

Homework | Cycle 08: Mount an EBS Volume on a Linux EC2 Instance

Step-by-Step Guide

Step 1: Create an EBS Volume

1. Go to the AWS Management Console.
 2. Navigate to **EC2 → Elastic Block Store → Volumes**.
 3. Click on **"Create Volume"**.
 - Set the **Size** (e.g., 1 GiB for Free Tier).
 - Ensure the **Availability Zone (AZ)** matches your EC2 instance (e.g., `ap-south-1a`).
 - Select the **Volume Type** as `gp2` or `gp3`.
 4. Click **Create Volume**.
-

Step 2: Attach the Volume to EC2

1. After creating the volume, go back to the **Volumes** page.
 2. Select your volume → Click **Actions → Attach volume**.
 3. Choose your running EC2 instance from the dropdown.
 4. Set the device name as `/dev/sdf` (inside Linux it will likely appear as `/dev/xvdf`).
 5. Click **Attach**.
-

Volume settings

Volume type | [Info](#)

General Purpose SSD (gp3) ▼

Size (GiB) | [Info](#)

5

Min: 1 GiB, Max: 16384 GiB.

IOPS | [Info](#)

3000

Min: 3000 IOPS, Max: 16000 IOPS.

Throughput (MiB/s) | [Info](#)

125

Min: 125 MiB, Max: 1000 MiB. Baseline: 125 MiB/s.

Availability Zone | [Info](#)

ap-south-1b ▼

Snapshot ID - *optional* | [Info](#)

Don't create volume from a snapshot ▼



```
ubuntu@ip-172-31-12-246:~$ history
1  df -h
2  lsblk
3  df -h
4  sudo mkfs -t ext4 /dev/xvdf
5  sudo mkdir /mnt/mydata
6  sudo mount /dev/xvdf /mnt/mydata
7  df -h
8  lsblk
9  history
```

```
ubuntu@ip-172-31-12-246:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        6.8G  1.8G  5.0G  26% /
tmpfs            479M   0  479M   0% /dev/shm
tmpfs            192M  868K  191M   1% /run
tmpfs            5.0M   0   5.0M   0% /run/lock
/dev/xvda16      881M   86M  734M  11% /boot
/dev/xvda15      105M   6.2M   99M   6% /boot/efi
tmpfs            96M   12K   96M   1% /run/user/1000
ubuntu@ip-172-31-12-246:~$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0         7:0    0 27.2M  1 loop /snap/amazon-ssm-agent/11320
loop1         7:1    0 73.9M  1 loop /snap/core22/1981
loop2         7:2    0 50.9M  1 loop /snap/snapd/24505
xvda         202:0    0    8G   0 disk
├─xvda1       202:1    0    7G   0 part /
├─xvda14      202:14   0    4M   0 part
├─xvda15      202:15   0  106M  0 part /boot/efi
└─xvda16      259:0    0  913M  0 part /boot
```

```
ubuntu@ip-172-31-12-246:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        6.8G  1.8G  5.0G  26% /
tmpfs            479M   0  479M   0% /dev/shm
tmpfs            192M  872K  191M   1% /run
tmpfs            5.0M   0   5.0M   0% /run/lock
/dev/xvda16      881M   86M  734M  11% /boot
/dev/xvda15      105M   6.2M   99M   6% /boot/efi
tmpfs            96M   12K   96M   1% /run/user/
/dev/xvdf        4.9G   24K  4.6G   1% /mnt/mydat
```

```
ubuntu@ip-172-31-12-246:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        6.8G  1.8G  5.0G  26% /
tmpfs            479M   0  479M   0% /dev/shm
tmpfs            192M  872K  191M   1% /run
tmpfs            5.0M   0   5.0M   0% /run/lock
/dev/xvda16      881M   86M  734M  11% /boot
/dev/xvda15      105M   6.2M   99M   6% /boot/efi
tmpfs            96M   12K   96M   1% /run/user/1000
/dev/xvdf        4.9G   24K  4.6G   1% /mnt/mydata

ubuntu@ip-172-31-12-246:~$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0        7:0    0   27.2M 1 loop /snap/amazon-ssm-agent/11320
loop1        7:1    0   73.9M 1 loop /snap/core22/1981
loop2        7:2    0   50.9M 1 loop /snap/snapd/24505
xvda         202:0    0    8G   0 disk
├─xvda1      202:1    0    7G   0 part /
├─xvda14     202:14   0    4M   0 part
├─xvda15     202:15   0   106M 0 part /boot/efi
└─xvda16     259:0    0   913M 0 part /boot
xvdf         202:80   0    5G   0 disk /mnt/mydata
```

vol-0122b98166e93bee5

Last updated less than a minute ago  [Actions](#) 

Details

Volume ID

 vol-0122b98166e93bee5

AWS Compute Optimizer finding

 Opt-in to AWS Compute Optimizer for recommendations. [Learn more](#)

Fast snapshot restored

No

Attached resources

[i-00ca90d40ccf79938 \(linux-extra\)](#):
/dev/sdf (attached)

Size

 5 GiB

Volume state

 In-use

Availability Zone

ap-south-1b

Outposts ARN

-


Type

gp3

IOPS

3000

Created

 Wed Jul 16 2025 11:24:02 GMT+0530
(India Standard Time)

Managed

false

Status check

 Okay

Throughput

125

Multi-Attach enabled

No

Operator

-

▼ Source

Chose filter set

Search

Name

Volume ID

Type

Size

IOPS

Throughput

Snapshot ID

Created

vol-0122b98166e93bee5

gp3

5 GiB

3000

125

-

2025/07/16 11:24 GMT+5:...

vol-0f4b06c64ad728eae

gp3

8 GiB

3000

125

snap-0b1af51...

2025/07/16 11:18 GMT+5:...

Step 3: Connect to Your EC2 Linux Instance

Use SSH to connect to your instance:

```
bash
CopyEdit
ssh -i "your-key.pem" ubuntu@<your-ec2-public-ip>
```

Step 4: Check for New Disk

Run the following command to list all attached block devices:

```
bash
CopyEdit
lsblk
```

Look for a disk that is not yet mounted, typically `/dev/xvdf`.

Step 5: Format the EBS Volume

Use the `mkfs` command to format the volume with an ext4 file system:

```
bash
CopyEdit
sudo mkfs.ext4 /dev/xvdf
```

Step 6: Mount the Volume

1. Create a directory to use as a mount point:

```
bash
CopyEdit
sudo mkdir /mnt/ebs
```

2. Mount the volume:

```
bash
CopyEdit
sudo mount /dev/xvdf /mnt/ebs
```

Step 7: Verify the Mount

To check if the volume is mounted correctly, run:

```
bash
CopyEdit
df -h
```

You should see `/dev/xvdf` mounted on `/mnt/ebs` .
