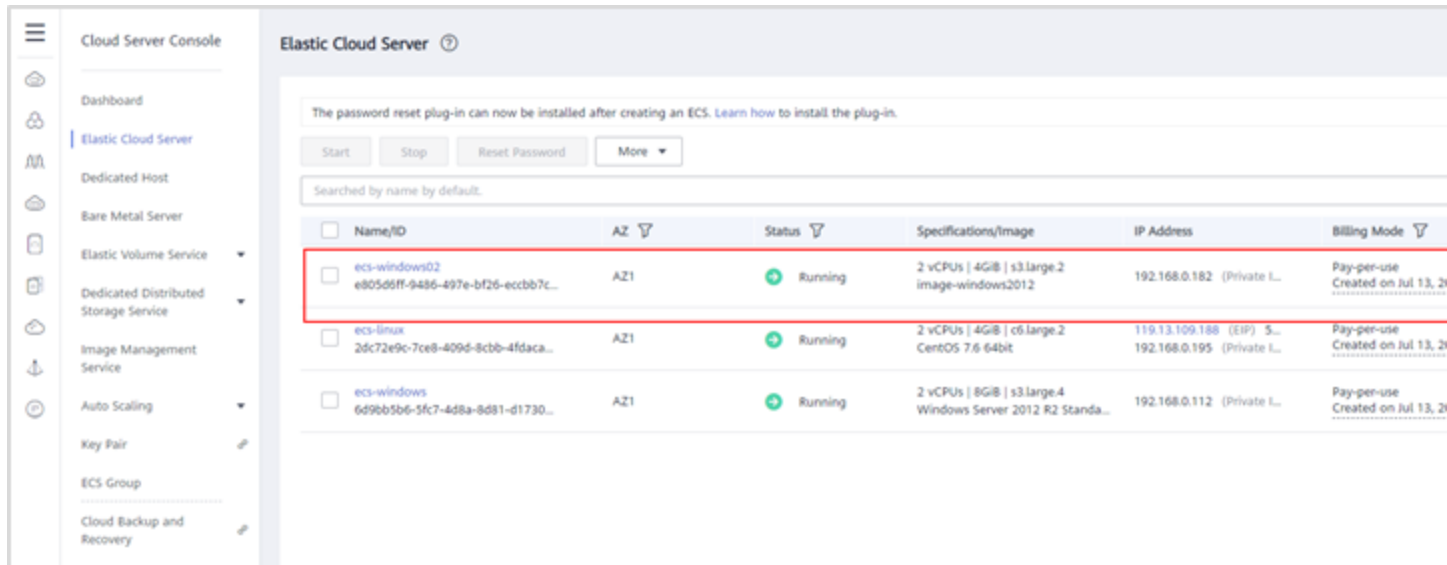




Step 2 On the ECS purchase page, ensure that the private image is selected.



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 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 Linux system disk image using an ECS, you need to configure a Linux ECS and then use 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/sysconfig/network-scripts/ifcfg-ethX` configuration file using the `vi` editor.

