

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

Step-1 :- Create One instance

The screenshot shows the 'Launch an instance' page in the AWS Management Console. The page is divided into two main sections: 'Key pair (login)' and 'Network settings' on the left, and a 'Summary' panel on the right.

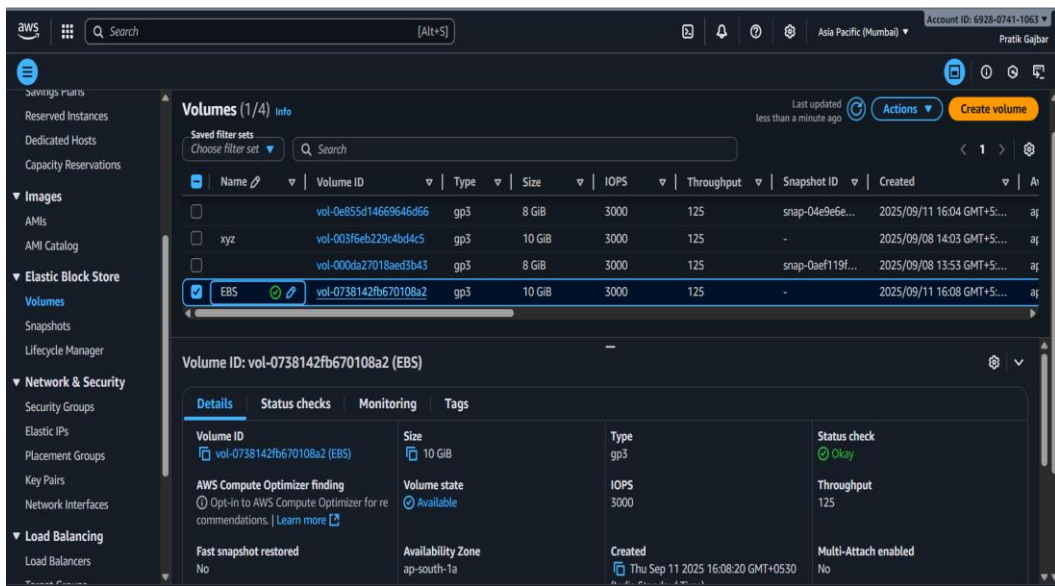
- Key pair (login):** A dropdown menu for 'Key pair name - required' is set to 'Amazon'. A 'Create new key pair' button is next to it.
- Network settings:** Includes fields for 'Network' (vpc-025ce65461a659b67), 'Subnet' (No preference), 'Auto-assign public IP' (Enabled), and 'Firewall (security groups)' (Create security group). An 'Edit' button is present.
- Summary:** Displays the configuration: 'Number of instances' (1), 'Software Image (AMI)' (Amazon Linux 2023 AMI), 'Virtual server type (instance type)' (t2.micro), 'Firewall (security group)' (New security group), and 'Storage (volumes)' (1 volume(s) - 8 GiB). 'Launch instance' and 'Preview code' buttons are at the bottom.

Step-2 :- Create one EBS Volume.

