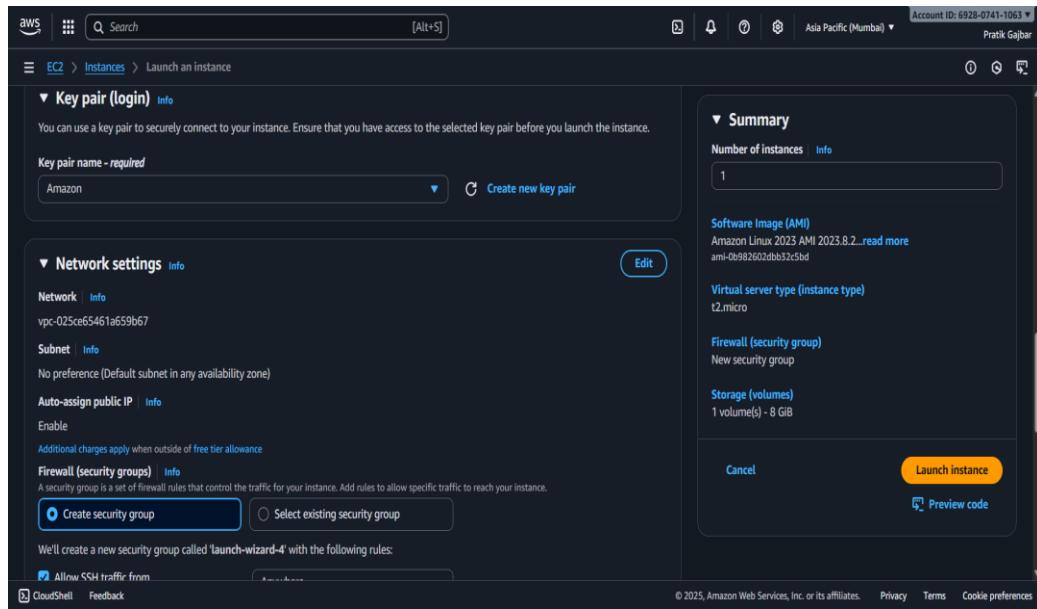
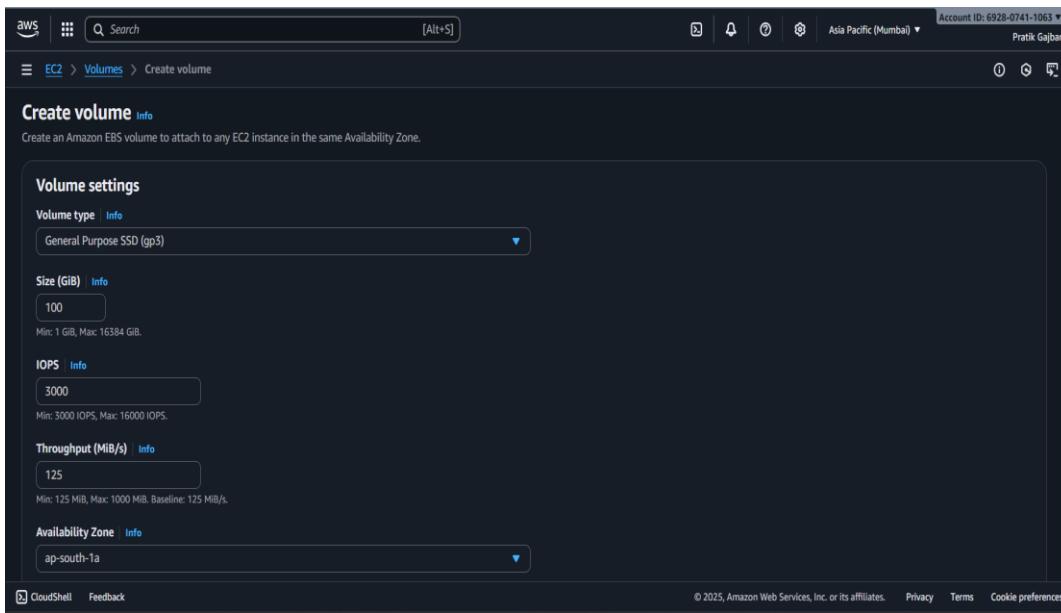


