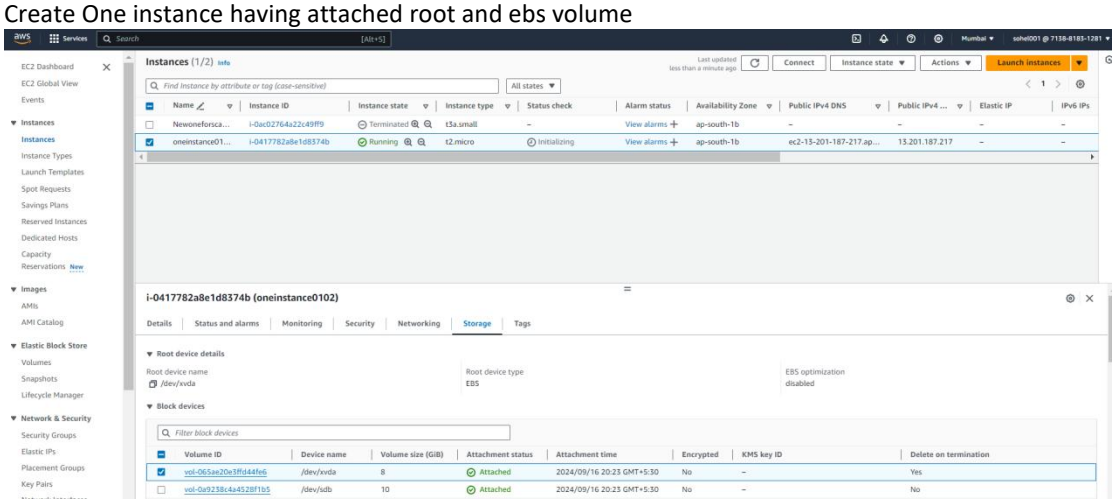
EBS 26 Aug Extend the size of rootEBS

Sohel Pathan

Task 1

****Create One instance having attached root and ebs volume****

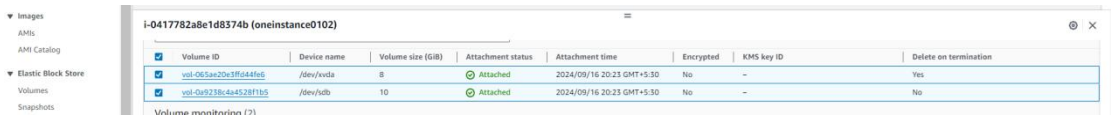
Create One instance having attached root and ebs volume



Attaching EBS to instance

```
root@ip-172-31-10-32:~
login as: ec2-user
Authenticating with public key "soheldemo-001"
       #_
   ~\_  ####_        Amazon Linux 2
  ~~  \_#####\
  ~~     \###|       AL2 End of Life is 2025-06-30.
  ~~       \#/ ___
   ~~       V~' '->
    ~~~         /    A newer version of Amazon Linux is available!
      ~~._.   _/
         _/ _/       Amazon Linux 2023, GA and supported until 2028-03-15.
       _/m/'           https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-172-31-10-32 ~]$ sudo su -
[root@ip-172-31-10-32 ~]# lsblk
NAME    MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda    202:0    0   8G  0 disk
└─xvda1 202:1    0   8G  0 part /
xvdb    202:16   0  10G  0 disk
[root@ip-172-31-10-32 ~]# file -s /dev/xvdb
/dev/xvdb: data
[root@ip-172-31-10-32 ~]# mkfs -t ext4 /dev/xvdb
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
655360 inodes, 2621440 blocks
131072 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=2151677952
80 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done

[root@ip-172-31-10-32 ~]#
```