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

```
[root@ecs-linux ~]# vi /etc/sysconfig/network-scripts
```

```
DEVICE="eth0"  
BOOTPROTO="dhcp"  
ONBOOT="yes"  
TYPE="Ethernet"  
PERSISTENT_DHCLIENT="yes"
```

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 \(https://support.huaweicloud.com/intl/en-us/usermanual-ims/ims\\_01\\_0408.html\)](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:

```
[root@ecs-linux ~]# ls -lh /Cloud*  
/CloudResetPwdUpdateAgent:  
total 20K  
drwx----- 2 root root 4.0K Jun 11 09:51 bin  
drwxr-xr-x 2 root root 4.0K Feb 26 16:37 conf  
drwx----- 3 root root 4.0K Feb 26 16:37 depend  
drwx----- 2 root root 4.0K Feb 26 16:37 lib  
drwx----- 2 root root 4.0K Jun 11 09:51 logs  
  
/CloudResetPwdAgent:  
total 16K  
drwx----- 2 root root 4.0K Jun 11 09:51 bin  
drwxr-xr-x 2 root root 4.0K Feb 26 16:37 conf  
drwx----- 2 root root 4.0K Feb 26 16:37 lib  
drwx----- 2 root root 4.0K Jun 11 09:51 logs  
[root@ecs-linux ~]# _
```

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

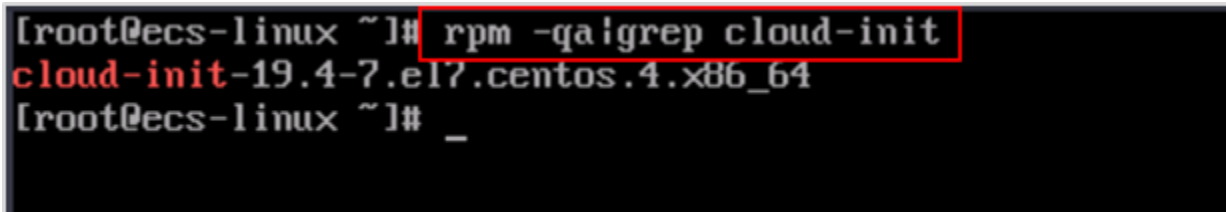
