

# Cloud Block Storage

## Getting Started

### Product Documentation



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# Getting Started

## Step 1. Creating Cloud Disks

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You can create a cloud disk and attach it to your available CVM instance. The cloud disk can be used as the data disk of the CVM instance after simple initialization procedure. To do this, complete the following steps:

[Step 1. Creating Cloud Disks](#)

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[Step 3. Initializing Cloud Disks](#)

## Overview

This document guides you through how to create a cloud disk `cbs-test` in the Beijing Zone 2 in the console.

## Notes

Make sure you have an available CVM instance in the availability zone (Beijing Zone 2 in this example) where the cloud disk is to be created.

For more information on how to purchase and start a CVM instance, see [Customizing Linux CVM Configurations](#) and [Customizing Windows CVM Configurations](#).

## Directions

### Note:

This document describes purchasing an elastic premium cloud disk in the console. For more information on cloud disk creation, see [Creating Cloud Disks](#).

1. Log in to the CVM console and click [Cloud Block Storage](#) on the left sidebar.
2. At the top of the **Cloud Block Storage** page, select **Beijing** and click **Create**.
3. Configure the following parameters in the pop-up window:

**Availability Zone:** Select **Beijing Zone 2**.

**Cloud Disk Type:** Select **Premium Cloud Disk**.

**Capacity:** Set to 20 GB.

**Disk Name:** Enter `cbs-test` .

**Billing Mode:** Select **Monthly Subscription**.

**Purchase Period:** Select **One month**.

4. Click **OK**.

5. After confirming the configurations, click **OK** and make the payment.

Return to the Cloud Block Storage list page. You can now view the purchased elastic cloud disk `cbs-test`, whose status is **To be attached**.

## Subsequent Operations

After the cloud disk is created, you need to first attach it to a CVM in the same availability zone as a data disk. For more information about this operation, see [Step 2. Attaching Cloud Disks](#).

# Step 2. Attaching Cloud Disks

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## Overview

This document uses the `cbs-test` cloud disk to be attached in the Beijing Zone 2 as an example to describe how to attach it to CVM via the console.

### Note:

Cloud disks can only be attached to an CVM in the same availability zone.

For more information on attaching cloud disks, see [Attaching Cloud Disks](#).

## Prerequisites

Create the `cbs-test` cloud disk. For details, see [Step 1. Creating Cloud Disks](#).

Make sure that available CVM instances exist in the AZ of the cloud disk, which is Beijing Zone 2 in this example. For more information on how to purchase and start a CVM instance, see [Customizing Linux CVM Configurations](#) and [Customizing Windows CVM Configurations](#).

## Directions

1. Log in to the CVM console and click [Cloud Block Storage](#) on the left sidebar.
2. Select **Beijing** at the top of the page, locate the `cbs-test` cloud disk, and select **More > Attach** under the **Operation** column.
3. In the pop-up window, select a CVM instance to which the cloud disk will be attached, and click **Next > Attach Now**.

### Note:

You can check **Release upon instance termination** according to actual circumstances.

Return to the cloud disk list page. The status of the cloud disk is **Attaching**, indicating that it is being attached to the CVM. After the status changes to **Attached**, the cloud disk is attached successfully.

## Subsequent Operations

After the cloud disk is attached to a CVM, the cloud disk acts as a data disk, which is offline by default. You need to initialize the cloud disks by formatting, partitioning, and creating a file system. For more information, see [Step 3](#).

Initializing Cloud Disks.

# Step 3. Initializing Cloud Disks

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## Overview

This document describes how to initialize a cloud disk newly mounted to a CVM, create a file system, and write a file named `qcloud.txt`.

### Note:

For more information on cloud disk initialization, see [Initialization Scenarios](#).

## Note

To protect important data, see [Usage FAQs](#) before performing any operation on your CBS cloud disks.

## Prerequisites

You have attached the **cbs-test** cloud disk to a CVM. For detailed directions, see [Step 2. Attaching Cloud Disks](#).

## Directions

Windows CVMs

Linux CVMs

### Note:

This section uses a CVM instance with Windows Server 2012 R2 DataCenter 64-bit English installed as an example. Note that the steps may vary by operating system version.

1. Log in to the Windows CVM instance as the admin user. See [Logging in to Windows Instance Using RDP \(Recommended\)](#).
2. On the desktop, right click



in the lower-left corner.

3. In the pop-up menu, select **Disk Management**.
4. (Optional) Right-click the target disk and select **Online**.

When the disk status changes to **Not Initialized**, it has gone online.



5. (Optional) Right-click an online disk and select **Initialize Disk**. In the pop-up window, select **MBR (Master Boot Record)** and click **OK**.

**Note:**

The master boot record (MBR) format supports a disk of up to 2 TB, while GUID partition table (GPT) supports a disk of up to 18 EB. If you need a larger capacity than 2 TB, adopt GPT.

If the partition format is changed for a disk in use, the original disk data will be cleared. Therefore, select the disk partition format with caution when initializing the disk.

6. Right-click the target disk and select **New Simple Volume**. In the pop-up window, click **Next**.

7. Enter the size of the simple volume and click **Next**.

8. Select the drive letter or path and click **Next**. Here, the drive letter E is used as an example.

9. Select the file system, perform a quick format, and then click **Next**.

10. Click **Complete**.

The disk status becomes **Formatting**. Wait for the completion of initialization. When the volume status becomes **Healthy**, the disk initialization is successful. You can then view the newly formatted data disk in the **PC** interface.

11. Go to the newly partitioned data disk, create the `qcloud.txt` file, enter the content, and select **File > Save**.

**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.

When a Linux CVM instance restarts or starts up, data disks will not be automatically attached. You can refer to [Step 9–Step 14](#) to configure disk automount at startup.

1. Log in to the Linux CVM instance as the root user. See [Logging in to Linux Instance Using Standard Login Method](#).

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

```
fdisk -l
```

If the returned result is as shown in the following figure, the current CVM has two disks, where `/dev/vda` is the system disk and `/dev/vdb` is the newly added data disk,

In this example, the disk attached to the instance is named `/dev/vdb` :

```
[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. Run the following command to mount this disk to the `/data` mount point.

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

5. Run the following commands to enter the disk and create a new file `qcloud.txt`.

```
cd /data
```

```
vi qcloud.txt
```

6. Press `i` to enter the edit mode and enter **This is my first test.**

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

8. Run the `ls` command, and you can see that the `qcloud.txt` file has been written to the disk.

#### Note:

Refer to [Step 9–Step 14](#) to configure disk automount at startup. If you don't need this feature, skip the following steps.

9.

Run the following command to back up the `/etc/fstab` file to the `/home` directory, for example:

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

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

```
vi /etc/fstab
```

11. Press `i` to enter edit mode.

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

```
<Device information> <Mount point> <File system format> <File system installation o
```

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 run 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**.

Save the configuration and exit the editor.

14.

Run the following command to check whether 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.