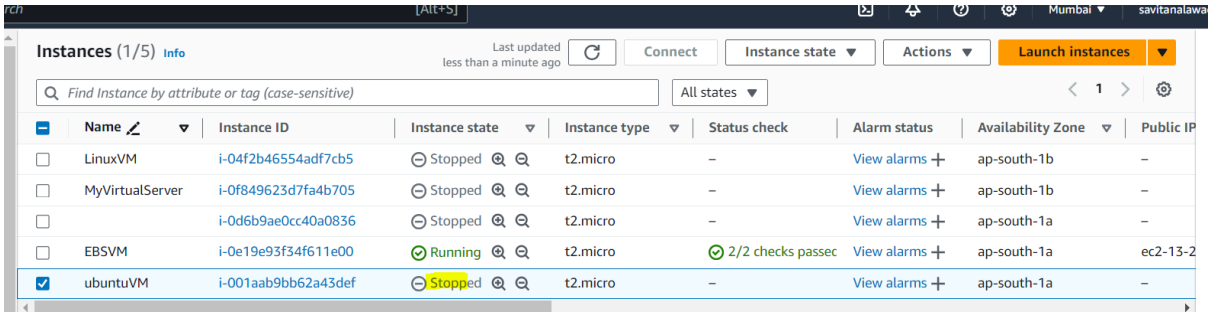
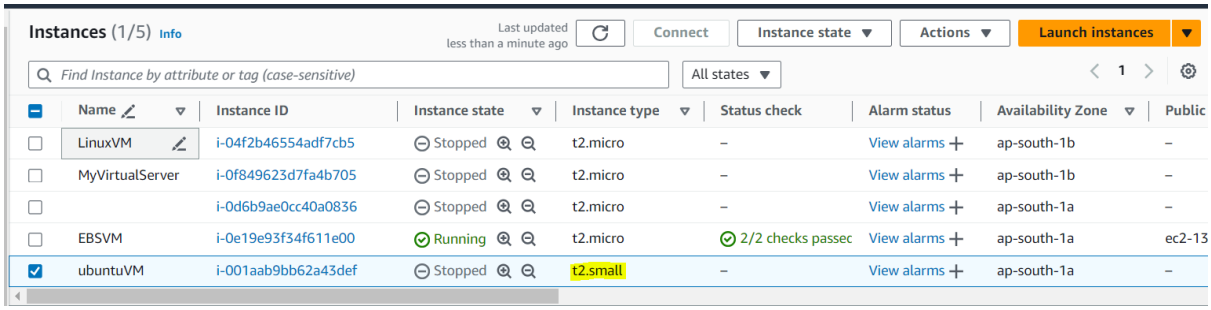
24th August Practical – Savita Nalawade