**Note:**

- 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 \(https://support.huaweicloud.com/intl/en-us/usermanual-ims/en-us\\_topic\\_0030730603.html\)](https://support.huaweicloud.com/intl/en-us/usermanual-ims/en-us_topic_0030730603.html) and [Configuring Cloud-Init \(https://support.huaweicloud.com/intl/en-us/usermanual-ims/ims\\_01\\_0407.html\)](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:



```
[root@ecs-linux ~]# rpm -qa |grep cloud-init
cloud-init-19.4-7.el7.centos.4.x86_64
[root@ecs-linux ~]# _
```

- 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-release-7-13.noarch.rpm
Loaded plugins: fastestmirror
epel-release-7-13.noarch.rpm
Examining /var/tmp/yum-root-JXr0Za/epel-release-7-13.noarch.rpm: epel-release-7-13.noarch
/var/tmp/yum-root-JXr0Za/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 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

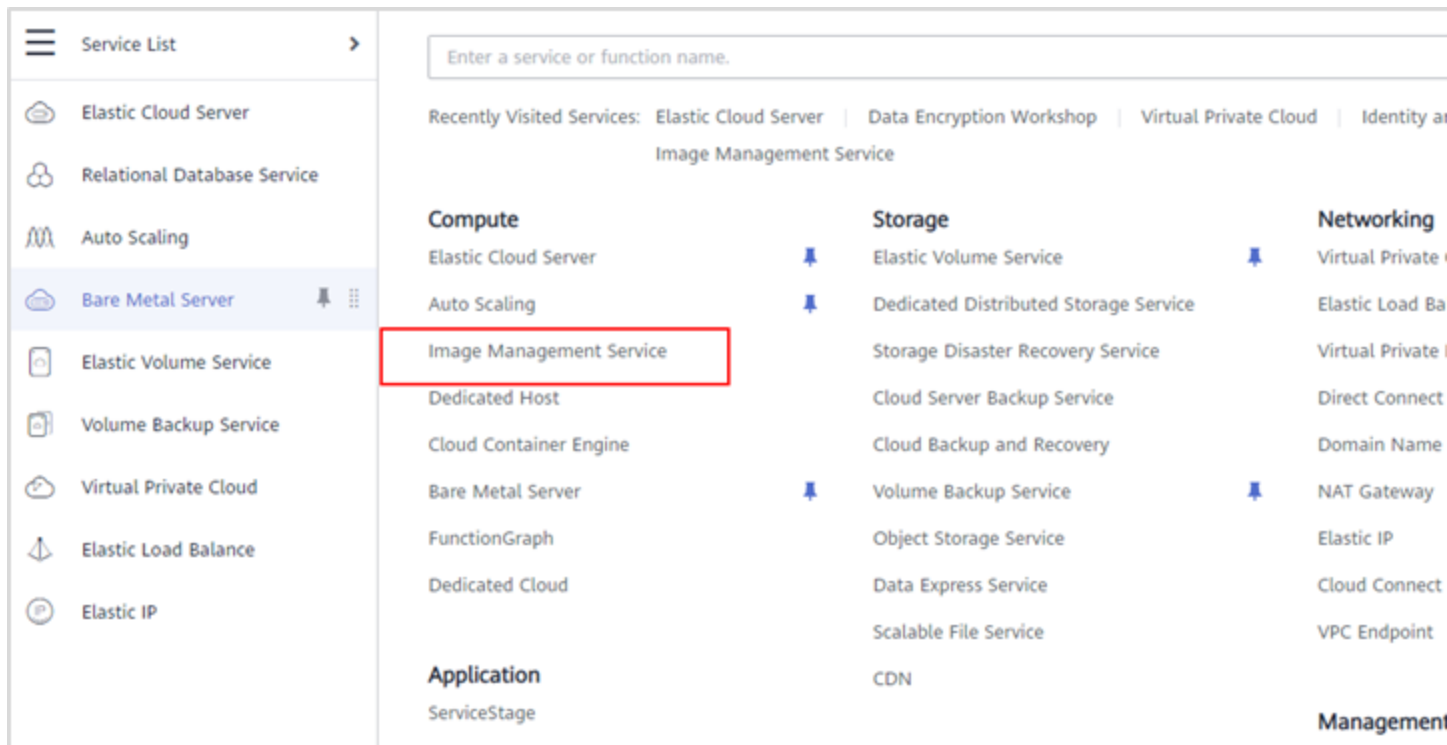
```

**Note:**

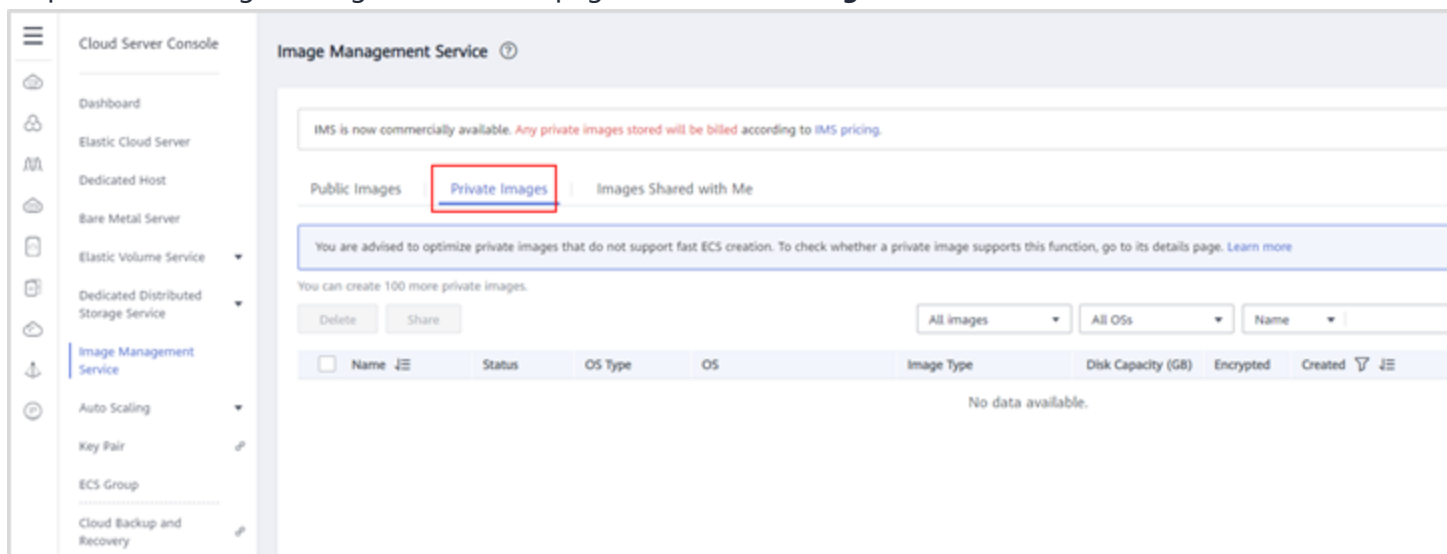
- An ECS created from a public image does not have network rule files by default.