## ⊕ Task-12 :- How to make an EBS volume mount permanent on an EC2 instance.

### Step-1 :- Create One instance



### Step-2 :- Create one EBS Volume.



The screenshot shows the AWS Management Console with the Volumes list open. The left sidebar includes sections for Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, AMI Catalog, Elastic Block Store (selected), Volumes, Snapshots, Lifecycle Manager, Network & Security, Security Groups, Elastic IPs, Placement Groups, Key Pairs, Network Interfaces, Load Balancing, and Load Balancers.

**Volumes (1/4) Info**

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created
vol-0e855d14669646d66	gp3	8 GiB	3000	125	-	snap-04e9e6...	2025/09/11 16:04 GMT+5:...
xyz	vol-003feb229c4bd4c5	gp3	10 GiB	3000	125	-	2025/09/08 14:03 GMT+5:...
	vol-000da27018aed3b43	gp3	8 GiB	3000	125	snap-0aef119f...	2025/09/08 13:53 GMT+5:...
EBS	vol-0738142fb670108a2	gp3	10 GiB	3000	125	-	2025/09/11 16:08 GMT+5:...

**Volume ID: vol-0738142fb670108a2 (EBS)**

**Details**

Volume ID vol-0738142fb670108a2 (EBS)	Size 10 GiB	Type gp3	Status check OK
AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations.   Learn more	Volume state Available	IOPS 3000	Throughput 125
Fast snapshot restored No	Availability Zone ap-south-1a	Created Thu Sep 11 2025 16:08:20 GMT+0530	Multi-Attach enabled No

Step-3 :- Attach EBS Volume to a Instance (Make sure they both are present in same AZ. )

The screenshot shows the AWS Management Console with the Volumes list and detailed view for EBS volume vol-0738142fb670108a2. The Actions menu is open, listing options: Modify volume, Create snapshot, Create snapshot lifecycle policy, Delete volume, Attach volume (selected), Detach volume, Force detach volume, Manage auto-enabled I/O, Manage tags, and Fault injection.

**Volumes (1/4) Info**

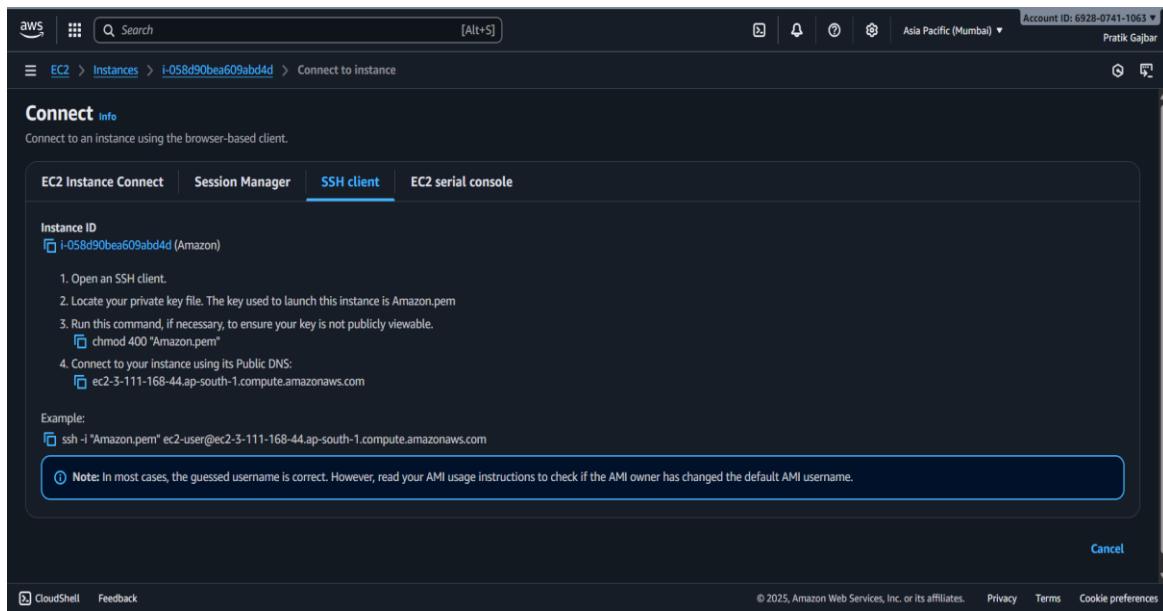
Name	Volume ID	Type	Size	IOPS	Throughput
vol-0e855d14669646d66	gp3	8 GiB	3000	125	-
xyz	vol-003feb229c4bd4c5	gp3	10 GiB	3000	125
	vol-000da27018aed3b43	gp3	8 GiB	3000	125
EBS	vol-0738142fb670108a2	gp3	10 GiB	3000	125