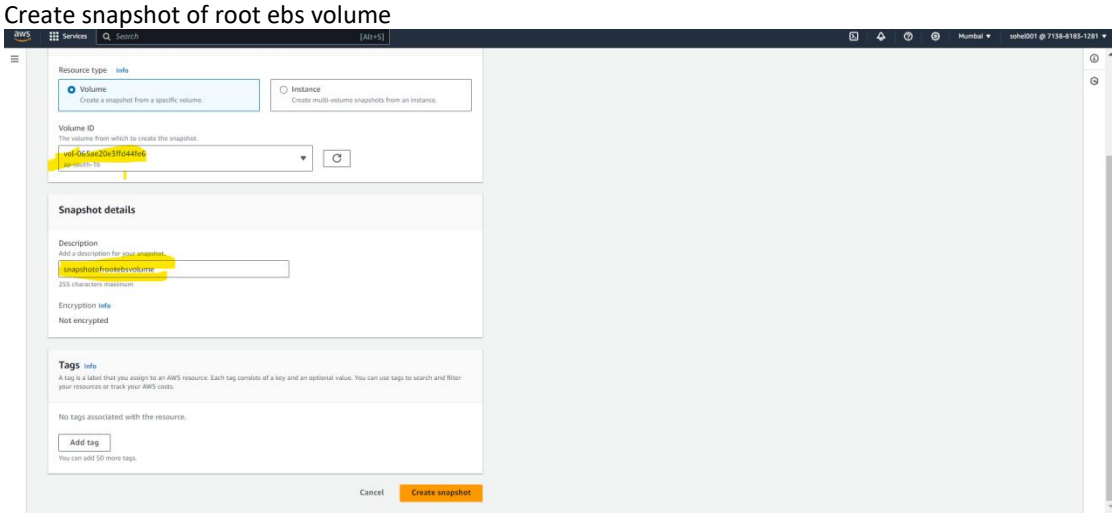
We can see both volumes are attached.

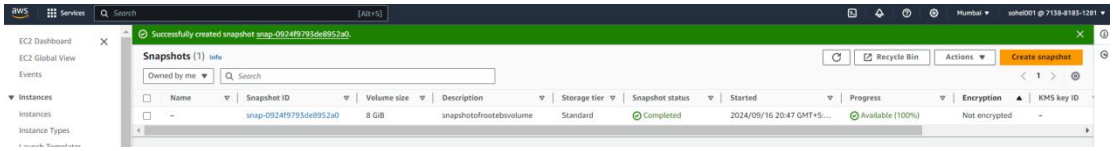


Increase the size of root EBS volume**

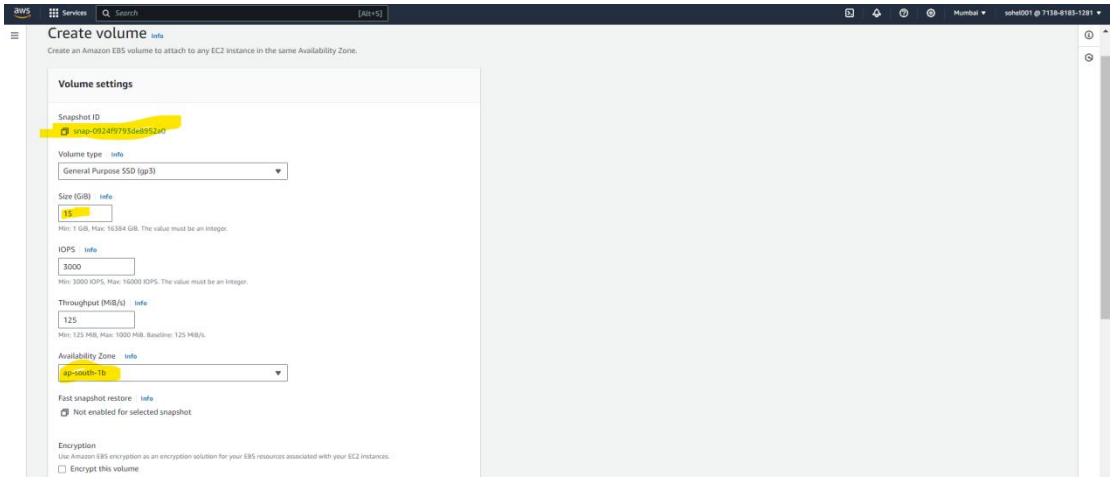
1. If we need to increase the size of root ebs volume snapsot is required.(Snapshot is chargable. Size of snapshot = size of volume)

