

## Working with Block Volumes/fstab options.txt

### fstab Options for Block Volumes Using Consistent Device Paths

On Linux instances, if you want to automatically mount volumes on instance boot, you need to set some specific options in the `/etc/fstab`

#### Note

These steps are for block volumes that are attached with consistent device paths enabled. If the block volume does not have consistent device paths enabled, follow the steps in [Working with Block Volumes/fstab options.txt](#).

Follow the steps to attach a volume and connect to the volume.

Create the file system of your choice on the volume using standard Linux tools. For example, run the following command to create an XFS file system:

```
mkfs.xfs /dev/sdc
```

If a file system already exists on the volume, you don't need to create another one.

Confirm that the instance supports consistent device paths and is correctly configured. To verify that the volume is attached to a supported instance type, see [Supported Instance Types for Consistent Device Paths](#).

#### Copy

```
ll /dev/oracleoci/oraclevd*
```

The output will look similar to the following:

```
lrwxrwxrwx. 1 root root 6 Feb  7 21:02 /dev/oracleoci/oraclevda -> ../sda
lrwxrwxrwx. 1 root root 7 Feb  7 21:02 /dev/oracleoci/oraclevda1 -> ../sda1
lrwxrwxrwx. 1 root root 7 Feb  7 21:02 /dev/oracleoci/oraclevda2 -> ../sda2
lrwxrwxrwx. 1 root root 7 Feb  7 21:02 /dev/oracleoci/oraclevda3 -> ../sda3
```

If you don't see this output and instead see the following error message:

```
cannot access /dev/oracleoci/oraclevd*: No such file or directory
```

there may be a problem with the instance configuration for device paths. For assistance with this, contact Support.

#### Use the `_netdev` and `nofail` Options

By default, the `/etc/fstab` file is processed before the initiator starts. Configure the mount process to initiate before the volumes are attached.

When you create a custom image of an instance where the volumes, excluding the root volume, are listed in the `/etc/fstab` file, instances may not boot properly.

In the example scenario with three volumes, the `/etc/fstab` file entries for the volumes with the `_netdev` and `nofail` options are as follows:

#### Copy

```
/dev/oracleoci/oraclevdb /mnt/vol1 xfs defaults,_netdev,nofail 0 2
/dev/oracleoci/oraclevdc /mnt/vol2 xfs defaults,_netdev,nofail 0 2
/dev/oracleoci/oraclevdd /mnt/vol3 xfs defaults,_netdev,nofail 0 2
```

After you have updated the `/etc/fstab` file, use the following command to mount the volumes:

#### Copy

```
bash-4.2$ sudo mount -a
```

Reboot the instance to confirm that the volumes are mounted properly on reboot with the following command:

#### Copy

```
bash-4.2$ sudo reboot
```

#### Troubleshooting Issues with the `/etc/fstab` File

If the instance fails to reboot after you update the `/etc/fstab` file, you may need to undo the changes to the `/etc/fstab` file. To update the `/etc/fstab` file, see [Working with Block Volumes/fstab options.txt](#).