

# **Alibaba Cloud Elastic Compute Service**

## **Quick Start for Entry-Level Users**

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## Generic conventions

Table -1: Style conventions

Style	Description	Example
	This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 <b>Danger:</b> Resetting will result in the loss of user configuration data.
	This warning information indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 <b>Warning:</b> Restarting will cause business interruption. About 10 minutes are required to restore business.
	This indicates warning information, supplementary instructions, and other content that the user must understand.	 <b>Notice:</b> Take the necessary precautions to save exported data containing sensitive information.
	This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.	 <b>Note:</b> You can use Ctrl + A to select all files.
>	Multi-level menu cascade.	Settings > Network > Set network type
<b>Bold</b>	It is used for buttons, menus, page names, and other UI elements.	Click OK.
Courier font	It is used for commands.	Run the <code>cd / d C :/ windows</code> command to enter the Windows system folder.
<i>Italics</i>	It is used for parameters and variables.	<code>bae log list --instanceid Instance_ID</code>
[ ] or [a b]	It indicates that it is an optional value, and only one item can be selected.	<code>ipconfig [-all -t]</code>

Style	Description	Example
<code>{}</code> or <code>{a b}</code>	It indicates that it is a required value, and only one item can be selected.	<code>switch {stand   slave}</code>



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# 1 Overview

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This document describes how to quickly create, connect, and release instances using the console.

Elastic Compute Service (ECS) instances are referred to as *ECS instances* or *instances* in this document.

This document applies only to console operations. For API users, see [API overview](#).

## Procedure

1. Complete the [preparations](#).
2. [Select the configuration](#).
3. [Create an instance](#).
4. [Connect to the instance](#).
5. If data disks are created, you need to [format and mount data disks](#) for a Linux instance, or [format data disks](#) for a Windows instance.
6. [Release the instance](#).

## 2 Preparations

---

Before you begin, you need to complete the preparations described in this article.

- [Sign up for Alibaba Cloud](#).
- [Bind your credit card or PayPal account](#).
- [Register by using your real name](#) if you want to create an ECS instance in a region inside mainland China.
- To create ECS instances in a VPC, you need to [create a VPC and switch](#) in the target region.
- A security group is a virtual firewall, and each instance must belong to at least one security group. The system provides one [default security group](#). You can also [create a security group](#) in the target region and [add security group rules that meet your business needs](#).

## 3 Step 1. Select the configuration

Alibaba Cloud offers more than 200 instance types in 10 categories to meet your needs in different application scenarios.

This article is applicable to entry-level users. The recommended configurations are only for reference when you start using an ECS instance.

Type	Instance Type	Cloud disk	Internet bandwidth	Scenarios
Entry level	1 vCPU + 1 GiB memory (ecs.xn4.small)	40 GiB Ultra Cloud Disks	1 Mbps	It is applicable to personal websites that are in their early stages and have a small number of visits
Advanced	1 vCPU + 2 GiB memory (ecs.n4.small)	40 GiB Ultra Cloud Disks	2 Mbps	It is applicable to websites with moderate traffic, simple development environments, and code base
General	2 vCPU + 4 GiB memory (ecs.n4.large)	40 GiB Ultra Cloud Disks	2 Mbps	It can meet the needs of 90% of entry-level users, and is applicable to enterprise operations, parallel computing and common data processing.

Type	Instance Type	Cloud disk	Internet bandwidth	Scenarios
Ideal	4 vCPU + 16 GiB memory (ecs.sn2ne.xlarge)	40 GiB Ultra Cloud Disks	5 Mbps	It is applicable to large and medium-sized websites, distributed analytics and computing, and Web applications.

For more information, see [xn4 type family](#), [n4 type family](#), and [sn2ne type family](#).

Alibaba Cloud provides a flexible and editable way to modify your configuration.

For subscription users, if the configuration is found to be excessively high or low in practice, you can [upgrade or downgrade instance configurations](#).

For more instance types, see [Instance type families](#).

For more information about web hosting, see [Web Application Hosting](#).

After confirming the configuration scheme, you can start to create an ECS instance.

## 4 Step 2. Create an instance

---

This article introduces how to quickly create an instance using the console by taking the entry-level instance type family for example. For more information, see [Create an instance](#). To use the API for instance creation, see [#unique\\_9](#).

### Procedure

1. Log on to the [ECS console](#).
2. In the left-side navigation pane, click Instances.
3. On the Instances page, click Create Instance to enter the Custom purchase page.
4. Follow these steps to finish Basic Configurations.