Create snapshot of root ebs volume

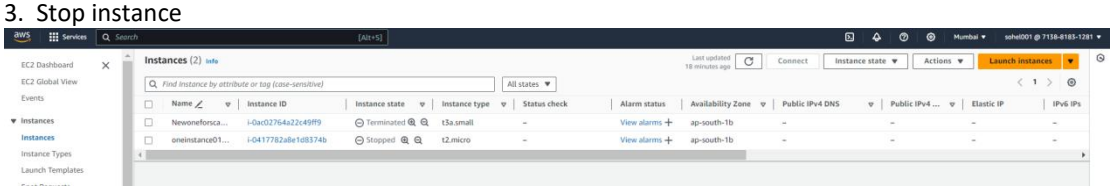




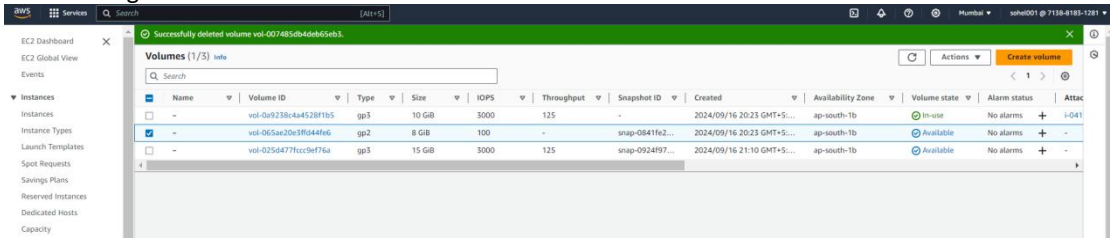
2. Create volume using snapshot **make Availability of zone and instance is same.**