- An ECS created using an external image file may have network rule files, delete the files by following the instructions provided in Deleting Files from the Network Rule Directory ([https://support.huaweicloud.com/intl/en-us/usermanual-imss/ims\\_01\\_0406.html](https://support.huaweicloud.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**

Create Image

IMS is now commercially available. Any private images stored will be billed according to [IMS pricing](#).

Image Type and Source

Type

System disk imageFull-ECS imageData disk imageISO image

SourceECSBMSImage File

Only ECSs in the running or stopped state can be used to create private images.

Before creating an image, configure and optimize the ECS. Ensure Cloud-Init is installed if the ECS runs Linux and Cloudbase-Init is installed if the ECS runs Windows. [Learn more](#)

Do not perform any operation on the selected ECS or associated resources when an image is being created.

All statuses

Name

Name	OS	Status	Private IP Address	Created
<div><div></div>ecs-linux</div>	CentOS 7.6 64bit	<div><div></div>Running</div>	192.168.0.195	Jul 13, 2021 02:12
<div><div></div>ecs-windows</div>	Windows Server 2012 R2 ...	<div><div></div>Stopped</div>	192.168.0.112	Jul 13, 2021 02:12

Selected: ecs-linux | OS: CentOS 7.6 64bit | System Disk: High I/O | 40 GB

[Buy ECS](#)

Image Information

Encryption

Unencrypted ?

Name

image-centos7.6

Tag

It is recommended that you use TMS's predefined tag function to add the same tag to different cloud resources. [View p](#)

Tag key

Tag value

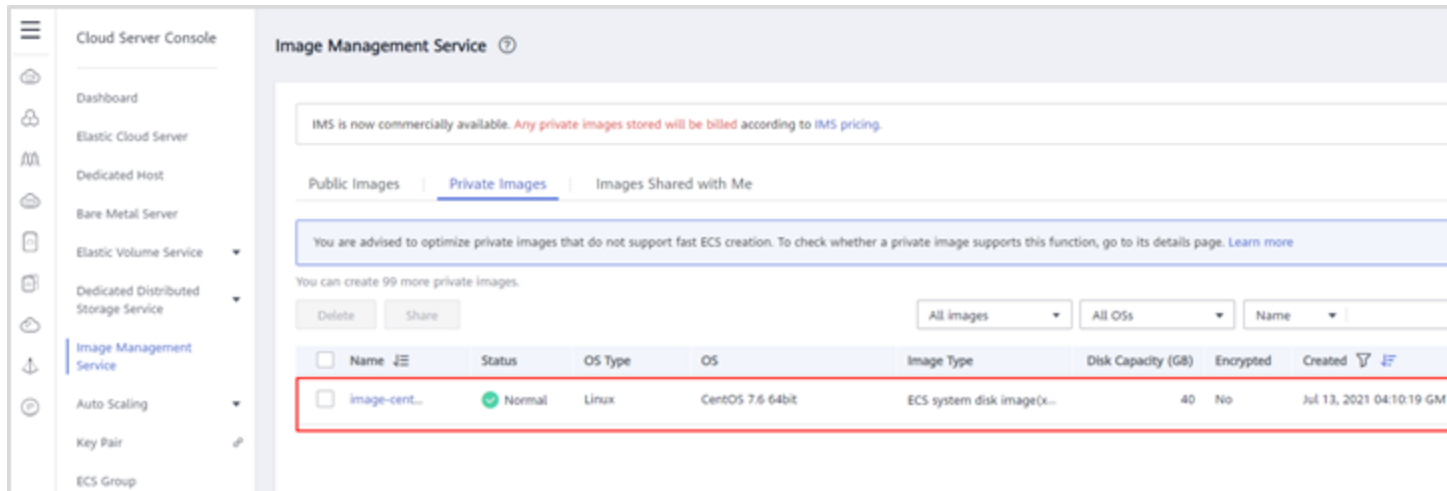
You can add 10 more tags.