- a) Select Billing Method. In this example, select Pay-As-You-Go.
- b) Select a region, such as China East 1. Select a zone, or allow one be allocated randomly, as by default.



#### Note:

After an instance is created, you cannot change its region and zone.

- c) Select an instance type and specify the quantity of instances.  
The available [Instance type families](#) are determined by the region selected. In this example, select All Generations > x86-Architecture > Entry-Level (Shared) > Compact Type xn4.
  - d) Select an image. In this example, the Public Image is selected.
  - e) Select a storage space. In this example, only a system disk is used, and the 40 GiB Ultra Cloud Disk is selected, which is the default.
5. Click Next: Networking to finish the networking and security group configuration.
    - a) Select VPC as the network type. In this example, select the default VPC and VSwitch.
    - b) Set the network billing method.  
In this example, select Assign public IP and Pay-By-Traffic.
    - c) Select a security group. You can use the default security group if you do not create one.
    - d) Add an Elastic Network Interface (ENI). Skip this step if the selected instance type does not support ENI.

**6. Click Next: System Configurations.**

Set configurations as needed. We recommend that you set Log on Credentials and an Instance Name. In this example, select Password and set the instance name to ecs-01.

**7. Click Next: Grouping.** You can set the options here as needed. In the case of multiple instances, we recommend that you add labels for ease of administration.**8. Click Next: Preview.** Confirm the selected configuration. You can also click the edit icon to return and modify the configurations.**9. Read and confirm Terms of Service, then click Create Instance.****Result**

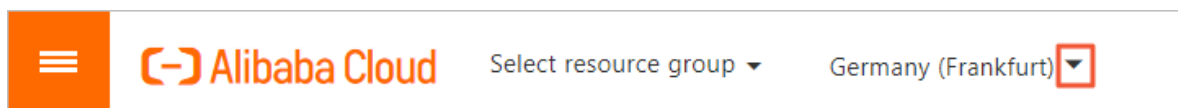
Click Console to return to the ECS console. It generally takes one to five minutes to complete instance creation. Click the refresh button to check if the instance is created. If the newly created ECS instance is shown in a Running status, the instance is created successfully.

## 5 Step 3. Connect to an instance

After creating an ECS instance, you can connect to it by using different methods. This topic describes how to connect and manage your ECS instance by using the Management Terminal in the ECS console.

### Procedure

1. Log on to the [ECS console](#).
2. In the left-side navigation pane, choose Instances & Images > Instances.
3. In the upper-left corner, select the target region.



4. In the instances list, find the ecs-01 instance that has been created. In the Actions column, click Connect.
5. In the displayed VNC Password dialog box, copy the password, then click Close.



#### Note:

The VNC password appears only once. Remember the password so that you can use it to connect to the Management Terminal later.

6. In the displayed Enter VNC Password dialog box, paste the password, and then click OK.
7. Log on to the ECS instance. Do the following according to your operating system:
  - For a Linux instance, enter the username root and the instance logon password that is set when you [create an instance](#).
  - For a Windows instance, in the upper-left corner of the Management Terminal interface, choose Send Remote Call > CTRL+ALT+DELETE to enter the logon interface. Enter the password set when you [create an instance](#) to log on.

If you forget your instance logon password, [reset the instance password](#).

## 6 Step 4. Format a data disk

---

### 6.1 Format a data disk for Windows instances

If data disks are selected when you create a Windows instance, you need to partition and format them for use.

This article describes how to create a single-partition data disk using a new data disk and how to mount a file system. You can also configure multiple partitions based on business needs. This article applies only to data disks that are not larger than 2 TiB. For those that are larger than 2 TiB, see [Partition and format data disk larger than 2 TiB](#).



#### Warning:

- Disk partitioning and formatting are high-risk operations. Please proceed with caution. This article describes how to deal with a blank data disk. If you have data on a data disk, be sure to create a snapshot for the data disk to avoid any possible data loss.
- ECS instances only support partitioning data disks, not system disks. If you use a third-party tool to forcibly partition the system disk, unknown risks may occur, for example, system crash and data loss.

#### Prerequisites

For a separately [purchased data disk](#), you must [attach the data disk to an instance](#) before partitioning and formatting.

A data disk purchased along with the instance can be partitioned and formatted without being attached.

