Cloud Block Storage

Getting Started

Tencent Cloud

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Overview

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This document guides you on how to create a cloud disk from scratch via the console and attach it to a cloud server. After performing simple initialization operations, the cloud disk can be used as a data disk for the cloud server.
Follow the steps below for this process:

- Step 1: Create a Cloud Disk
- Step 2: Attach the Cloud Disk
- Step 3: Initialize the Cloud Disk

Step 1. Creating Cloud Disks

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Scenario

This guide illustrates how to create a cloud disk named `cbs-test` in the Beijing Zone 2 via the console. You can refer to this guide for a quick start on creating cloud disks.

Supports and Limits

Ensure that there is an available cloud server in the availability zone (Beijing Zone 2 in this example) where the cloud disk is to be created.
For detailed information on how to purchase and start a cloud server, please refer to Customizing Linux CVM Configurations or Customizing Windows CVM Configurations.

Instructions

> ⓘ **Note**
> This guide uses the example of purchasing a high-performance elastic cloud disk via the console. For information on other methods of creating cloud disks, please refer to Creating Cloud Disks.

1. Log in to the Cloud Server Console and select Cloud Disk from the left sidebar.
2. Select **Beijing** at the top of the cloud disk list page and click **Create**.
3. In the **Purchase Data Disk** pop-up window, configure the following parameters:
   ○ **Availability Zone:** Select **Beijing Zone 2.**
   ○ **Cloud Disk Type:** Select **Premium Cloud Disk.**
   ○ **Capacity:** Set to 20GB.
   ○ **Disk Name:** Enter `cbs-test`.
   ○ **Billing Mode:** Select **Monthly Subscription.**
   ○ **Validity Period:** Select **1 month.**
4. Click **OK**.
5. After confirming the specifications, click **Submit Order** on the payment page and complete the payment process. Return to the cloud disk list page to view the purchased elastic cloud disk `cbs-test`, which is displayed as **To be mounted**. As shown in the following figure:

See Also

Once the cloud disk is created, you need to attach it to a cloud server in the same availability zone to use it as a data disk. For specific operations, please refer to Step 2: Attaching the Cloud Disk .

Step 2. Attaching Cloud Disks

Last updated：2023−09−22 14:23:51

Scenario

This document guides you on how to attach a cloud disk named `cbs-test` that is in the **pending attachment** state in the Beijing Zone 2, to a cloud server via the console.

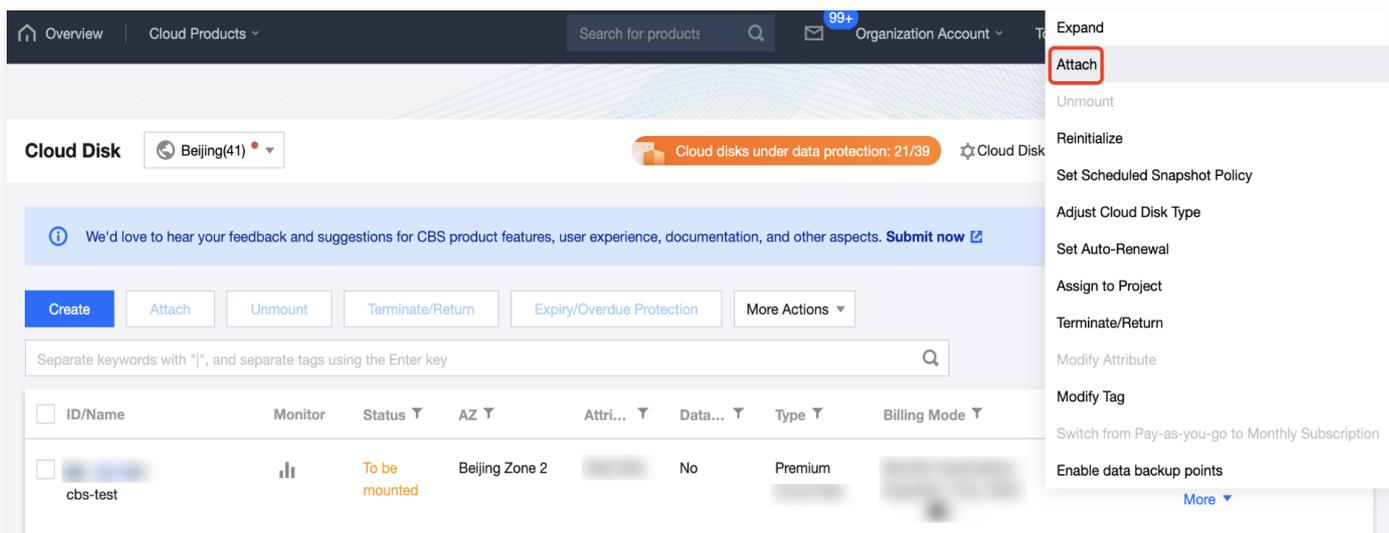> ⓘ **Note**
> Cloud disks can only be attached to an CVM in the same availability zone.