**Volume ID: vol-0738142fb670108a2 (EBS)**

**Details**

Volume ID vol-0738142fb670108a2 (EBS)	Size 10 GiB	Type gp3	Status check OK
AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations.   Learn more	Volume state Available	IOPS 3000	Throughput 125
Fast snapshot restored No	Availability Zone ap-south-1a	Created Thu Sep 11 2025 16:08:20 GMT+0530	Multi-Attach enabled No

Step-4 :- Connect instance on CLI with SSH.\



**Step-5 :-**

- cd Downloads/
  - Paste ssh on cli and give Fingerprint (yes)
  - lsblk – list a blocks

```
[ec2-user@ip-172-31-35-211 ~]$ lsblk
NAME   MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
xvda    202:0   0   8G  0 disk 
└─xvda1  202:1   0   8G  0 part /
xvda12  202:12  0   1M  0 part 
xvda127 202:127 0   1M  0 part 
xvda128 202:128 0   10M 0 part /boot/efi
xvdb    202:16  0   10G 0 disk 
[ec2-user@ip-172-31-35-211 ~]$ |
```

Fdisk /dev/xvdb (use for partition) n = For new Partition.

- P = For Primary partition
- Partition Number
- First Sector
- Last sector (+5G)
- W = For Save and Quit

```
[root@ip-172-31-35-211 ~]# fdisk /dev/xvdb
Welcome to fdisk (util-linux 2.37).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table.
Created a new dos disklabel with disk identifier 0x93fae2ff.

Command (m for help): n
Partition type:
   p   primary (0 primary, 4 extended, 4 free)
   e   extended (container for logical partitions)
Select (default p): p
Value out of range.
   p   primary (0 primary, 0 extended, 4 free)
   e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1): 1
First sector (2048-20971519, default 2048).
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-20971519, default 20971519): +5G
Created a new partition 1 of type 'Linux' and of size 5 GiB.

Command (m for help):
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

[root@ip-172-31-35-211 ~]# lsblk
NAME   MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
xvda    202:0   0   8G  0 disk 
└─xvda1  202:1   0   8G  0 part /
xvda12  202:12  0   1M  0 part 
xvda127 202:127 0   1M  0 part 
xvda128 202:128 0   10M 0 part /boot/efi
xvdb    202:16  0   10G 0 disk 
└─xvdb1  202:17  0   5G  0 part
[root@ip-172-31-35-211 ~]#
```