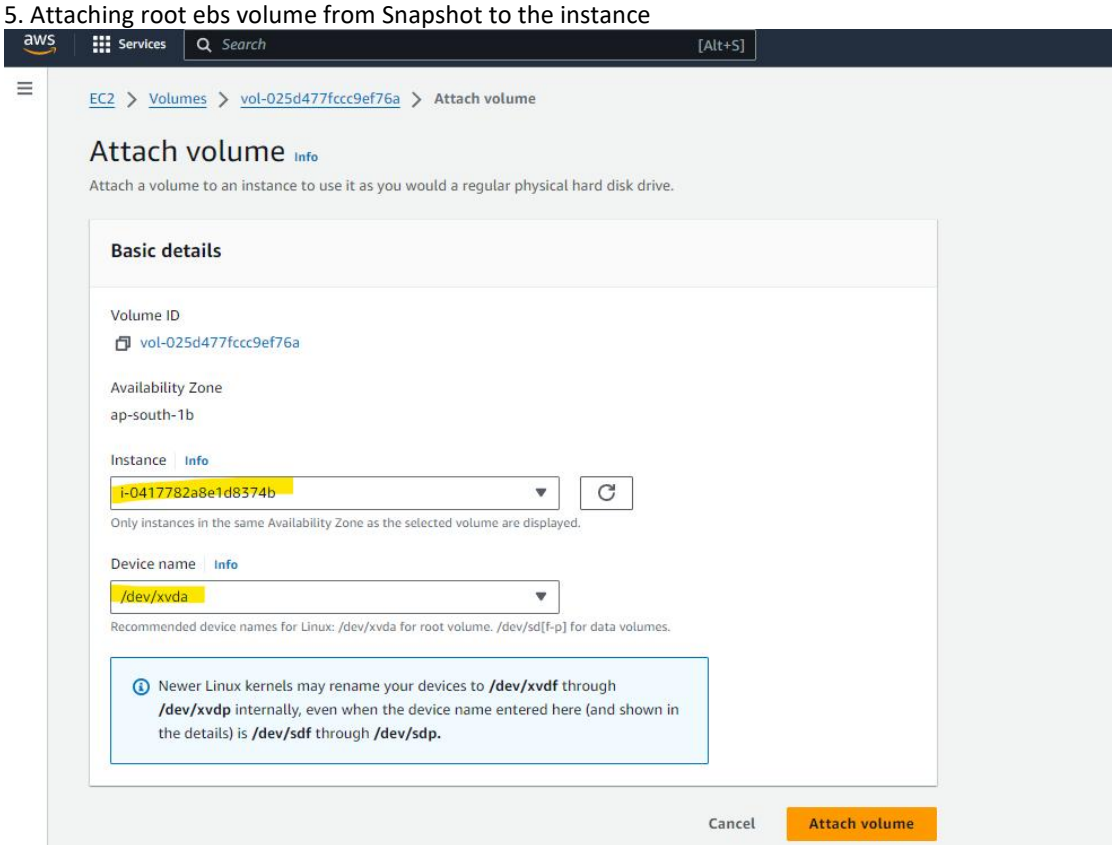
3. Stop instance

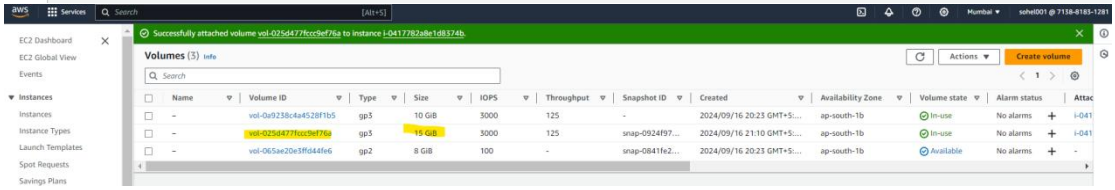


4. Detaching root ebs volume

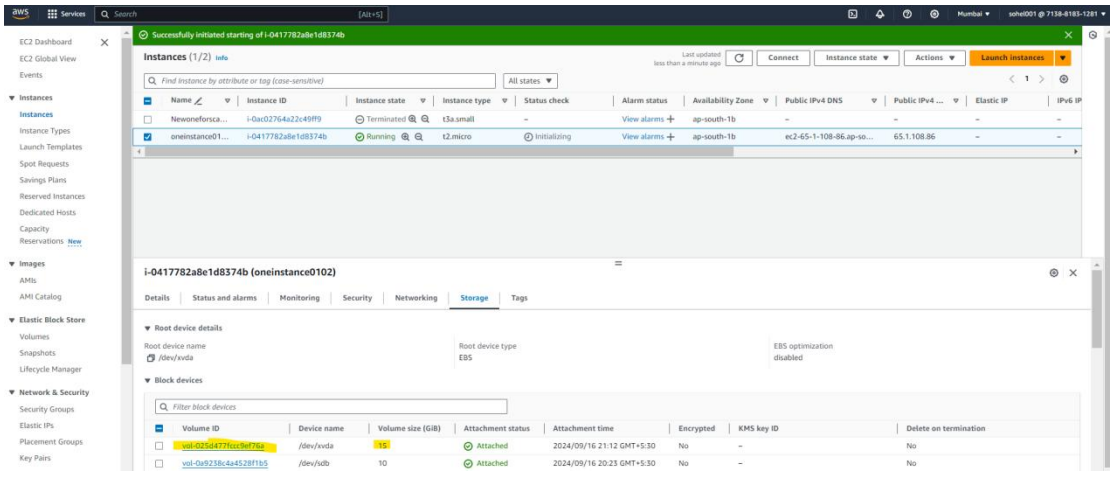


5. Attaching root ebs volume from Snapshot to the instance





6. Start the instsance we se the volume is extended

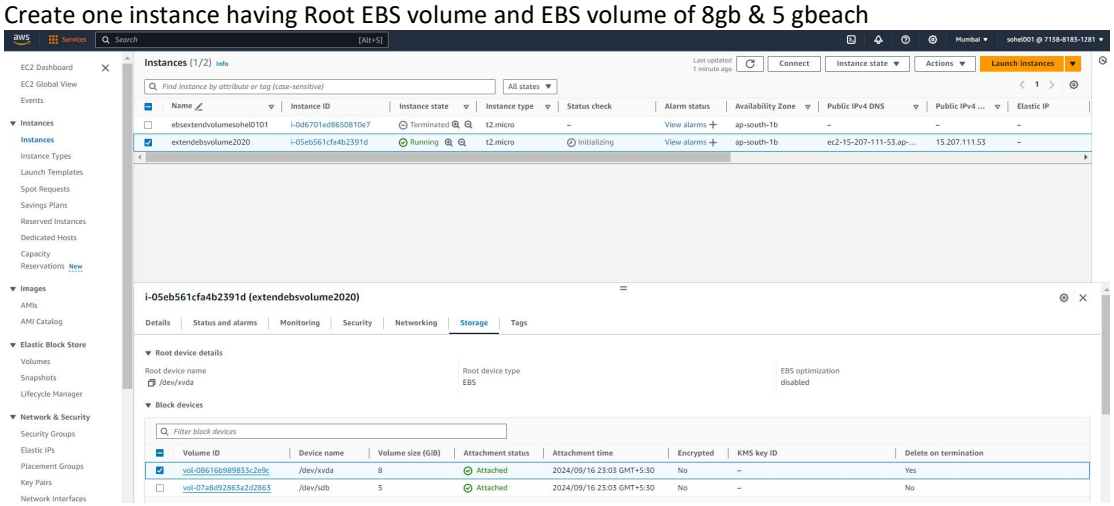


Succesfully extended root ebs volume to 15 gb

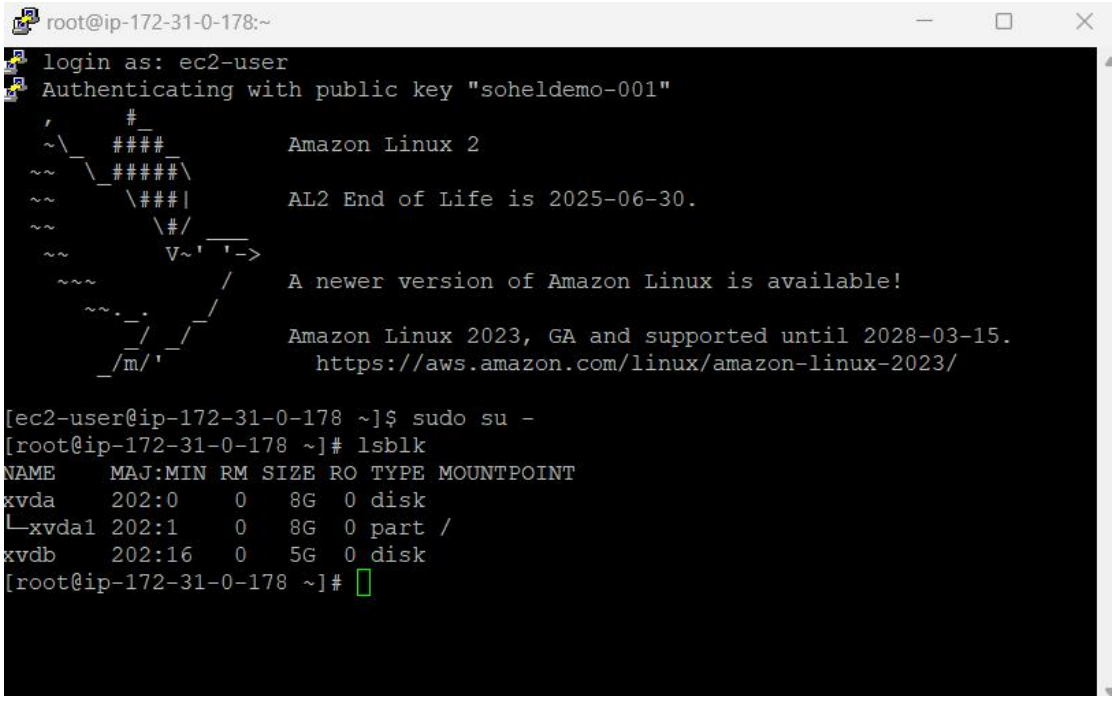
```
root@ip-172-31-10-32:~
login as: ec2-user
Authenticating with public key "soheldemo-001"
Last login: Mon Sep 16 14:57:12 2024 from 152.57.2.140
   ,     #_
   ~\_  ####_        Amazon Linux 2
  ~~  \_#####\
  ~~     \###|       AL2 End of Life is 2025-06-30.
  ~~       \#/ ___
   ~~       V~' '->
    ~~~         /    A newer version of Amazon Linux is available!
      ~~._.   _/
         _/ _/       Amazon Linux 2023, GA and supported until 2028-03-15.
       _/m/'           https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-172-31-10-32 ~]$ sudo su -
Last login: Mon Sep 16 14:57:21 UTC 2024 on pts/0
[root@ip-172-31-10-32 ~]# lsblk
NAME    MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda    202:0    0  15G  0 disk
└─xvda1 202:1    0  15G  0 part /
xvdb    202:16   0  10G  0 disk
[root@ip-172-31-10-32 ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        467M     0  467M   0% /dev
tmpfs           477M     0  477M   0% /dev/shm
tmpfs           477M  408K  476M   1% /run
tmpfs           477M     0  477M   0% /sys/fs/cgroup
/dev/xvda1       15G  1.8G   14G  12% /
tmpfs            96M     0   96M   0% /run/user/1000
[root@ip-172-31-10-32 ~]#
```

