

Cloud Block Storage Troubleshooting Methods Product Documentation



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Contents

Troubleshooting Methods

Cloud Disk Automount Failed upon Linux CVM Restart

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Error Description

The file system is created and configured to automatically mount to the cloud disk on a Linux CVM, but automount fails upon the CVM restart.

Possible Reasons

- **Reason 1:** cloud disk automount is not configured in the `fstab` configuration file of the CVM.
- **Reason 2:** incorrect configuration of the `fstab` configuration file.
For example, if the device name is used for automatic mounting and it changes when CVM restarts, the startup will fail.

Solutions

- **Solution to reason 1:**
Refer to the following method to reconfigure the `/etc/fstab` file to automatically mount cloud disks after a CVM restarts:
 - Using the soft link of the disk (recommended)
 - Using the Universally Unique Identifier (UUID) of the file system
 - Using the device name (not recommended)
For detailed directions, see [Configuring the `/etc/fstab` file](#).
- **Solution to reason 2:**
Log in to the Linux CVM using VNC and enter single user mode. In this mode, fix and reconfigure the `/etc/fstab` configuration file. For detailed directions, see [Fixing the `/etc/fstab` file](#).

Troubleshooting Procedure

Configuring the `/etc/fstab` file

1. [Log in to a Linux instance using standard login method.](#)
2. Choose a configuration method to obtain information.

- Using the soft link of elastic cloud disks (recommended)
- Using the UUID of the file system
- Using device name (not recommended)

Analyzing the configuration method

- **Pros:** the soft link of an elastic cloud disk is fixed and unique. It does not change with operations such as mounting, unmounting, and formatting partitions.
- **Cons:** only an elastic cloud disk can use the soft link, which operates imperceptibly for the partition formatting operation.

Obtaining information

Run the following command to view the soft link of the elastic cloud disk.

```
plaintext
ls -l /dev/disk/by-id
```

The following information will appear:

```
[root@VM-8-11-centos ~]# ls -l /dev/disk/by-id
total 0
lrwxrwxrwx 1 root root 9 Mar 23 16:16 ata-QEMU DVD-ROM QM00002 -> ../../sr0
lrwxrwxrwx 1 root root 9 Mar 23 17:28 virtio-disk-b[redacted]na -> ../../vdb
lrwxrwxrwx 1 root root 10 Mar 23 17:28 virtio-disk-b[redacted]na-part1 -> ../../vdb1
```

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

```
cp /etc/fstab /home
```

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

```
vi /etc/fstab
```

5. Press ****j**** to enter the edit mode, and append the following content to the next line of the last line of the file.

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

Refer to the following examples according to the configuration method selected in [step 2](#Step2).

- (Recommended) Take the soft link of an elastic cloud disk as an example. Add the following content:

```
/dev/disk/by-id/virtio-disk-drkhklpe-part1 /data/newpart ext4 defaults 0 2
```

- Take the UUID of the file system as an example. Add the following content:

```
UUID=d489ca1c-5057-4536-81cb-ceb2847f9954 /data/newpart ext4 defaults 0 2
```

- (Not recommended) Take the device name as an example. Add the following content:

```
/dev/vdb1 /data/newpart ext4 defaults 0 2
```

6. Press **ESC**, enter **wq**, and press **Enter** to save the configuration and exit the editor. 7.

Run the following command to check whether the `/etc/fstab` file has been written successfully.

```
mount -a
```

If information similar to what is shown below is returned, the file has been written. The file system will automatically mount when the operating system is started. You can restart CVM to verify the result.

Fixing the `/etc/fstab` file

1. [Log in to a Linux instance using VNC](#).

2. Enter single user mode. For detailed directions, see [Configuring Linux CVM to Boot into Single User Mode](#).

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

```
cp /etc/fstab /home
```

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

```
vi /etc/fstab
```

5. Press **i** to enter the edit mode. Move the cursor to the beginning of the error line and enter **#** to comment out this configuration, as shown below.

Note :

This line configures data disk automount. However, due to misconfiguration, the cloud disk could not be mounted when CVM restarts.

```
# /etc/fstab
# Created by anaconda on Tue Nov 26 02:11:36 2019
#
# Accessible filesystems, by reference, are maintained under '/dev/disk/'.
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info.
#
# After editing this file, run 'systemctl daemon-reload' to update systemd
# units generated from this file.
#
UUID=659e6f89-71fa-463d-842e-ccdf2c06e0fe /                    ext4    defaults    1 1
# /dev/vdc1_/data auto rw,relatime,data=ordered 0 2
```

6. Press **ESC**, enter **:wq**, and press **Enter** to save the configuration and exit the editor.
7. Enter `exit` to exit the single user mode.
8. Wait until restarting is completed. Log in to the CVM.
9. Reconfigure the file as instructed in [Configuring the /etc/fstab file](#).