Create a second Partition

```

root@ip-172-31-35-211:~
Select (default p): p
Partition number (2-4, default 2): 1
Value out of range
Partition number (2-4, default 2): 2
First sector (10487808-20971519, default 10487808);
Last sector, +/-sectors or +/-size{K,M,G,T,P} (10487808-20971519, default 20971519): +2G
Created a new partition 2 of type 'Linux' and of size 2 GiB.

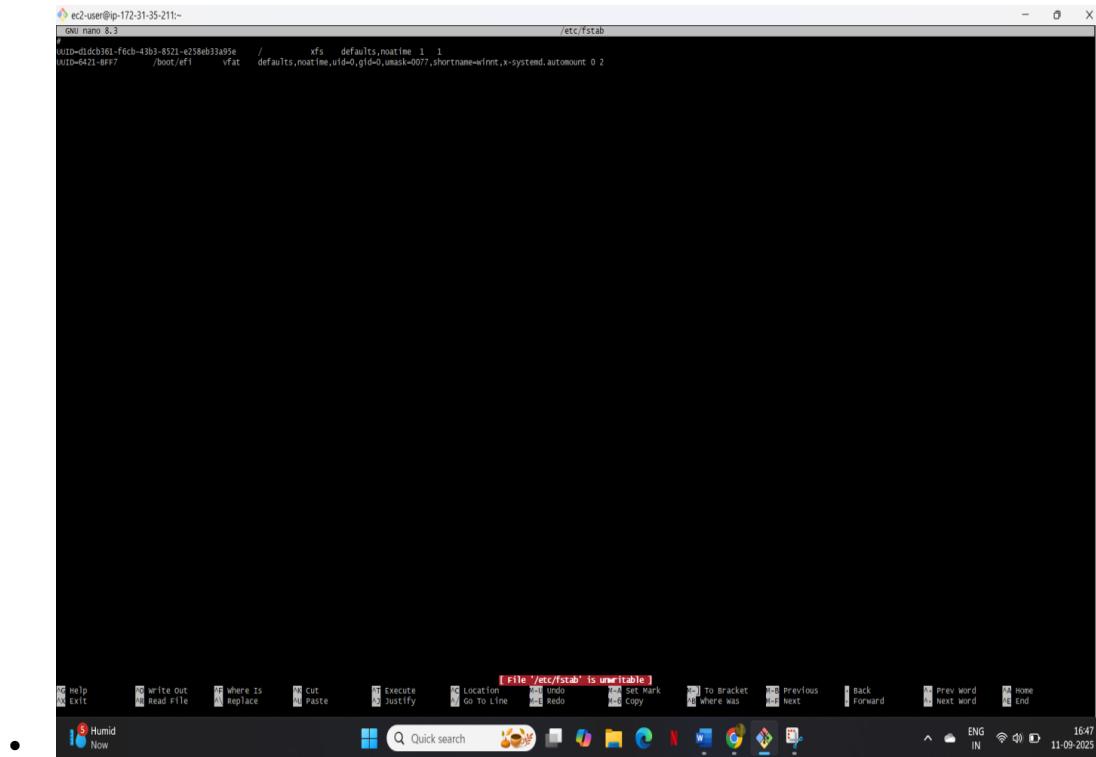
Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

[root@ip-172-31-35-211 ~]# lsblk
NAME   MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
xvda    202:0    0 8G  0 disk
└─xvda1  202:1    0 8G  0 part /
└─xvda127 259:0    0 1M  0 part /boot/efi
xvdb    202:15   0 10G 0 disk
└─xvdb1  202:16   0 10G 0 part
└─xvdb2  202:18   0 2G  0 part
[root@ip-172-31-35-211 ~]# mkfs.ext2 /dev/xvdb
mkfs 1.46.5 (30-Dec-2021)
Creating filesystem with 532788 4k blocks and 131072 inodes
Filesystem UUID: 449a96eb-985a-4f7b-9ab6-06e660f8f707
Superblock backups stored on blocks:
 32768, 98304, 163840, 229376, 294912
Allocating group tables: done
writing inode tables: done
writing superblocks and filesystem accounting information: done

[root@ip-172-31-35-211 ~]# mkfs
mkfs: no device specified