Description

0/1,024

Step 4 Confirm the settings. Then, select I have read and agree to the Image Disclaimer and click **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 performing operations.**

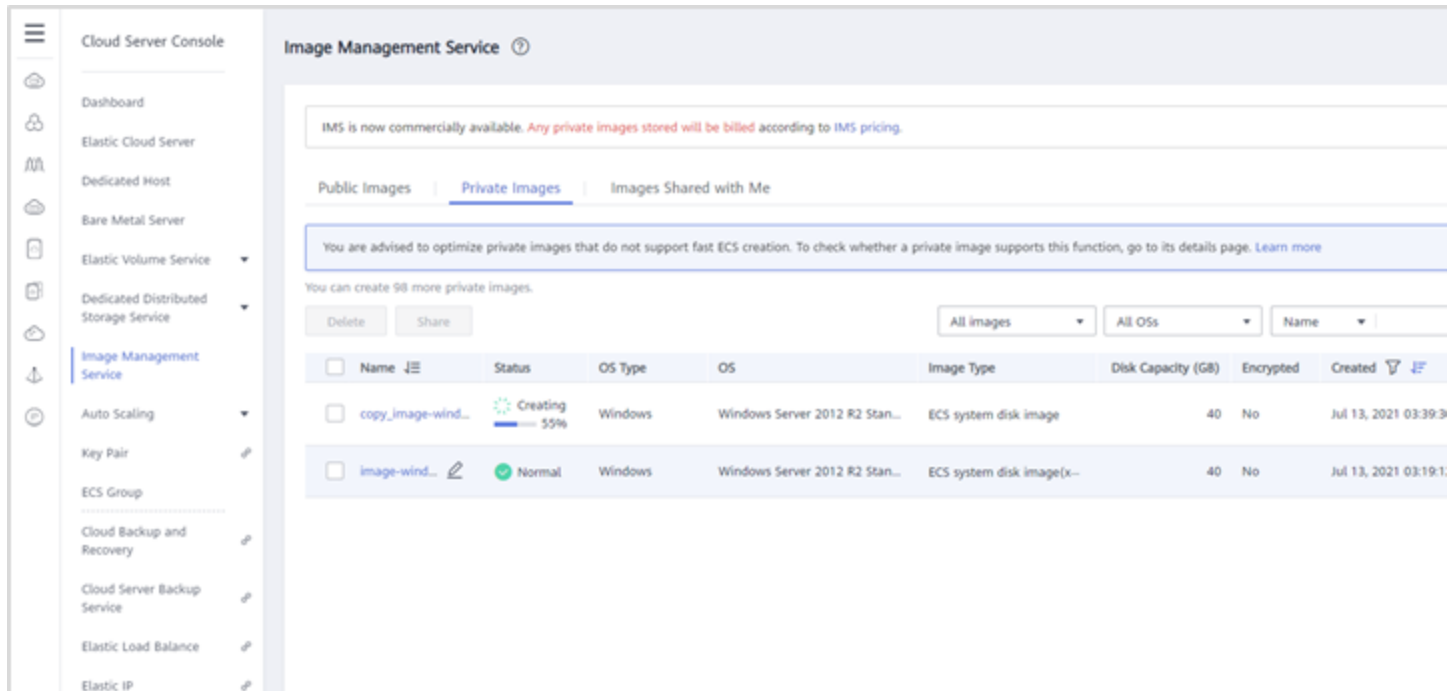
Step 1 Before sharing image with yourself, you need to find your Huawei Cloud account project ID. Log in to the management console using your **Huawei Cloud account** (not SandBox user).

Step 2 Click the username in the upper right corner and select My Credentials from the dropdown list.

