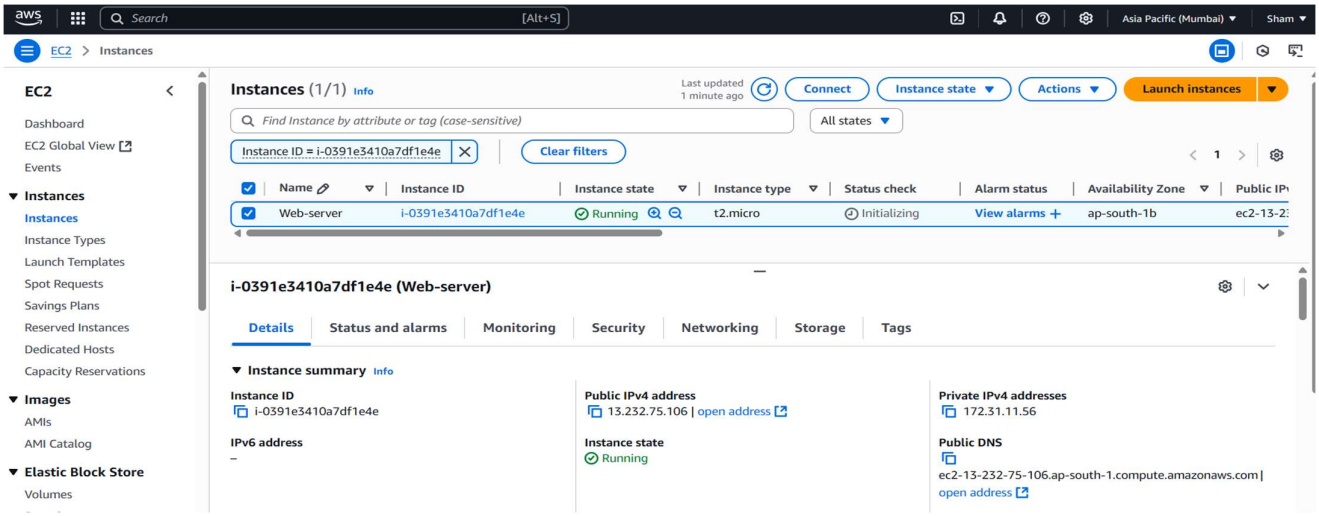
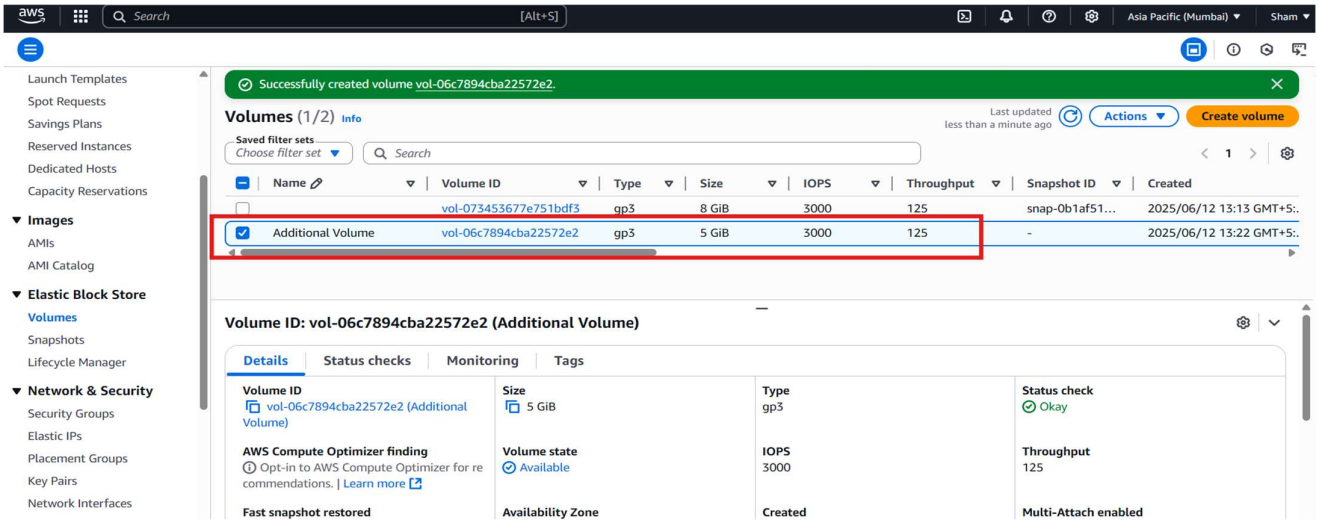
To create an EBS volume, attach it to an EC2 instance, and mount it permanently