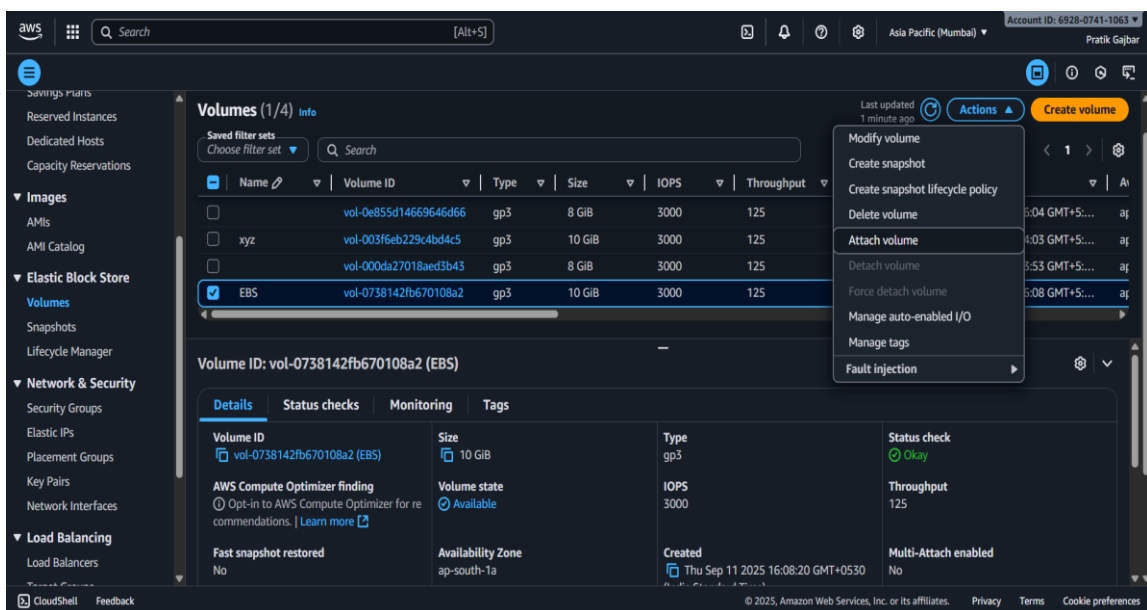
The screenshot shows the 'Create volume' page in the AWS Management Console. The page is titled 'Create volume' and includes a description: 'Create an Amazon EBS volume to attach to any EC2 instance in the same Availability Zone.'

The 'Volume settings' section contains the following configuration:

- Volume type:** General Purpose SSD (gp3)
- Size (GiB):** 100 (Range: Min: 1 GiB, Max: 16384 GiB)
- IOPS:** 3000 (Range: Min: 3000 IOPS, Max: 16000 IOPS)
- Throughput (MiB/s):** 125 (Range: Min: 125 MiB, Max: 1000 MiB, Baseline: 125 MiB/s)
- Availability Zone:** ap-south-1a



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



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



```
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 /
├─xvda127   259:0    0   1M  0 part 
├─xvda128   259:1    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 2.37.4).
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 (n for help): n
Partition type:
  p primary (0 primary, 0 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[M,G,T,P] (2048-20971519, default 20971519): +5G
Created a new partition 1 of type 'Linux' and of size 5 GiB.

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

[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 /
├─xvda127   259:0    0   1M  0 part 
├─xvda128   259:1    0  10M  0 part /boot/efi
└─xvdb      202:16   0  10G  0 disk
├─xvdb1     202:17   0   5G  0 part 
└─xvdb1     202:17   0   5G  0 part 
[ec2-user@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        202:10  0   8G  0 disk  
├─xvda1     202:11  0   8G  0 part /  
├─xvda12    202:10  0   1W  0 part  
├─xvda18    202:11  0   10G  0 part /boot/efi  
├─xvdb      202:16  0   10G  0 disk  
├─xvdb1     202:17  0   5G  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)  
Found a dos partition table in /dev/xvdb  
proceed anyway? (y,n) n  
[root@ip-172-31-35-211 ~]# mkfs.ext /dev/xvdb2  
-bash: mkfs.ext: command not found  
[root@ip-172-31-35-211 ~]# mkfs.ext2 /dev/xvdb2  
mkfs: 1.46.5 (30-Dec-2021)  
Creating filesystem with 524288 4k blocks and 131072 inodes  
Filesystem UUID: 09172d3d-5d31-488e-8022-aa7ba31eeaa  
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 --help' for more information.  
[root@ip-172-31-35-211 ~]# mkfs.ext2 /dev/xvdb2  
mkfs: 1.46.5 (30-Dec-2021)  
/dev/xvdb2 contains a ext2 file system  
Created on Thu Sep 11 10:59:14 2025  
proceed anyway? (y,n) y  
Creating filesystem with 524288 4k blocks and 131072 inodes  
Filesystem UUID: 449a9deb-985a-4f7b-9ab6-06e60f8f707  
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="449a9deb-985a-4f7b-9ab6-06e60f8f707" BLOCK_SIZE="4096" TYPE="ext2" PARTUUID="93fae2ff-02"  
/dev/xvda12: SEC_TYPE="msdos" UUID="6421-8ff7" BLOCK_SIZE="512" TYPE="vfat" PARTLABEL="EFI System Partition" PARTUUID="2e208378-d396-4bad-b67f-ee95c51e1e4d"  
/dev/xvda127: PARTLABEL="BIOS Boot Partition" PARTUUID="ca24870b-66f5-42f2-9e5c-58471a64edef"  
/dev/xvda1: LABEL="root" UUID="d1dcb361-f6cb-43b3-8521-e258eb33a95e" BLOCK_SIZE="4096" TYPE="xfs" PARTLABEL="Linux" PARTUUID="7ec847c5-0f4b-41fa-acd6-3cb0689060fd"  
/dev/xvdb1: PARTUUID="93fae2ff-01"  
[root@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=6421-8ff7 /boot/efi vfat defaults,noatime,uid=0,gid=0,umask=0077,shortname=winnt,x-systemd,automount 0 2  
File /etc/fstab is writable  
Help Exit Write out Read file Where is replace Cut Paste Execute Justify Location Set Mark Set Mark Copy To Bracket redo redo Copy Where was next previous Back Forward Prev word next word Home end  
Humid Now Quick search 1647 11-09-2025
```