Preparations

- A cloud disk `cbs-test` has been created. For more information, see Step 1: Creating a Cloud Disk .
- Ensure that there is an available CVM in the same availability zone as the cloud disk (Beijing Zone 2 in this example). For information on how to purchase and start a CVM, refer to Quickly Configuring a Linux CVM or Quickly Configuring a Windows CVM .

Instructions

1. Log in to the CVM console and select **Cloud Disk** from the left navigation pane.
2. At the top of the cloud disk list page, select **Beijing**, and in the **Operation** column of the cloud disk `cbs-test` , select **More** > **Attach**. As shown in the figure below:

3. In the pop−up **Attach to Instance** window, select the CVM to which the cloud disk will be attached, and then select **Next** > **Start Attaching**.

> ⚠ **Note**
>
> You may select **Release with Instance** based on your actual requirements.

Return to the cloud disk list page. At this point, the status of the cloud disk is **mounting**, indicating that the cloud disk is in the process of being attached to the cloud server. When the status of the cloud disk is **in use**, it signifies a successful attachment.

See Also

Upon completion of the cloud disk attachment, the cloud disk serves as a data disk for the CVM and is offline by default. You need to initialize the data disk by formatting, partitioning, and creating a file system. For specific operations, please refer to Step 3: Initialize the Cloud Disk .

> ⚠ **Note:**
>
> For more information on the methods and steps to attach a cloud disk, please refer to Attaching Cloud Disks .

Step 3. Initializing Cloud Disks

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Scenario

This document guides you on how to initialize an empty cloud disk that has been attached to a CVM instance, create a file system on the cloud disk, and write a file named `qcloud.txt` into it.

Supports and Limits

Before performing any operations on the cloud disk, it is advisable to familiarize yourself with the Precautions for Using Cloud Disks to prevent damage to important data.

Preparations

The cloud disk `cbs-test` has been attached to the CVM instance. For more details, refer to Step 2: Attaching the Cloud Disk .

Instructions

Formatting, Creating a File System, and Writing a File (Windows)

> ⓘ **Note**
> This document uses a CVM with Windows Server 2012 R2 DataCenter 64-bit English installed as an example. Note that the steps may vary according to the operating system version.

1. Log in to the Windows CVM instance as an administrator. For more information, see Logging in to Windows Instances Using RDP (Recommended) .

