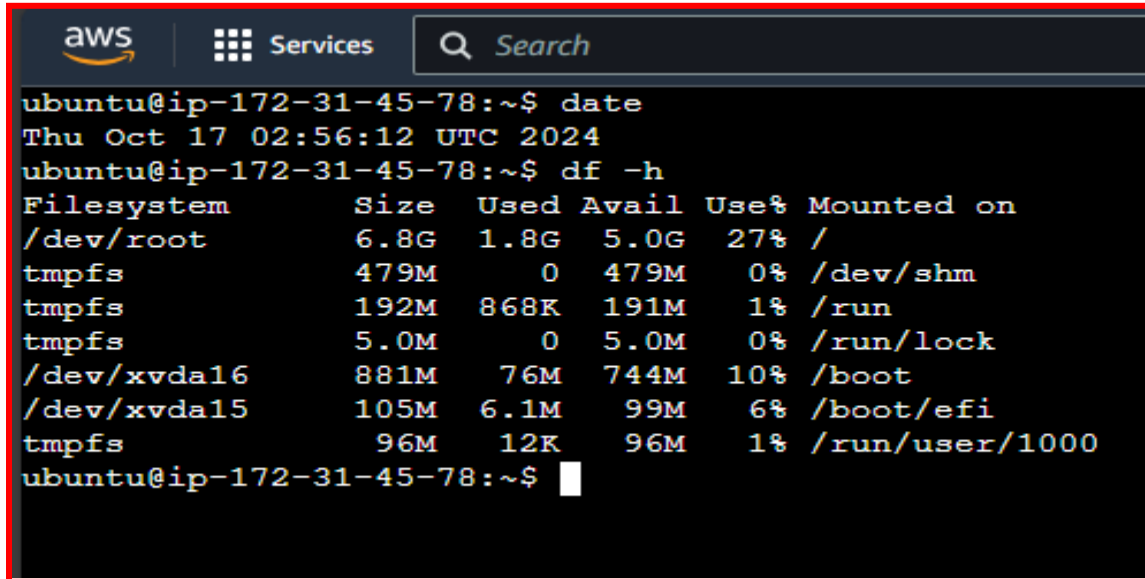


VOLUME MOUNTING IN LINUX

1. Login into the AWS EC2 Instance.

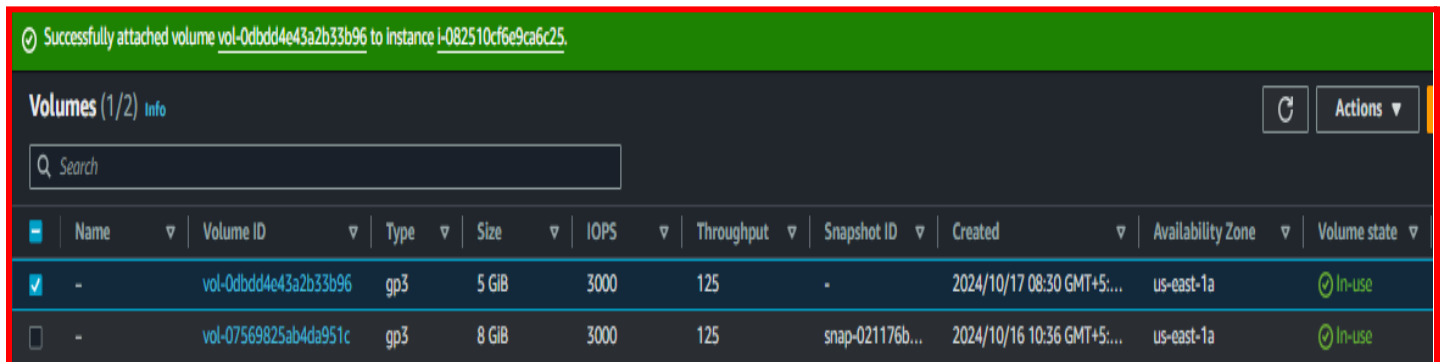


The screenshot shows the AWS Management Console interface with a terminal window open. The terminal displays the output of the 'date' and 'df -h' commands. The 'date' command shows the current time as Thursday, October 17, 2024, at 02:56:12 UTC. The 'df -h' command shows the disk usage for various filesystems, including /dev/root, tmpfs, /dev/xvda16, /dev/xvda15, and /run/user/1000.

```
aws | Services | Search
ubuntu@ip-172-31-45-78:~$ date
Thu Oct 17 02:56:12 UTC 2024
ubuntu@ip-172-31-45-78:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        6.8G  1.8G  5.0G  27% /
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   76M  744M  10% /boot
/dev/xvda15      105M   6.1M   99M   6% /boot/efi
tmpfs            96M   12K   96M   1% /run/user/1000
ubuntu@ip-172-31-45-78:~$
```

2. Attach the EBS Volume to the EC2 Instance

- Go to the AWS Console.
- Navigate to EC2 Dashboard > Elastic Block Store > Volumes.
- Select your volume, then choose Actions > Attach Volume.
- Choose the EC2 instance from the drop-down list and select the device name (e.g., /dev/xvdf).