Try 'mkfs -h' for more information.
[root@ip-172-31-35-211 ~]# mkfs.ext2 /dev/xvdb
mkfs 1.46.5 (30-Dec-2021)
/dev/xvdb2 contains a ext2 file system
created on Thu Sep 11 10:59:14 2025
Proceed (y/N)? (y,N) y
Creating filesystem with 524288 4k blocks and 131072 inodes
Filesystem UUID: 449a96eb-985a-4f7b-9ab6-06e660f8f707
Superblock backups stored on blocks:
 32768, 98304, 163840, 229376, 294912
Allocating group tables: done
writing inode tables: done
writing superblocks and filesystem accounting information: done

[root@ip-172-31-35-211 ~]# blkid
/dev/xvdb2: UUID="449a96eb-985a-4f7b-9ab6-06e660f8f707" BLOCK_SIZE="4096" TYPE="ext2" PARTUUID="93fae2ff-02"
/dev/xvda1: UUID="d1dcb361-f6cb-43b3-8521-e258eb33a95e" BLOCK_SIZE="4096" TYPE="xfs" PARTLABEL="System Partition" PARTUUID="2e208378-d396-4bad-b67f-ee95c51e1e4d"
/dev/xvda1: UUID="d1dcb361-f6cb-43b3-8521-e258eb33a95e" TYPE="vfat" PARTLABEL="Boot" PARTUUID="ca24870b-6f55-42f2-9e5c-58471a64e4ed"
/dev/xvdb1: LABEL="/" UUID="d1dcb361-f6cb-43b3-8521-e258eb33a95e" BLOCK_SIZE="4096" TYPE="xfs" PARTLABEL="Linux" PARTUUID="7ec847c5-0f4b-41fa-acd6-5cb0689060fd"
/dev/xvdb1: PARTUUID="93fae2ff-01"
[root@ip-172-31-35-211 ~]#