3. Increase the size of EBS Volume

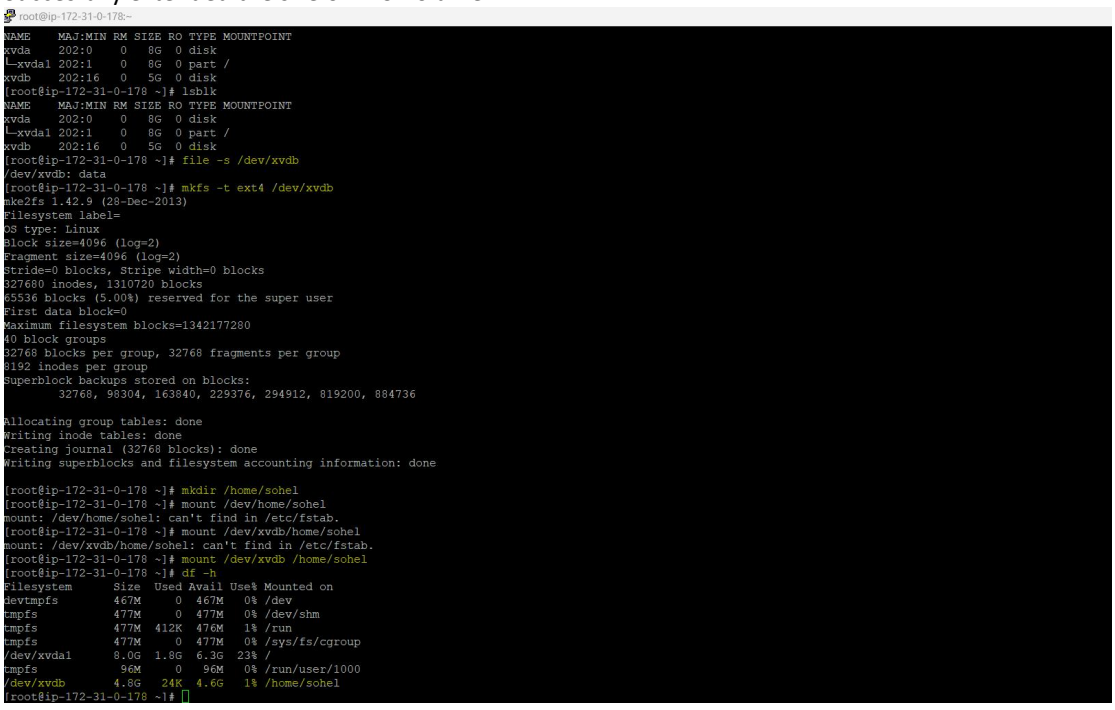
Create one instance having Root EBS volume and EBS volume of 8gb & 5 gbeach



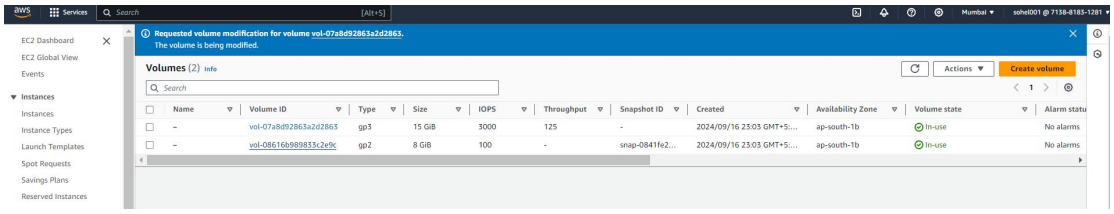
Need to increase size of EBS volume
Before increasing the size:



Modify the size of as per we want:
Succesfully extended the size of EBS Volume



Now use Resize2fs command to extend the volume



```
[root@ip-172-31-0-178 ~]# resize2fs dev/xvdb
resize2fs 1.42.9 (28-Dec-2013)
open: No such file or directory while opening dev/xvdb
[root@ip-172-31-0-178 ~]# resize2fs /dev/xvdb
resize2fs 1.42.9 (28-Dec-2013)
Filesystem at /dev/xvdb is mounted on /home/sohel; on-line resizing required
old_desc_blocks = 1, new_desc_blocks = 2
The filesystem on /dev/xvdb is now 3932160 blocks long.

[root@ip-172-31-0-178 ~]# lsblk
NAME    MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda    202:0    0   8G  0 disk
└─xvda1 202:1    0   8G  0 part /
xvdb    202:16   0  15G  0 disk /home/sohel
[root@ip-172-31-0-178 ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        467M     0  467M   0% /dev
tmpfs           477M     0  477M   0% /dev/shm
tmpfs           477M  412K  476M   1% /run
tmpfs           477M     0  477M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.8G  6.3G  23% /
tmpfs            96M     0   96M   0% /run/user/1000
/dev/xvdb        15G   24K   14G   1% /home/sohel
[root@ip-172-31-0-178 ~]#
```