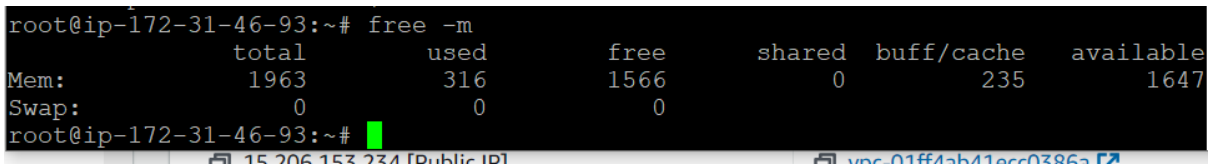
1. Vertical scaling

a) To apply vertical scaling we need to first stop instance

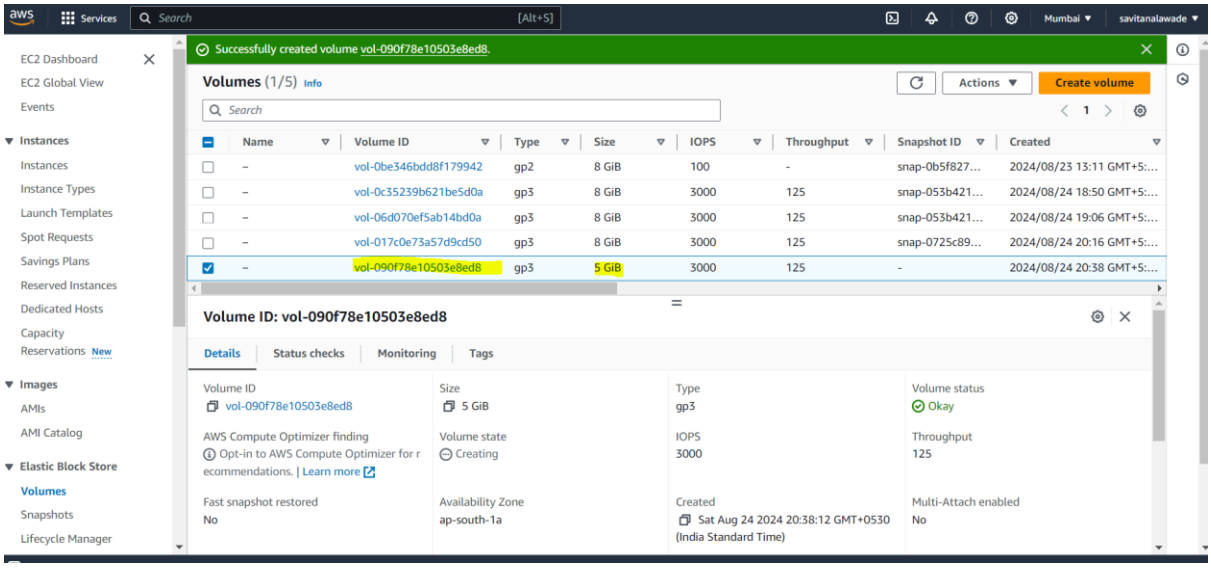


b) Change it to t2.small

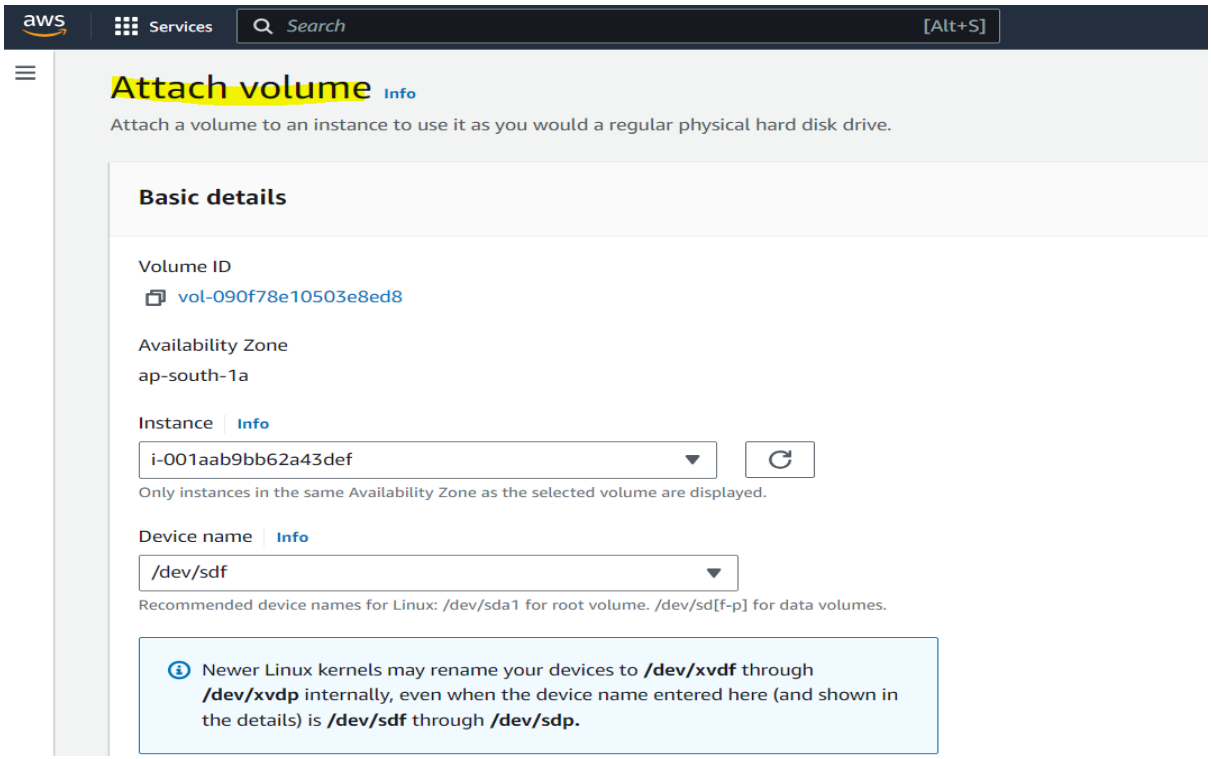




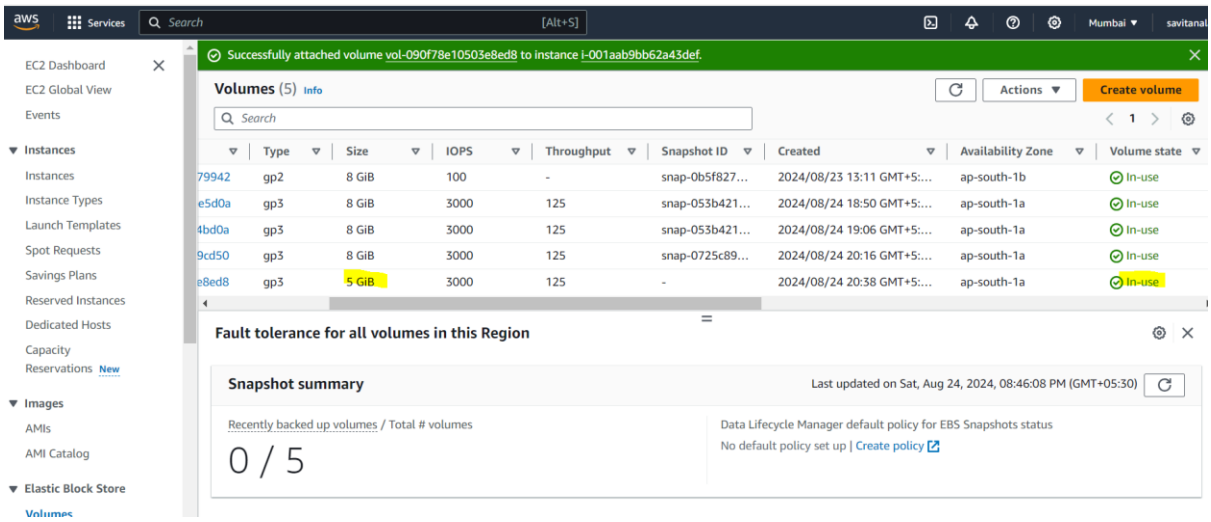
c) Created one volume



d) Attaching EBS volume to instance



e) Successfully attached volume to instance

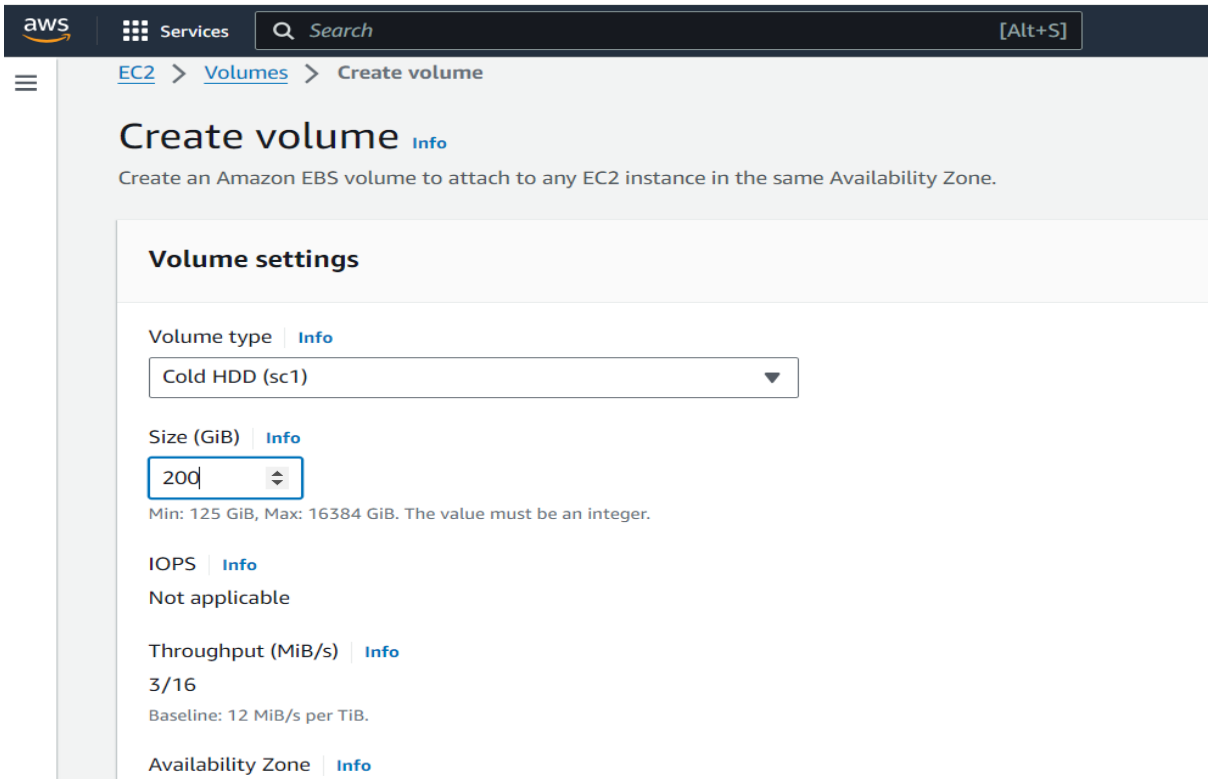


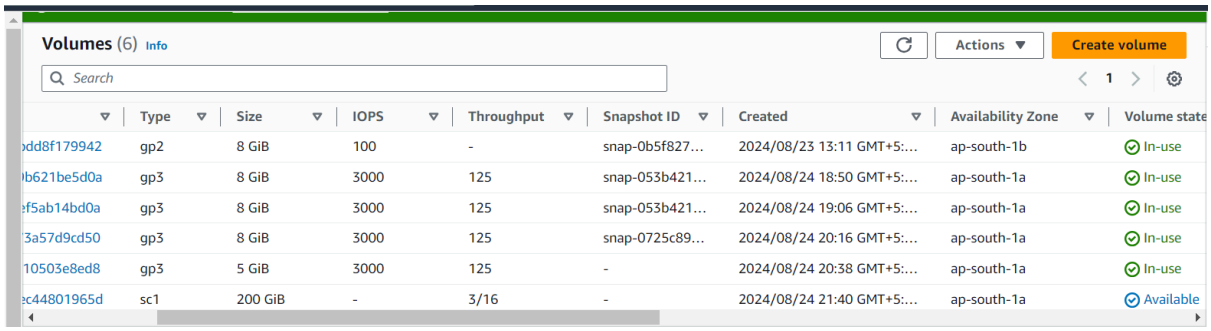
```
root@ip-172-31-46-93:~# lsblk
NAME     MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0      7:0    0 25.2M  1 loop /snap/amazon-ssm-agent/7993
loop1      7:1    0 55.7M  1 loop /snap/core18/2829
loop2      7:2    0 38.8M  1 loop /snap/snapd/21759
xvda     202:0    0    8G  0 disk
├─xvda1  202:1    0    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-172-31-46-93:~# file -s /dev/xvdf
/dev/xvdf: data