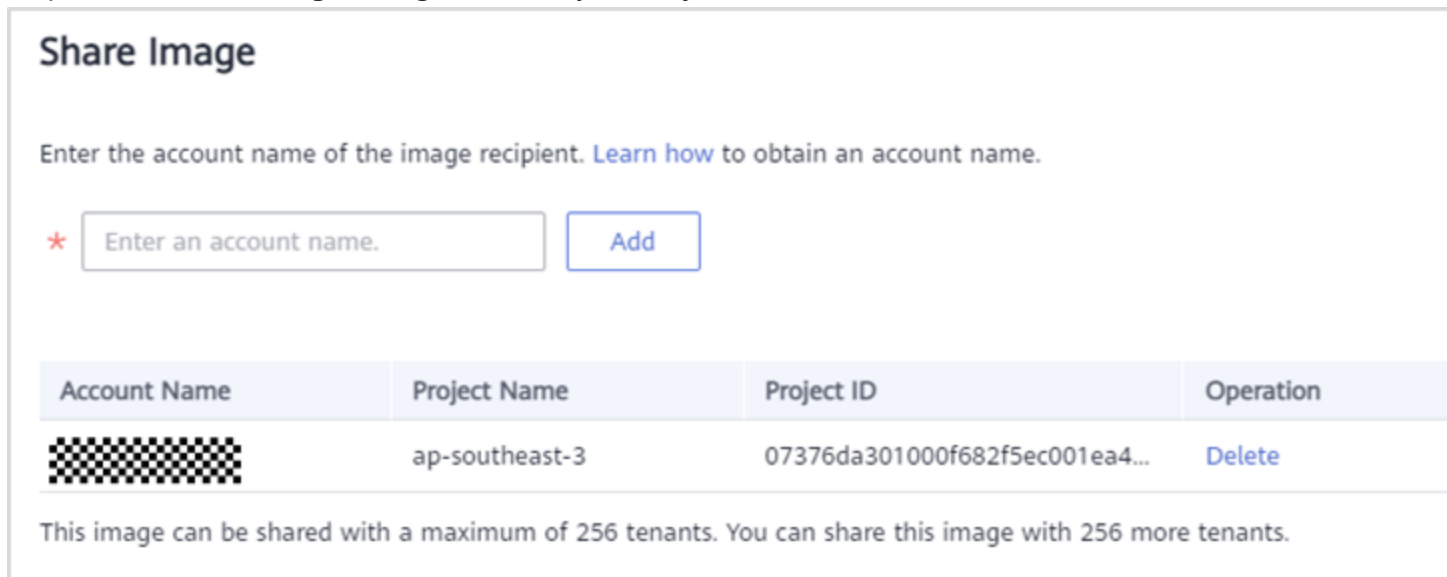
Step 3 On the My Credentials page, view the project ID in the project list. You should use Project ID of region "AP-Singapore".

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

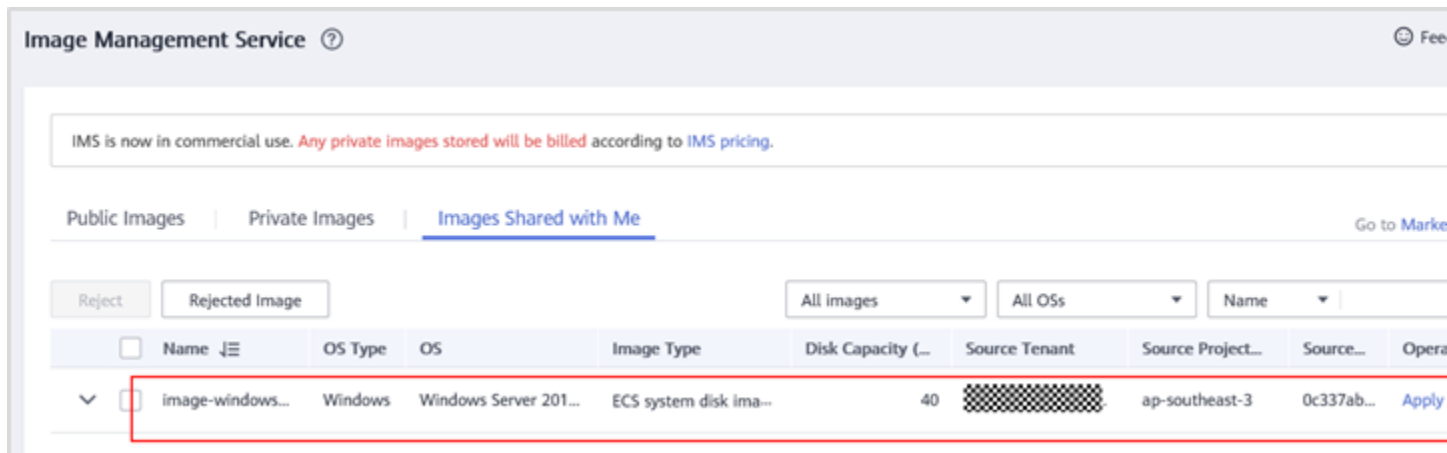




Step 5 In the **Share Image** dialog box, enter your Project ID and click **Add**. Click **OK**.