```



- Mount /dev/xvdb2 /mnt
- Cd /mnt
- ls
- mkdir prateek (Just creating a folder)
- cd
- nano /etc/fstab

```
UUID="449a96eb-985a-4f7b-9ab6-06e660f8f707" /mnt /ext2 defaults,noatime 0 2
```

- Reboot Server
  - Again connect a server with SSH

```
ssh -i "/Downloads/amazon.pem" ec2-user@ec2-3-111-168-44.ap-south-1.compute.amazonaws.com
Last login: Thu Sep 11 10:43:34 2025 from 106.220.184.238
[ec2-user@ip-172-31-35-211 ~]$ mount /dev/xvdb2 /mnt
[bash: mount: /dev/xvdb2:mnt: no such file or directory
[ec2-user@ip-172-31-35-211 ~]$ cd /mnt
[ec2-user@ip-172-31-35-211 mnt]$ ls
[ec2-user@ip-172-31-35-211 mnt]$ mkdir prateek
mkdir: cannot create directory 'prateek': Permission denied
[ec2-user@ip-172-31-35-211 mnt]$ sudo mkdir prateek
[sudo] password for ec2-user: 
[ec2-user@ip-172-31-35-211 mnt]$ cd prateek
[bash: cd: /prateek: No such file or directory
[ec2-user@ip-172-31-35-211 mnt]$ cd prateek
[ec2-user@ip-172-31-35-211 mnt]$ nano /etc/fstab
[nano] /etc/fstab: no such file or directory
[ec2-user@ip-172-31-35-211 mnt]$ cd ..
[ec2-user@ip-172-31-35-211 ~]$ cd /mnt
[ec2-user@ip-172-31-35-211 mnt]$ 449a96eb-985a-4f7b-9ab6-0e6e60f8f707

> ^C
[ec2-user@ip-172-31-35-211 mnt]$ nano /etc/fstab
[nano] /etc/fstab: no such file or directory
[ec2-user@ip-172-31-35-211 mnt]$ cd ..
[ec2-user@ip-172-31-35-211 ~]$ mount /dev/xvdb2 /mnt
mount: /dev/xvdb2:mnt: can't find in /etc/fstab.
[ec2-user@ip-172-31-35-211 ~]$ fdisk -l
Disk /dev/xvda: 20 GiB, 21474836480 bytes, 41943040 sectors
Disk label type: gpt
Disk identifier: 00000000-0000-0000-0000-000000000000
[ec2-user@ip-172-31-35-211 ~]$ parted /dev/xvda
[ec2-user@ip-172-31-35-211 ~]$ mkfs -t ext4 /dev/xvda1
[ec2-user@ip-172-31-35-211 ~]$ mount /dev/xvda1 /mnt
[ec2-user@ip-172-31-35-211 mnt]$ ls
[ec2-user@ip-172-31-35-211 mnt]$ sudo mkdir prateek
[ec2-user@ip-172-31-35-211 mnt]$ cd ..
[ec2-user@ip-172-31-35-211 ~]$ nano /etc/fstab
[nano] /etc/fstab: no such file or directory
[ec2-user@ip-172-31-35-211 ~]$ fdisk /dev/xvdb2
[fdisk] /dev/xvdb2: UUID="449a96eb-985a-4f7b-9ab6-0e6e60f8f707" BLOCK_SIZE="4096" TYPE="ext2" PARTUUID="93fae2ff-02
[ec2-user@ip-172-31-35-211 ~]$ nano /etc/fstab
[ec2-user@ip-172-31-35-211 ~]$
```

```
ec2-user@ip-172-31-35-211:~  
GNU nano 8.3  
/etc/fstab  
UUID=d1dcb361-f6cb-43b3-8521-e258eb33a95e / xfs defaults,noatime 1 1  
UUID=6421-BFF7 /boot/efi vfat defaults,noatime,uid=0,gid=0,umask=0077,shortname=winnt,x-systemd.automount 0 2  
  
File '/etc/fstab' is unwriteable
```

```
[root@ip-172-31-80-49 ~]# nano /etc/fstab
[root@ip-172-31-80-49 ~]# reboot

Broadcast message from root@localhost on pts/1 (Tue 2025-09-09 18:12:35 UTC):
The system will reboot now!

[root@ip-172-31-80-49 ~]# Connection to ec2-54-174-77-235.compute-1.amazonaws.com closed by remote host.
Connection to ec2-54-174-77-235.compute-1.amazonaws.com closed.

Asus@LAPTOP-BP3QNOQT MINGW64 ~/Downloads
$ ssh -i "lucifer.pem" ec2-user@ec2-54-174-77-235.compute-1.amazonaws.com
ssh: connect to host ec2-54-174-77-235.compute-1.amazonaws.com port 22: Connection timed out

Asus@LAPTOP-BP3QNOQT MINGW64 ~/Downloads
$ ssh -i "lucifer.pem" ec2-user@ec2-54-174-77-235.compute-1.amazonaws.com
.
.
.
Amazon Linux 2023
.
.
.
https://aws.amazon.com/linux/amazon-linux-2023

Last login: Tue Sep  9 18:01:30 2025 from 106.215.182.82
[ec2-user@ip-172-31-80-49 ~]$ lsblk
NAME   MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
xvda    202:0    0   8G  0 disk 
└─xvda1  202:1    0   8G  0 part /
xvda127 259:0    0   1M  0 part 
xvda128 259:1    0  10M 0 part 
xvdb    202:16   0   8G  0 disk 
└─xvdb1  202:17   0   8G  0 part 
xvdb127 259:2    0   1M  0 part 
xvdb128 259:3    0  10M 0 part /boot/efi
xvdc    202:32   0  10G 0 disk 
└─xvdc1  202:33   0   5G  0 part /
xvdc2    202:34   0   2G  0 part /mnt
[ec2-user@ip-172-31-80-49 ~]$
```



**Now your EBS volume is mounted permanently**