#### Procedure

This example describes how to partition and format a 20 GiB data disk on the 64-bit Windows Server 2012 R2.

1. [Connect to an instance](#).



2. On Windows Server desktop, right click the Start icon, then select Disk management.

The unformatted data disk (Disk 2) appears as Offline.

3. Right click the blank area around Disk 2, and select Online in the context menu.

After going online, the status of Disk 2 is displayed as Not Initialized.

4. Right click the blank area around Disk 2, and then select Initialize Disk in the context menu.

5. In the Initialize Disk dialog box, select Disk 2 and a partitioning method:

- MBR is still the most common partitioning method. However, this method only supports data disks that no greater than 2 TB and can divide a disk into up to four primary partitions. If you want to divide a disk into more than four partitions, you need to take a primary partition as an extended partition and create logical partitions within it.
- GPT is a new partitioning method, and cannot be recognized by earlier versions of Windows. The size of GPT-partitioned data disk is determined by the operating system and the file system. In the Windows operating system, GPT supports up to 128 primary partitions.

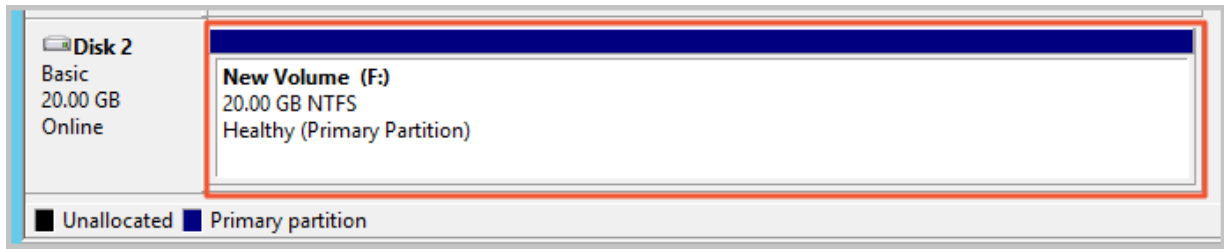
In this example, select the MBR partitioning method, and click OK.

6. In the Disk Management window, right click the Unallocated area for Disk 2 and select New Simple Volume.

7. In the New Simple Volume Wizard, follow these steps:

- a. Click Next.
- b. Specify Volume Size: Specify the size of the simple volume to create. If you need only one primary partition, use the default value, and then click Next.
- c. Assign Drive Letter or Path: Select a drive letter (in this example, F). Click Next.
- d. Format Partition: select format settings (including the file system, allocation unit size, and volume label), and confirm whether to enable Quick Formatting and File and Folder Compression. Use the default values, then click Next.
- e. Create a new simple volume. When the wizard shows the information below, a new simple volume is created. Click Finish to close the New Simple Volume Wizard.

After the partition formatting is completed, the status of Disk 2 in Disk Management is as shown in the following figure.



In this PC, you can view a new drive named New Volume (F:). The data disk is now ready to use.

## 6.2 Format a data disk of a Linux instance

This topic describes how to format a data disk of a Linux instance. A newly created or purchased data disk cannot be used unless you format it, create one or more partitions in it, and mount a file system on it.



### Warning:

- Disk partitioning and formatting are high-risk operations. Exercise caution when performing these operations. The following procedure uses a newly purchased data disk as an example. If you partition or format an existing data disk, make sure that you have [created a snapshot of the data disk](#) to avoid data loss.
- Do not partition the system disk of an ECS instance. Failure to comply can result in unknown risks, such as system failure and data loss. You can only extend a partition of, or add a partition to a system disk after you resize the system disk. For more information, see [Extend the file system of the Linux system disk](#).



### Note:

The following procedure applies only to data disks less than 2 TiB. If your data disk is greater than 2 TiB, see [Partition and format data disk greater than 2 TiB](#).

### Prerequisites

- The ECS instance is [attached with a data disk](#) that was [created separately](#). You do not need to perform this operation for data disks created along with ECS instances.

- The device name of the data disk is obtained.

You can obtain the device name of the data disk by choosing ECS Console > Block Storage > Disks > (Disk ID specific) More > Modify Attributes.

**Note:**

By default, device names are assigned by the system. The device name for I/O-optimized instances starts from `/dev/vdb` to `/dev/vdz`. If the device name is `dev/xvd*` (where, `*` is a lowercase letter), then a non-I/O-optimized instance is being used.