2. On the desktop of the CVM instance, right-click on the ⊞ at the lower left corner.

3. From the pop-up menu, select **Server Management – All Servers – File and Storage Services – Disks** to open the **Disk Management** window.
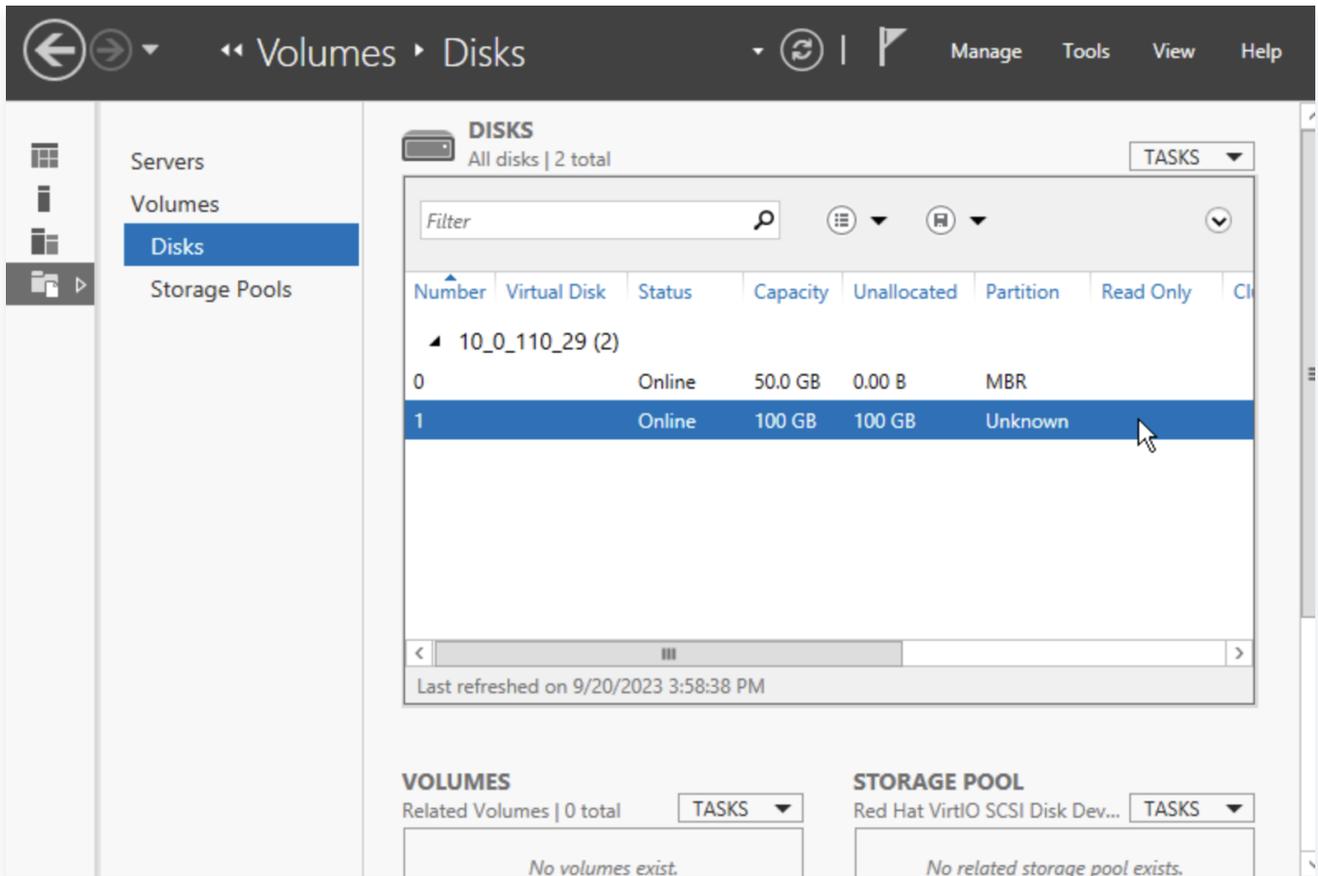
4. Right-click the online disk and select **New Volume...** button, in the pop-up window, follow the default settings and click **Next** all the time.
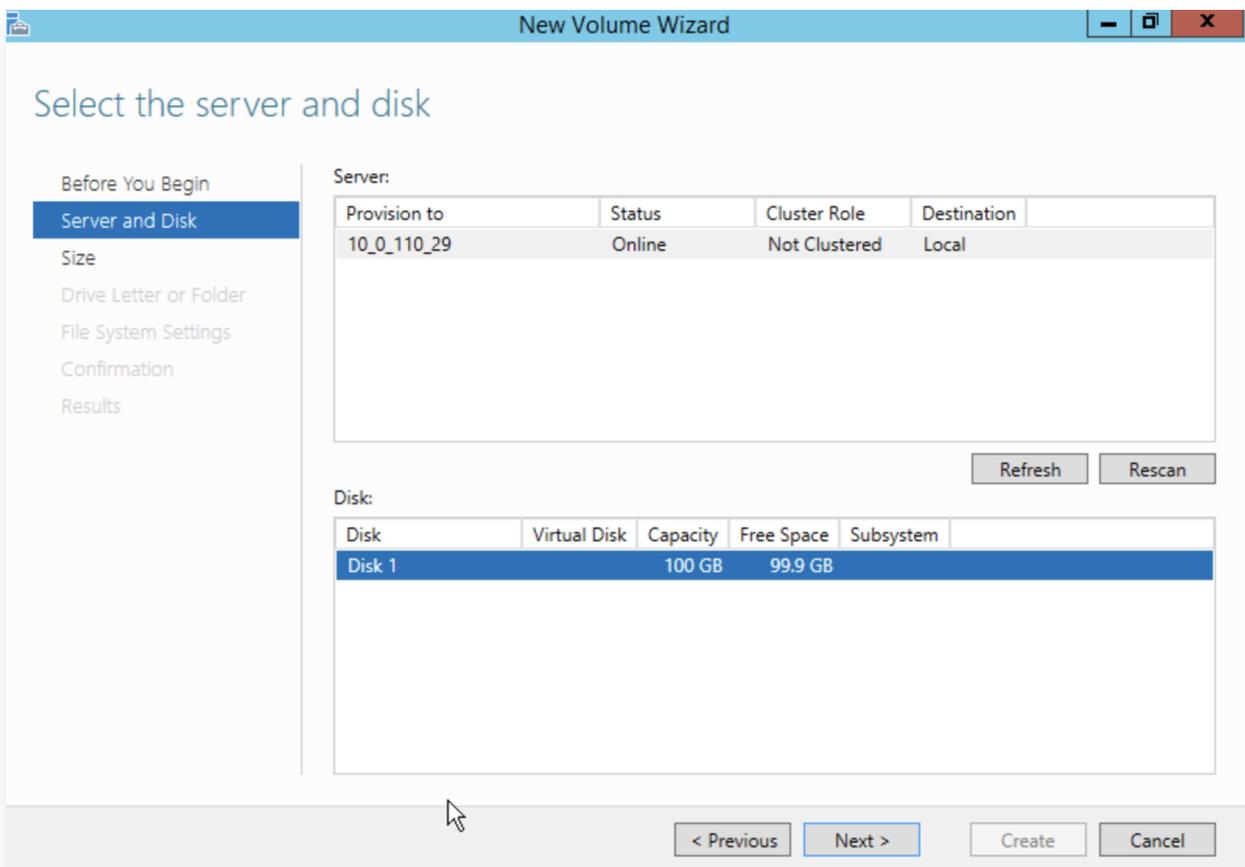