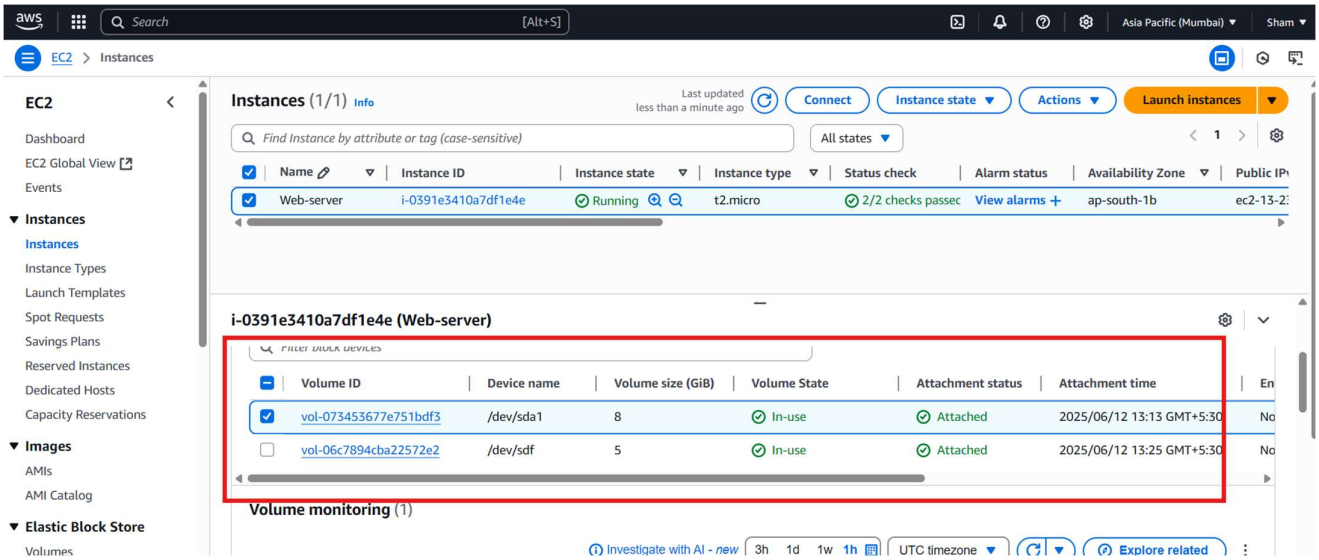
1: Create EC2 Instance.



2: Create EBS Volume.



3: Attach Volume to EC2 Instance.



4: SSH into EC2 and Mount the EBS.

```
root@ip-172-31-11-56:~# 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  876K  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
root@ip-172-31-11-56:~#
```

```
root@ip-172-31-11-56:~# 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
root@ip-172-31-11-56:~#
```

5: Format The EBS Volume and Create Partition.

CMD: mkfs -t ext4 /dev/xvdf

```
root@ip-172-31-11-56:~# mkfs -t ext4 /dev/xvdf
mke2fs 1.47.0 (5-Feb-2023)
Creating filesystem with 1310720 4k blocks and 327680 inodes
Filesystem UUID: c57e5450-2fbf-4b24-801a-66c64589df18
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

root@ip-172-31-11-56:~#
```

6: Create a Mount Point & Mount the Volume.

CMD: mkdir /data

CMD: mount /dev/xvdf /data

```
root@ip-172-31-11-56: ~
root@ip-172-31-11-56:~# mkdir /data
root@ip-172-31-11-56:~# mount /dev/xvdf /data
root@ip-172-31-11-56:~# 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  880K  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% /data
root@ip-172-31-11-56:~#
```

7: For Permanent Mount After Reboot (Edit fstab)

Check the UUID of the volume:

CMD: blkid /dev/xvdf

```
root@ip-172-31-11-56:~# blkid /dev/xvdf
/dev/xvdf: UUID="c57e5450-2fbf-4b24-801a-66c64589df18" BLOCK_SIZE="4096
" TYPE="ext4"
root@ip-172-31-11-56:~# vi /etc/fstab
```

Edit the /etc/fstab file:

CMD: vi /etc/fstab

Insert into file at last:

UUID= (UUID) /data ext4 defaults,nofail 0 2

```
root@ip-172-31-11-56:~# cat /etc/fstab
LABEL=cloudimg-rootfs   /        ext4   discard,commit=30,errors=remoun
t-ro    0 1
LABEL=BOOT      /boot   ext4    defaults        0 2
LABEL=UEFI      /boot/efi       vfat    umask=0077      0 1
UUID=c57e5450-2fbf-4b24-801a-66c64589df18 /data   ext4   defaults,nofai
l   0   2
root@ip-172-31-11-56:~#
```

8: Test fstab (Don't Reboot Yet!)