**Procedure**

In this example, a new 20 GiB data disk with the device name of `/dev/vdb` is used to create a single-partition data disk and format the disk to an ext4 file system. An I/O-optimized instance with CentOS 7.6 is used.

1. [Connect to the instance](#) to which the data disk is attached.
2. Run the `fdisk -l` command to view the data disks of the instance.

**Note:**

If `/dev/vdb` is not displayed in the output, no data disk is attached to the instance. In this case, check whether a data disk is mounted to the instance.

3. Create a single-partition data disk by running the following commands in sequence:
  - a. Run the `fdisk -u /dev/vdb` command to partition the data disk.
  - b. Enter `p` and press Enter to view the partitions of the data disk. In this example, the data disk is not partitioned.
  - c. Enter `n` and press Enter to create a new partition.
  - d. Enter `p` and press Enter to select the primary partition.

**Note:**

In this example, you are creating a single-partition data disk, so you only need to create one primary partition. If you want to create four or more partitions, you must create at least one extended partition by selecting `e`.

- e. Enter the partition number and press Enter. In this example, enter `1`.
- f. Enter a number for the first available sector, or press Enter to use the default value of `2048`.
- g. Press Enter to use the default number for the last sector.
- h. Enter `p` and press Enter to view the planned partitions of the data disk.
- i. Enter `w` and press Enter to start partitioning and exit after partitioning.

```
[root@ecshost~]# fdisk -u /dev/vdb
Welcome to fdisk (util-linux 2.23.2).
Changes will remain in memory only, until you decide to write
them.
Be careful before using the write command.
Device does not contain a recognized partition table
Building a new DOS disklabel with disk identifier 0x3e60020e.
```

```
Command (m for help): p
Disk /dev/vdb: 21.5 GB, 21474836480 bytes, 41943040 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk label type: dos
Disk identifier: 0x3e60020e
Device Boot Start End Blocks Id System
```

```
Command (m for help): n
Partition type:
p primary (0 primary, 0 extended, 4 free)
e extended
Select (default p): p
Partition number (1-4, default 1): 1
First sector (2048-41943039, default 2048):
Using default value 2048
Last sector, +sectors or +size{K,M,G} (2048-41943039, default
41943039):
Using default value 41943039
Partition 1 of type Linux and of size 20 GiB is set
```

```
Command (m for help): p

Disk /dev/vdb: 21.5 GB, 21474836480 bytes, 41943040 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk label type: dos
Disk identifier: 0x3e60020e
Device Boot Start End Blocks Id System
/dev/vdb1 2048 41943039 20970496 83 Linux
```

```
Command (m for help): w
The partition table has been altered!

Calling ioctl() to re-read partition table.
```

Syncing disks.

4. Run the `fdisk -lu /dev/vdb` command to view the new partition.

If the following information is displayed, the new partition `/dev/vdb1` is created successfully.

```
[ root @ ecshost ~ ]# fdisk -lu /dev/vdb

Disk /dev/vdb : 21.5 GB, 21474836480 bytes,
41943040 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512
bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk label type: dos
Disk identifier: 0x3e60020e

Device Boot Start End Blocks Id System
/dev/vdb1 2048 41943039 20970496 83 Linux
```

5. Run the `mkfs . ext4 /dev/vdb1` command to create an ext4 file system on the new partition.



#### Note:

You can also create other file systems as needed. For example, if you need to share files among different operating systems, such as Linux, Windows, and macOS, you can run the `mkfs . vfat` command to create a VFAT file system. The time required to create a file system depends on the data disk size.

```
[ root @ ecshost ~ ]# mkfs . ext4 /dev/vdb1
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label =
OS type: Linux
Block size = 4096 (log = 2)
Fragment size = 4096 (log = 2)
Stride = 0 blocks, Stripe width = 0 blocks
1310720 inodes, 5242624 blocks
262131 blocks (5.00%) reserved for the super user
First data block = 0
Maximum filesystem blocks = 2153775104
160 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
32768, 98304, 163840, 229376, 294912, 819200, 884736,
1605632, 2654208,
4096000

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
```

```
Writing superblock s and filesystem accounting
informatio n : done
```

6. (Recommended) Run the command `cp / etc / fstab / etc / fstab . bak` to back up `etc / fstab` .

7. Run the command `echo / dev / vdb1 / mnt ext4 defaults 0 0`  
`>> / etc / fstab` to write the new partition information to `/ etc / fstab` .