follow the default settings and click **Next** all the time
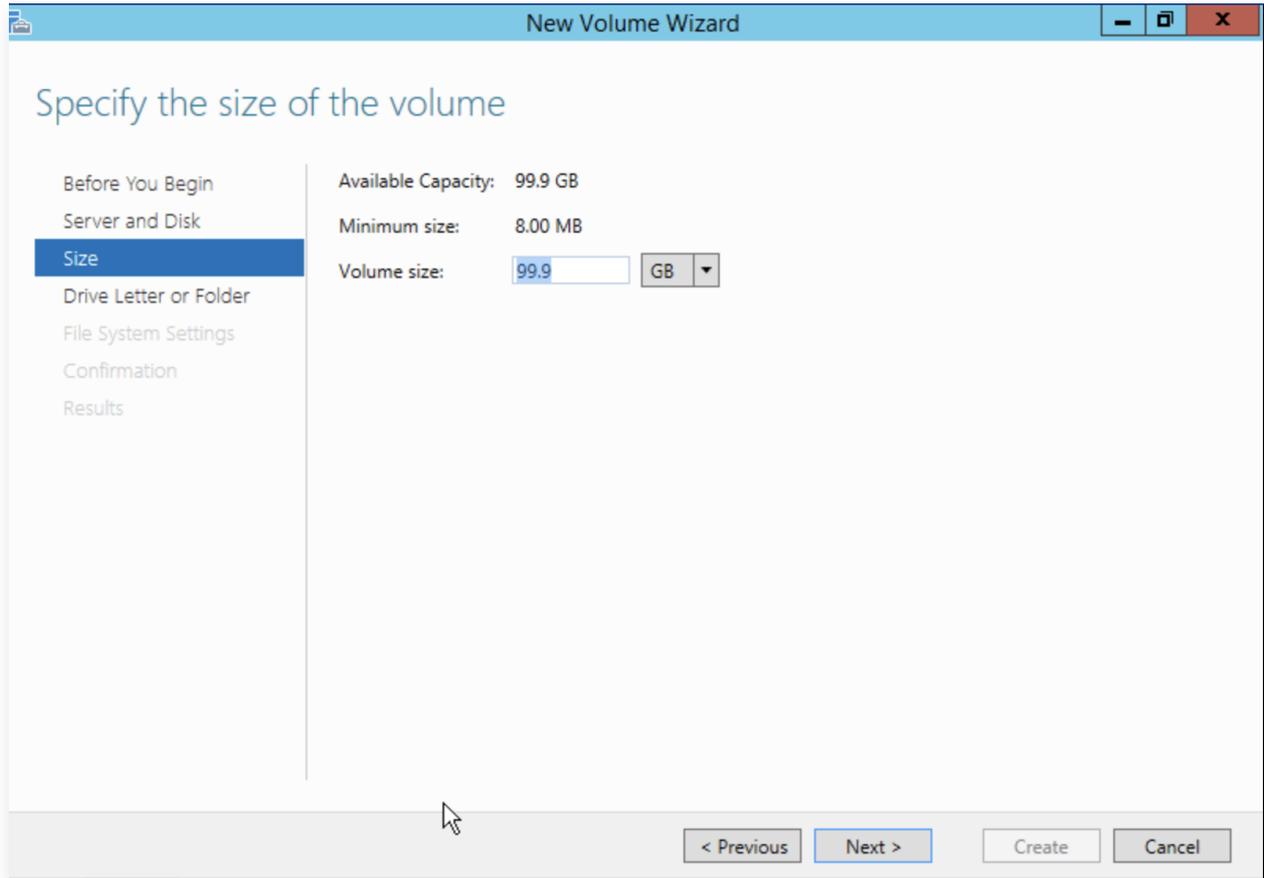
follow the default settings and click **Next** all the time
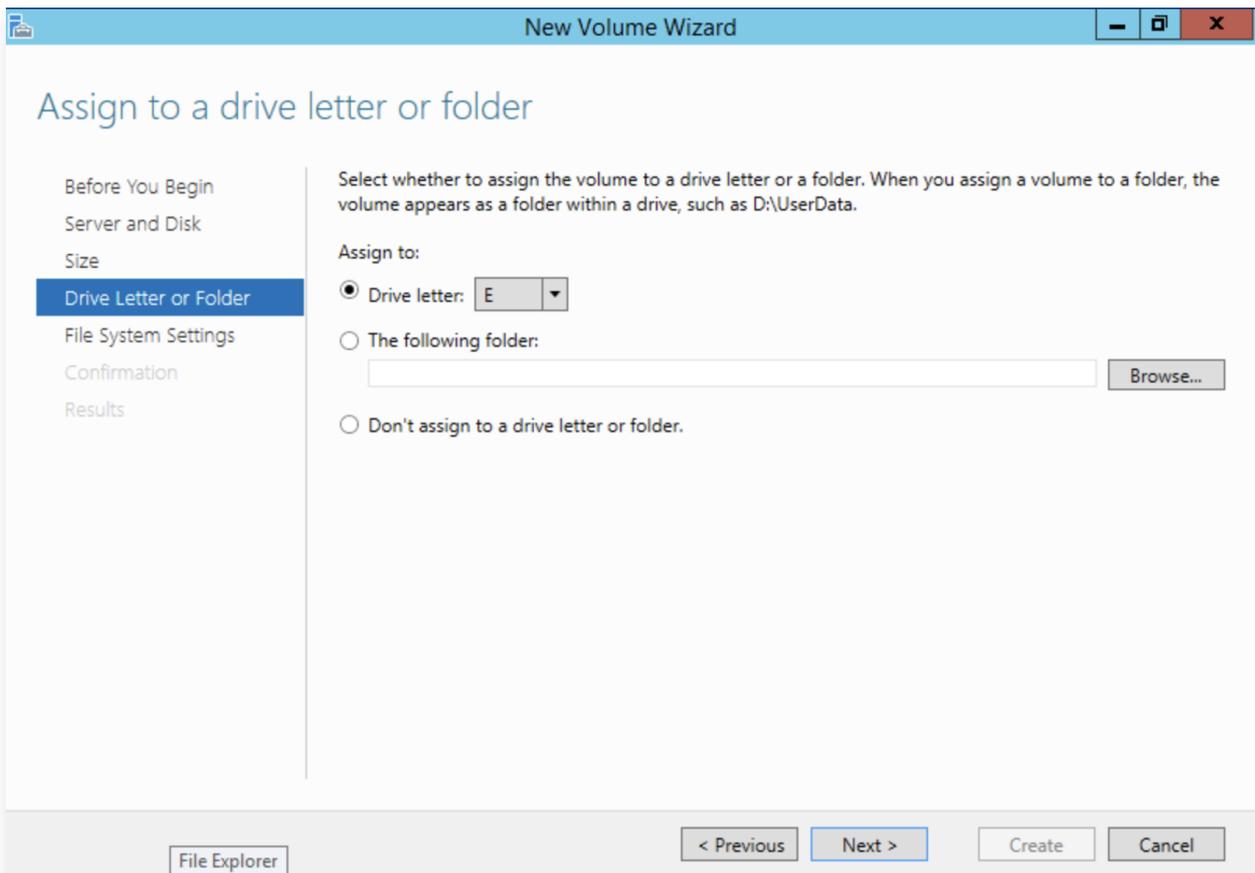
5. Click **Create**.