The screenshot shows the AWS Volumes page. A green banner at the top indicates that volume vol-0dbdd4e43a2b33b96 has been successfully attached to instance i-082510cf6e9ca6c25. Below the banner, there is a search bar and a table listing the volumes. The table has columns for Name, Volume ID, Type, Size, IOPS, Throughput, Snapshot ID, Created, Availability Zone, and Volume state. Two volumes are listed: vol-0dbdd4e43a2b33b96 (5 GiB, gp3, In-use) and vol-07569825ab4da951c (8 GiB, gp3, In-use).

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created	Availability Zone	Volume state
-	vol-0dbdd4e43a2b33b96	gp3	5 GiB	3000	125	-	2024/10/17 08:30 GMT+5:...	us-east-1a	In-use
-	vol-07569825ab4da951c	gp3	8 GiB	3000	125	snap-021176b...	2024/10/16 10:36 GMT+5:...	us-east-1a	In-use

EC2 > Volumes > [vol-0dbdd4e43a2b33b96](#) > Attach volume

Attach volume Info

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

Basic details

Volume ID

Availability Zone
us-east-1a

Instance Info

Only instances in the same Availability Zone as the selected volume are displayed.

Device name Info

Recommended device names for Linux: /dev/sda1 for root volume. /dev/sd[f-p] for data volumes.

ⓘ Newer Linux kernels may rename your devices to `/dev/xvdf` through `/dev/xvdp` internally, even when the device name entered here (and shown in the details) is `/dev/sdf` through `/dev/sdp`.

3. Verify the Volume Attachment

- On your EC2 instance, run the following command to check if the new volume is attached:

lsblk

- This will list all block devices. Look for a new device like `/dev/xvdf`.

```
aws Services Search
ubuntu@ip-172-31-45-78:~$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0        7:0      0  25.2M 1 loop /snap/amazon-ssm-agent/7993
loop1        7:1      0  38.8M 1 loop /snap/snapd/21759
loop2        7:2      0  55.7M 1 loop /snap/core18/2829
loop3        7:3      0  55.4M 1 loop /snap/core18/2846
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
ubuntu@ip-172-31-45-78:~$
```

4. Create a Filesystem on the Volume

- If the volume is new and has no file system, create one using mkfs.

sudo mkfs -t ext4 /dev/xvdf

```
ubuntu@ip-172-31-45-78:~$ sudo mkfs -t ext4 /dev/xvdf
mke2fs 1.47.0 (5-Feb-2023)
Creating filesystem with 1310720 4k blocks and 327680 inodes
Filesystem UUID: 8d08ff44-bb2b-4c95-adb3-7cf3301996d5
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912, 819200, 884736

Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done

ubuntu@ip-172-31-45-78:~$
```

5. Create a Mount Point

- Choose a directory where you want to mount the volume, for example, /mnt/new_volume:

sudo mkdir /mnt/my_new_volume

```
ubuntu@ip-172-31-45-78:~$ ls
awkprac  info.txt  logs.log
ubuntu@ip-172-31-45-78:~$ sudo ls /mnt/
my_new_volume
ubuntu@ip-172-31-45-78:~$
```

6. Mount the Volume

- Mount the volume to the directory:

sudo mount /dev/xvdf /mnt/my_new_volume

7. Verify the Mount

- Check if the volume is mounted successfully:

df -h

```
ubuntu@ip-172-31-45-78:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        6.8G  1.9G  4.9G  28% /
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   76M  744M  10% /boot
/dev/xvda15      105M   6.1M   99M   6% /boot/efi
tmpfs            96M   12K   96M   1% /run/user/1000
/dev/xvdf        4.9G   24K  4.6G   1% /mnt/my_new_volume
ubuntu@ip-172-31-45-78:~$
```

- You can see here the 5 gb volume /dev/xvdf, is visible here.