#### Note:

- Ubuntu 12.04 does not support barrier. Therefore, the correct command for this system is `echo '/ dev / vdb1 / mnt ext4 barrier = 0 0`  
`0 ' >> / etc / fstab` .
- If you need to mount the data disk to a folder to store web pages separately, replace `/ mnt` with the desired mount point path.

8. Run the `cat / etc / fstab` command to view the new partition information in `/ etc / fstab` .

```
[ root @ ecshost ~ ]# cat / etc / fstab
#
# / etc / fstab
# Created by anaconda on Wed Dec 12 07 : 53 : 08
2018
#
# Accessible filesystem s , by reference , are maintained
under '/ dev / disk '
# See man pages fstab ( 5 ), findfs ( 8 ), mount ( 8 ) and
/ or blkid ( 8 ) for more info
#
UUID = d67c3b17 - 255b - 4687 - be04 - f29190d373 96 / ext4
defaults 1 1
/ dev / vdb1 / mnt ext4 defaults 0 0
```

9. Run the `mount / dev / vdb1 / mnt` command to mount the file system.

10.Run the `df - h` command to view the disk space and usage.



#### Note:

If the new file system information is displayed in the response message, the file system is successfully mounted, and you can use the new file system without restarting the instance.

```
[ root @ ecshost ~ ]# df - h
Filesystem Size Used Avail Use % Mounted on
/ dev / vda1 40G 1 . 6G 36G 5 % /
devtmpfs 234M 0 234M 0 % / dev
tmpfs 244M 0 244M 0 % / dev / shm
tmpfs 244M 484K 244M 1 % / run
```

```
tmpfs    244M    0    244M    0 % / sys / fs / cgroup
tmpfs    49M    0    49M    0 % / run / user / 0
/ dev / vdb1    20G    45M    19G    1 % / mnt
```

## 7 Step 5. Release an instance

This topic describes how to release an ECS instance. If you no longer need an instance, you can release it so it does not continue to incur fees.

For VPC-Connected instances, if you do not enable the No fees for stopped instances (VPC-Connected) feature, the instance continues to incur fees even after it is stopped. For instances in classic networks, the instance constantly incurs fees throughout its lifecycle. If you no longer need an instance, you can release it to prevent any possible fees. For more information, see [Stop an instance](#) and [Release an instance](#).

This topic describes how to release a Pay-As-You-Go instance in the ECS console. Subscription instances are released automatically after the billing cycle ends.

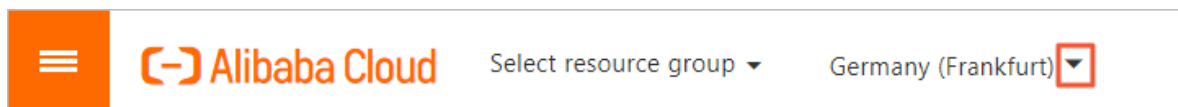


### Note:

If there is data on the instance, we recommend that you [create a snapshot](#) to back up the data before releasing it.

### Procedure

1. Log on to the [ECS console](#).
2. In the left-side navigation pane, choose Instances & Images > Instances.
3. In the upper-left corner, select the target region.



4. In the list of instances, locate the instance ecs-01 to release. In the Actions column, choose More > Instance Status > Release.
5. In the displayed dialog box, select Release Now, then click Next.
6. Confirm that you want to release the instance, then click OK.

The released instance is then no longer displayed on the Instances page.



## 8 Quick reference

---

This topic is a quick reference guide for common operations of Alibaba Cloud ECS instances and resources. This guide offers solutions for such scenarios as connecting to an instance remotely, scaling a disk, upgrading or downgrading configurations, and using snapshots or images.

### Operation instructions and limits

To guarantee proper operation of your ECS instance, read [ECS operation instructions](#) and [limits](#) carefully before using your instance.

### Create and manage ECS instances

#### Basic operations

1. [Create an ECS instance](#).
2. Connect to the ECS instance. Depending on the operating system running on your ECS instance and your actual scenario, use one of the following methods:
  - For any type of operating system, use the [Management Terminal](#) for scenarios involving troubleshooting and maintenance.
  - For Linux or Unix-like OSs, you can [connect to a Linux instance by using a password](#), or [connect to a Linux instance by using an SSH key pair](#).
  - For Windows OSs, you can [connect to a Windows instance](#).
3. [Stop the ECS instance](#).
4. [Release the instance](#).