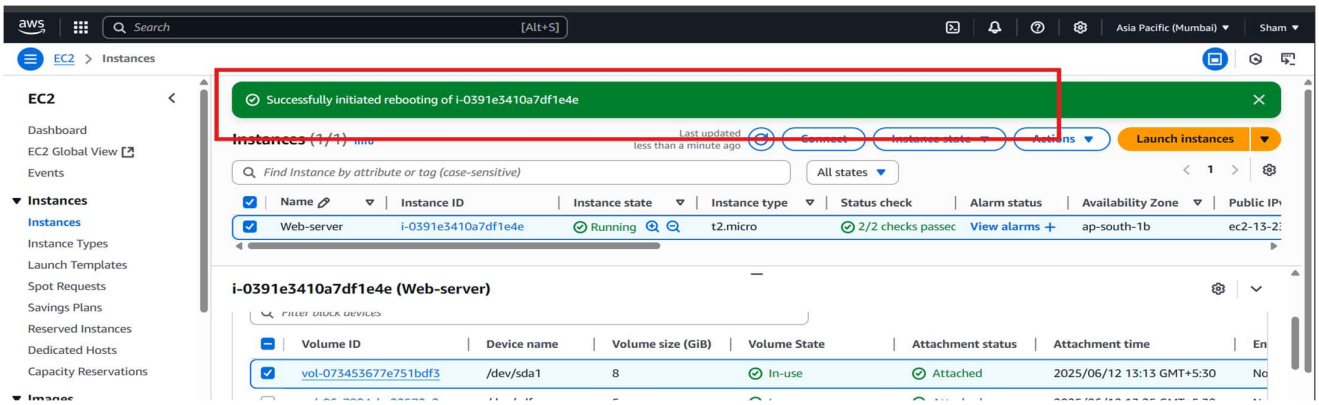
CMD: mount -a : no error found, it means the entry is correct. we can safely reboot

```
root@ip-172-31-11-56: ~
root@ip-172-31-11-56:~# mount -a
root@ip-172-31-11-56:~#
```

8: Test the volume.

```
root@ip-172-31-11-56:~# mount -a
root@ip-172-31-11-56:~# 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  880K  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% /data
root@ip-172-31-11-56:~#
```

9: Test the volume after reboot instance.




```
Broadcast message from root@ip-172-31-11-56 (Thu 2025-06-12 08:17:10 UTC):

The system will power off now!


Broadcast message from root@ip-172-31-11-56 (Thu 2025-06-12 08:17:10 UTC):

The system will power off now!

Connection to 13.232.75.106 closed by remote host.
Connection to 13.232.75.106 closed.

SHAM@Shams-PC MINGW64 ~/Downloads
$
```

```
SHAM@Shams-PC MINGW64 ~/Downloads
$ ssh -i "Demo-priacc.pem" ubuntu@13.232.75.106
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-1029-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/pro

 System information as of Thu Jun 12 08:18:42 UTC 2025

  System load:  0.23               Processes:             107
  Usage of /:   25.8% of 6.71GB    Users logged in:       0
  Memory usage: 20%                IPv4 address for enX0: 172.31.11.56
  Swap usage:   0%


Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


Last login: Thu Jun 12 07:47:38 2025 from 223.185.43.92
ubuntu@ip-172-31-11-56:~$ sudo -i
root@ip-172-31-11-56:~# 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  880K  191M   1% /run
tmpfs           5.0M     0  5.0M   0% /run/lock
/dev/xvda16     881M   86M  734M  11% /boot
/dev/xvdf       4.9G   24K  4.6G   1% /data
/dev/xvda15     105M  6.2M   99M   6% /boot/efi
tmpfs            96M   12K   96M   1% /run/user/1000
root@ip-172-31-11-56:~#
```