root@ip-172-31-46-93:~# mkfs -t ext4 /dev/xvdf
mke2fs 1.47.0 (5-Feb-2023)
Creating filesystem with 1310720 4k blocks and 327680 inodes
Filesystem UUID: 3f819d02-228e-4bbe-81b5-0f18c1ac7a85
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-172-31-46-93:~# mount /dev/xvdf /home/cpp
root@ip-172-31-46-93:~# 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 55.7M  1 loop /snap/core18/2829
loop2      7:2    0 38.8M  1 loop /snap/snapd/21759
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 /home/cpp
root@ip-172-31-46-93:~#
```

f) Creating one more HDD EBS Volume and attaching to instance





g) Successfully added to the instance

```
root@ip-172-31-46-93:~# 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 55.7M  1 loop /snap/core18/2829
loop2      7:2    0 38.8M  1 loop /snap/snapd/21759
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 /home/cpp
xvdg     202:96   0  200G  0 disk
root@ip-172-31-46-93:~#
```

h) Formating the newly added HDD

```
root@ip-172-31-46-93:~# mkfs -t ext4 /dev/xvdg
mke2fs 1.47.0 (5-Feb-2023)
Creating filesystem with 52428800 4k blocks and 13107200 inodes
Filesystem UUID: 482b016c-468a-445a-940e-cd266e82e636
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208,
        4096000, 7962624, 11239424, 20480000, 23887872

Allocating group tables: done
Writing inode tables: done
```

i) Create directory and mount it

```
root@ip-172-31-46-93:~# mkdir /home/python-app
root@ip-172-31-46-93:~# mount /dev/xvdg /home/python-app
root@ip-172-31-46-93:~# 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 55.7M  1 loop /snap/core18/2829
loop2      7:2    0 38.8M  1 loop /snap/snapd/21759
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 /home/cpp
xvdg     202:96   0  200G  0 disk /home/python-app
root@ip-172-31-46-93:~#
```