The target disk will display as formatting, and you will need to wait for a moment for the system to complete the initialization operation. When the volume status is **Healthy**, it indicates that the disk initialization was successful. After successful initialization, the new partition's data disk can be seen in the **Computer** interface.

6. Navigate to the new partition of the data disk, create a new file `qcloud.txt` , input the content you need, and select **File** > **Save**.
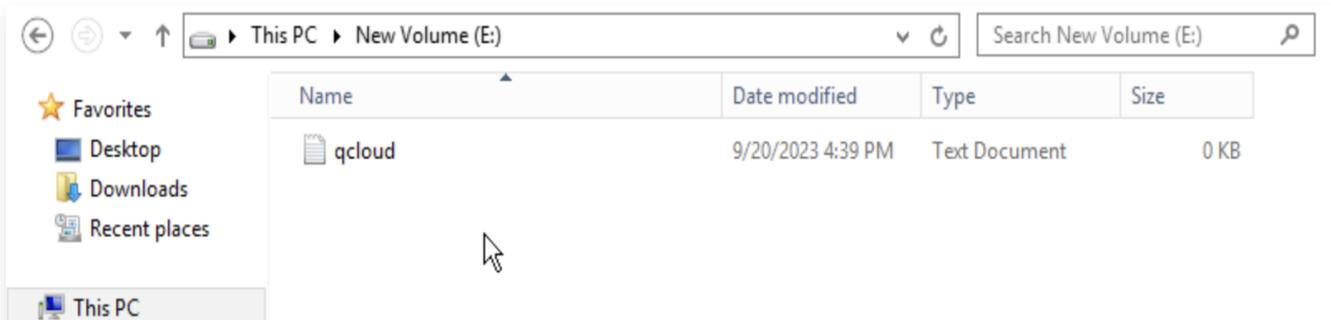
Formatting, Creating a File System, and Writing a File (Linux)