- 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 deffaults,noatime 0 2

- Reboot Server
- Again connect a server with SSH
-

```
prateek@prateek:~/Downloads
$ ssh -i "Amazon.pem" ec2-user@ec2-3-111-168-44.ap-south-1.compute.amazonaws.com

Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023

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]$ sudo mkdir prateek
mkdir: cannot create directory 'prateek': permission denied
[ec2-user@ip-172-31-35-211 mnt]$ cd prateek
[ec2-user@ip-172-31-35-211 prateek]$ cd /prateek
-bash: cd: /prateek: No such file or directory
[ec2-user@ip-172-31-35-211 prateek]$ cd prateek
[ec2-user@ip-172-31-35-211 prateek]$ nano/etc/fstab
-bash: nano/etc/fstab: No such file or directory
[ec2-user@ip-172-31-35-211 prateek]$ cd
[ec2-user@ip-172-31-35-211 ~]$
[ec2-user@ip-172-31-35-211 ~]$ cd /mnt
[ec2-user@ip-172-31-35-211 mnt]$ "449a96eb-985a-4f7b-9ab6-06e660f8f707"
> AC
[ec2-user@ip-172-31-35-211 mnt]$ nano/etc/fstab
-bash: 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 ~]$ lsblk
NAME        MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
xvda        202:10   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 /boot/efi
xvdb        202:16   0  10G  0 disk
--xvdb1     202:17   0   5G  0 part
--xvdb2     202:18   0   7G  0 part
[ec2-user@ip-172-31-35-211 ~]$ sudo mount /dev/xvdb2 /mnt
[ec2-user@ip-172-31-35-211 ~]$ cd /mnt
[ec2-user@ip-172-31-35-211 mnt]$ ls
lost+found
[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
-bash: nano/etc/fstab: no such file or directory
[ec2-user@ip-172-31-35-211 ~]$ sudo blkid /dev/xvdb2
/dev/xvdb2: UUID="449a96eb-985a-4f7b-9ab6-06e660f8f707" 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=d1dc3b61-f6cb-43b3-8521-e258eb33a95e / xfs defaults,noatime 1 1
UUID=8421-BFF7 /boot/efi vfat / defaults,noatime,uid=0,gid=0,umask=0077,shortname=winnt,x-systemd.automount 0 2
```