To use an ECS instance, follow these steps:

#### Change configurations

You can change the instance type, IP addresses, and network bandwidth of your instance.

- Subscription instances: [Upgrade configurations of Subscription instances](#) or [renew for configuration downgrade](#)
- [Change configurations of Pay-As-You-Go instances](#)
- [Change public IP address](#)
- [Convert public IP address to EIP address](#)

If the current operating system no longer meets your business needs, you can [change the operating system](#).

### Billing

You can [switch from Pay-As-You-Go to Subscription](#).

Select either of the following methods to renew your Subscription instances:

- [Manual renewal](#)
- [Auto-renewal](#)

### Refined management of and control over ECS instances

You can use the following features to refine your management of and control over ECS instances:

- [User data](#)
- [Metadata](#), including [instance identity](#)
- [Instance RAM roles](#)

### Create and manage cloud disks

#### Basic operations

To use a cloud disk as a data disk, follow these steps:

1. [Create a cloud disk](#).
2. [Attach a cloud disk](#).
3. [\(Linux\) Format and mount a data disk](#) or [\(Windows\) Format a data disk](#).
4. [Create snapshots](#) to back up data.
5. [Detach a cloud disk](#).
6. [Release a cloud disk](#).

#### Change configurations

To adjust the capacity of your system disks or data disks, you can [increase the system disk size](#) or resize the data disks. For more information about resizing a data disk, see [Linux \\_ Resize a data disk](#) and [Windows \\_ Resize a data disk](#).

#### Manage data on a cloud disk

If data errors occur on a cloud disk, you can use a snapshot to [roll back a cloud disk](#) and restore data.

If you want to restore a cloud disk to its initial status after it is created, you can [reinitialize a cloud disk](#).

If you want to copy data on an existing cloud disk to a new, empty cloud disk, you can [create a cloud disk from a snapshot](#).

## Create and manage snapshots

### Basic operations

To use a snapshot, follow these steps:

1. Create a snapshot by using either of the following methods:
  - [Create snapshots](#).
  - [Create and delete an automatic snapshot policy](#), and [apply automatic snapshot policies to disks](#), to enable automatic snapshot creation.
2. [View a snapshot chain](#).
3. [Delete unnecessary snapshots](#) to reduce charges and free disk space

### Using snapshots

To copy or back up data, you can use a snapshot to [create a cloud disk from a snapshot](#), or [roll back a cloud disk](#).

To simplify deployment, you can use a system disk snapshot to [create a custom image using a snapshot](#), and [create an instance from a custom image](#).

## Create and manage custom images

Only custom images can be operated in the ECS console.

You can run a custom image by using the following methods:

- [Create a custom image using a snapshot](#)
- [Create a custom image by using an instance](#)
- [Use Packer to create a custom image](#)
- [Copy custom images](#) across different regions.
- [Share custom images](#) across different accounts.
- [Import custom images](#)
- [Create and import custom images stored on an on-premises server by using Packer](#)

You can also [export custom images](#) to back up your environment and delete custom images when they are no longer required.

## Create and manage security groups

### Basic operations

To use a security group, follow these steps:

1. [Create a Security Group](#).
2. [Add security group rules](#).
3. [Add to or remove from a security group](#)
4. [Delete a security group rule](#).
5. [Delete a security group](#).

### Manage security groups and their rules

To simplify business deployment, you can [clone a security group](#) across regions or network types.

If new security group rules disrupt your online business application, you can [restore security group rules](#) fully or partially.

## Create and manage SSH key pairs

To use an SSH key pair, follow these steps:

1. [Create an SSH key pair](#), or [import an SSH key pair](#).
2. [Bind a SSH key pair](#), or bind the SSH key pair after a Linux instance is created or when you [create an instance](#).
3. [Connect to a Linux instance by using an SSH key pair](#).
4. [Unbind an SSH key pair](#).
5. [Delete a SSH key pair](#).

## Create and manage ENIs

To use an ENI, follow these steps:

1. [Create an ENI](#).
2. [Attach an ENI to an instance](#), or [attach an ENI when creating an instance](#).
3. Optional. [Configure an ENI](#).
4. [Detach an ENI from an instance](#).
5. [Delete an ENI](#).

## Use tags

You can apply tags to group resources for easier resource organization. To use tags, follow these steps:

1. [Add a tag to resources.](#)
2. [Filter resources by tags.](#)
3. [Delete a tag.](#)