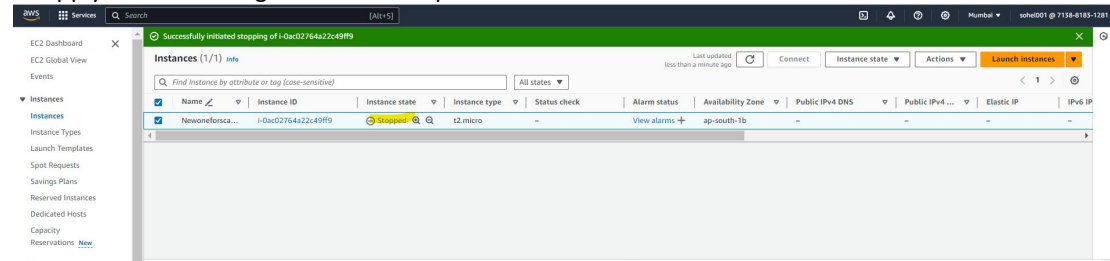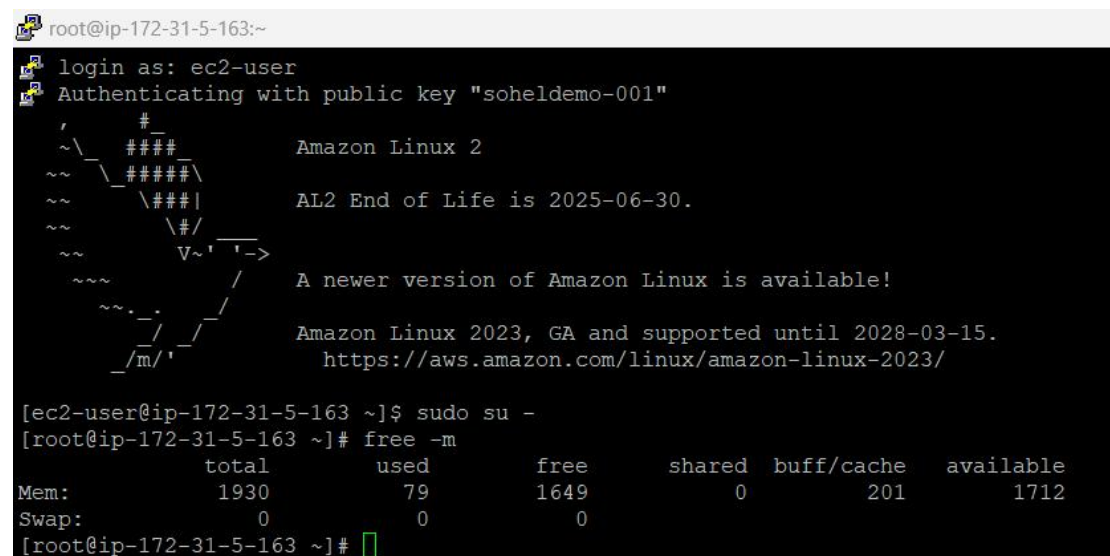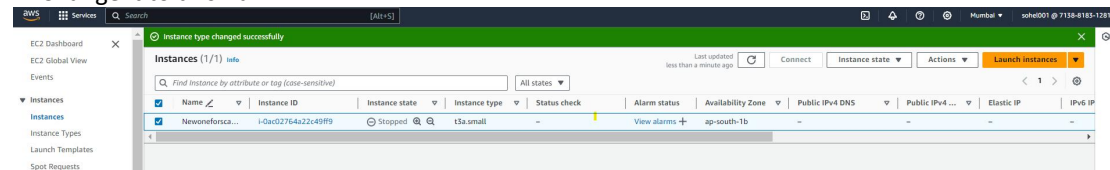AWS EC2 Vertical scaling practical 24 Aug 2024

1. Vertical scaling
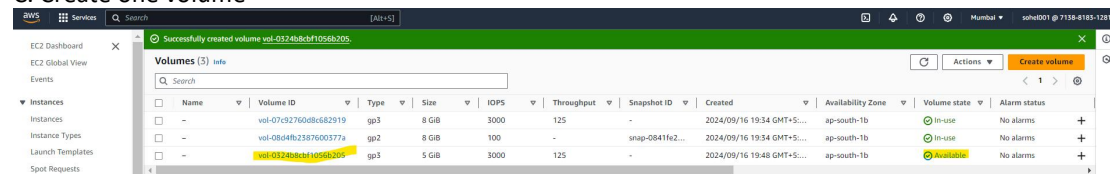A. Apply vertical scaling we need to stop the instance

B. Change it to t2.small

C. Create one volume

D. Attach EBS volume to instance

E. Successfully attached volume 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
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
```
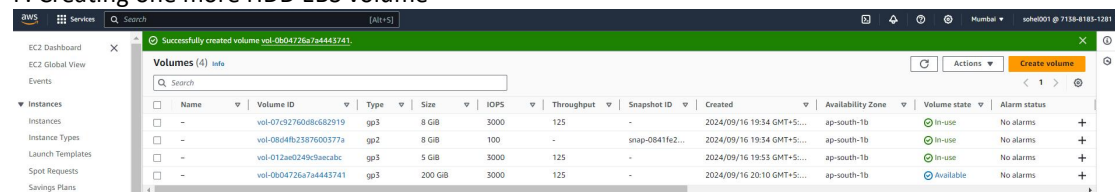
```
root@ip-172-31-46-93:~# mount /dev/xvdf /home/cpp
root@ip-172-31-46-93:~# lsblk
NAME       MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
loop0        7:0    0  25.2M  1 loop /snap/amazon-ssm-agent/7993
loop1        7:1    0  55.7M  1 loop /snap/core18/2829
loop2        7:2    0  38.8M  1 loop /snap/snapd/21759
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

	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created	Availability Zone	Volume state	Alarm status	
☐	-	vol-07c92760d8c682919	gp3	8 GiB	3000	125	-	2024/09/16 19:34 GMT+5:...	ap-south-1b	⊘ In-use	No alarms	+
☐	-	vol-08d4fb2387600377a	gp2	8 GiB	100	-	snap-0841fe2...	2024/09/16 19:34 GMT+5:...	ap-south-1b	⊘ In-use	No alarms	+
☐	-	vol-012ae0249c9aecabc	gp3	5 GiB	3000	125	-	2024/09/16 19:53 GMT+5:...	ap-south-1b	⊘ In-use	No alarms	+
☐	-	vol-0b04726a7a4443741	gp3	200 GiB	3000	125	-	2024/09/16 20:10 GMT+5:...	ap-south-1b	⊘ Available	No alarms	+

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. Format the new 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 on 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:~#
```