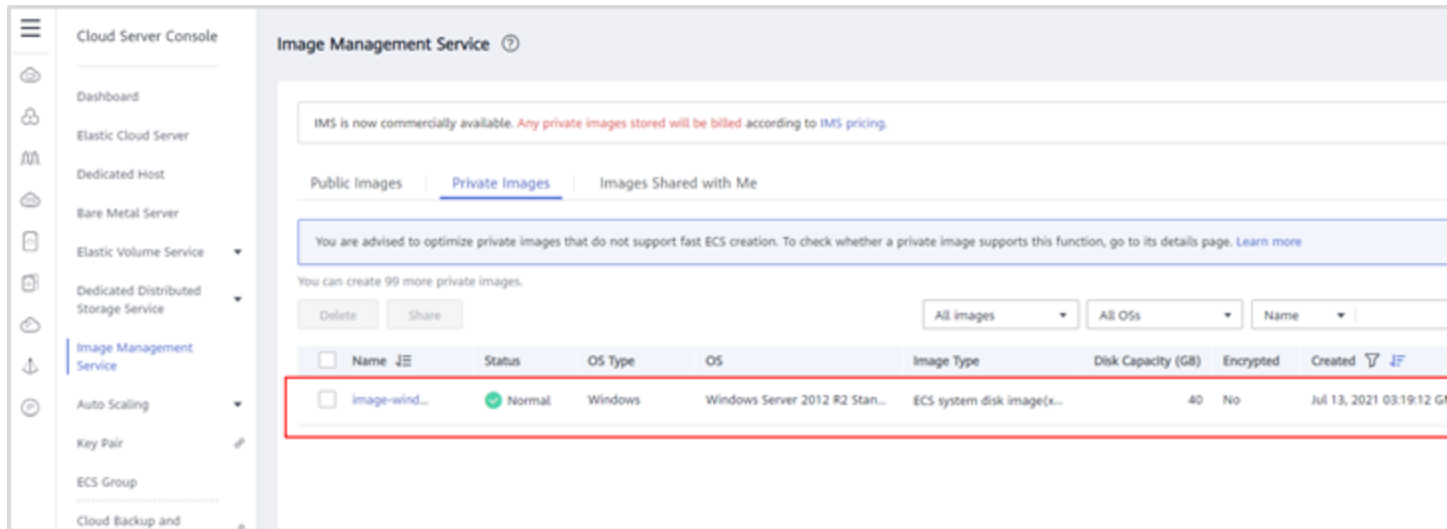


Step 6 Log in to the management console using your **Huawei Cloud account**(not SandBox User), go to the IMS console of " AP-Singapore" , click the **Shared Images** tab, and click **Accept**.



### 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**.

< | image-windows2012

Name	image-windows2012	ID	d5c54c90-be10-4954-aa83-360318d4e823
Image Type	System disk image	Disk Capacity (GB)	40
OS	Windows Server 2012 R2 Standard 64bit	Status	<span>✓</span> Normal
Minimum Memory	Unlimited	Image Size	9.07 GB
Maximum Memory	Unlimited	Published <span>?</span>	No
Created	Jul 13, 2021 03:19:12 GMT+08:00	Completed	Jul 13, 2021 03:26:58 GMT+08:00
Source	ECS ecs-windows	Description	--
Encrypted	No	OS Type	Windows
NIC Multi-Queue	Supported	Fast ECS Creation <span>?</span>	Supported

Shared with Tenants | Tags

Delete All

Add Tenant

You can add 256 more tenants.

Account Name	Project Name	Project ID	Status
No data available.			

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

## Add Tenant

Enter the account name of the image recipient. [Learn how](#) to obtain 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