⚠ **Note**

- This section uses a Linux CVM instance with CentOS 7.8 installed as an example. Note that the steps may vary by operating system version.
- This section uses the EXT4 file system as an example.
- After a Linux CVM restarts or starts up, it does not automatically mount the data disk. You can refer to Step 9 – Step 14 to set up automatic disk mounting at startup.

1. Log in to the Linux CVM instance as the root user. For more information, refer to Logging in to Linux Instance Using Standard Login Method (Recommended).

2. Run the following command to view the names of data disks attached to the instance.

```
fdisk -l
```

If the information returned is as shown below, it indicates that the current CVM has two disks. /dev/vda is the system disk, and /dev/vdb is the newly added data disk. In this document, the disk connected to the instance is referred to as /dev/vdb for example. As shown in the figure below:

```
[root@VM-2-54-centos ~]# fdisk -l

Disk /dev/vda: 42.9 GB, 42949672960 bytes, 83886080 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: 0x0009ac89

   Device Boot      Start         End      Blocks   Id  System
/dev/vda1   *        2048    83886046    41941999+   83  Linux

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
```

3. Run the following command to format the disk.

```
mkfs.ext4 /dev/vdb
```

4. Execute the following command to mount the disk to the /data mount point.

```
mount /dev/vdb /data
```

5. Execute the following commands in sequence to access the disk and create a new file

named `qcloud.txt` .

```
cd /data
```

```
vi qcloud.txt
```

6. Press `i` to enter the editing mode, where you can input `This is my first test.` .

7. Press **Esc** to exit the editing mode, enter `:wq` , and press **Enter** to save and close the file.

8. By executing the `ls` command, you can verify that the `qcloud.txt` file has been written to the disk.

> ⓘ **Note**
> You can set up disk automount at startup through Step 9 to Step 14 . If you do not need to configure disk automount at startup, skip the following steps.

9. Run the following command to back up the `/etc/fstab` file. The example below shows how to back it up to the /home directory:

```
cp -r /etc/fstab /home
```

10. Run the following command to open the `/etc/fstab` file using the VI editor.

```
vi /etc/fstab
```

11. Press `i` to enter the editing mode.

12. Move the cursor to the end of the file, press **Enter**, and append the following content.

```
<Device information> <Mount point> <File system format> <File system
installation option> <File system dump frequency> <File system check
sequence at launch>
```

Take automatic mounting using the soft link of an elastic cloud disk as an example. Add the following content:

```
/dev/disk/by-id/virtio-disk-drkhklpe /data ext4 defaults 0 0
```

> **ⓘ Note**
>
> You can use the `ls -l /dev/disk/by-id` command to view the soft link of the elastic cloud disk.

13. Press **ESC**, enter `:wq` , and press **Enter** to save the configuration and exit the editor.

14. Run the following command to verify if the **/etc/fstab** file has been written successfully.

```
mount -a
```

If the command runs successfully, the file has been written. The newly created file system will automatically mount when the operating system starts up.

> **ⓘ Note**
>
> For detailed information about initializing cloud disks, please refer to Introduction to Initialization Scenarios .