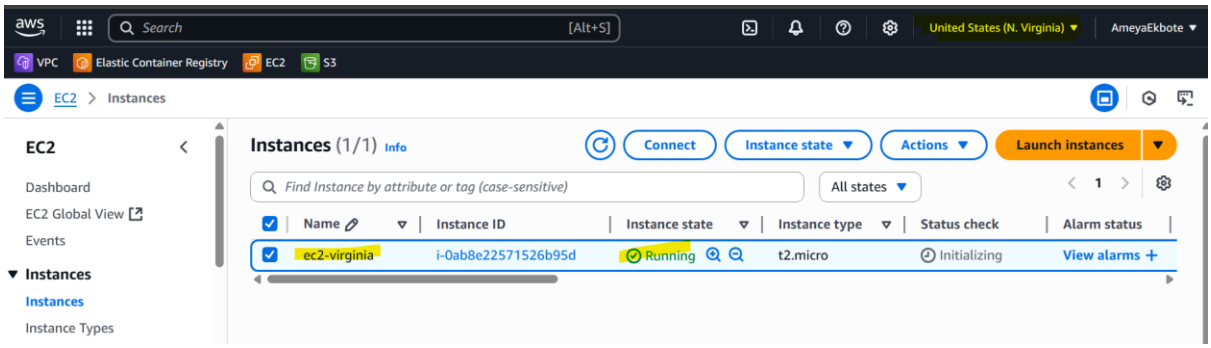
1] Problem Statement: You work for XYZ Corporation. Your corporation is working on an application and they require secured web servers on Linux to launch the application.

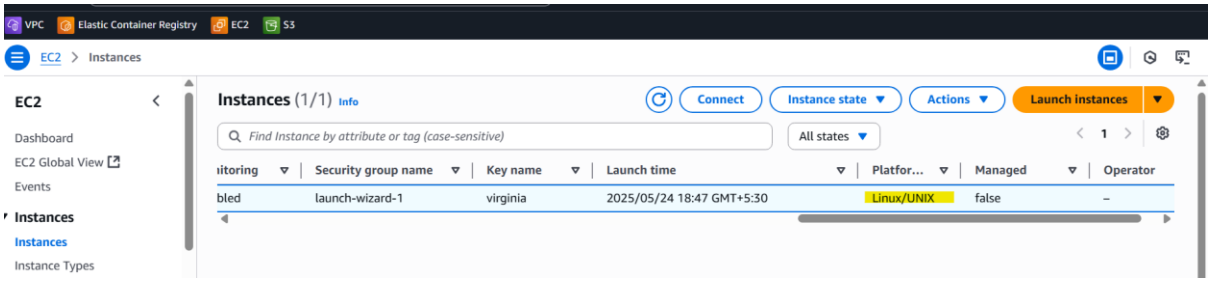
Tasks To Be Performed:

1. Create an instance in the US-East-1 (N. Virginia) region with Linux OS and manage the requirement of web servers of your company using AMI. 2. Replicate the instance in the US-West-2 (Oregon) region. 3. Build two EBS volumes and attach them to the instance in the US-East-1 (N. Virginia) region. 4. Delete one volume after detaching it and extend the size of the other volume. 5. Take backup of this EBS volume

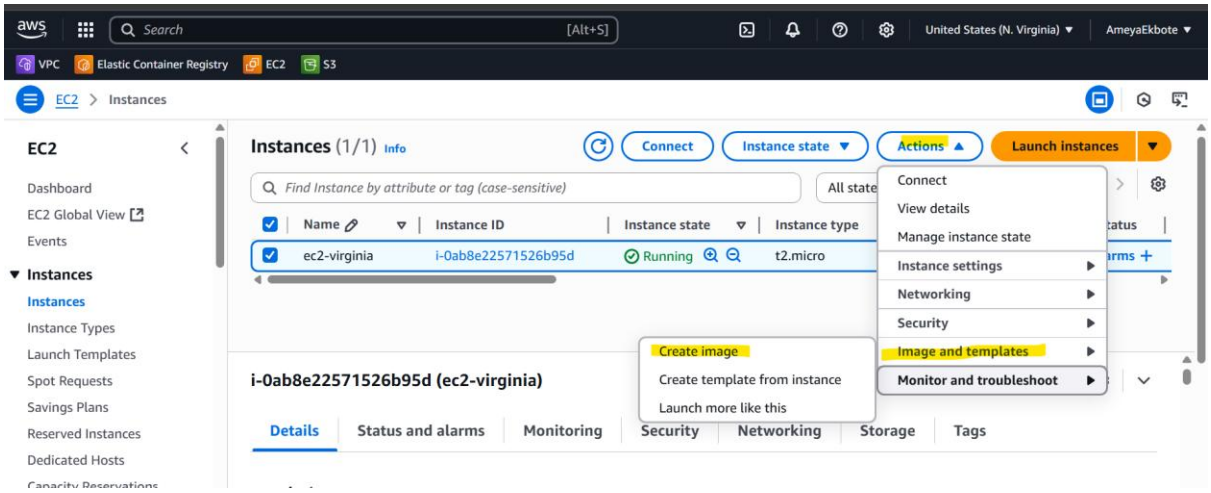
Solution ➔

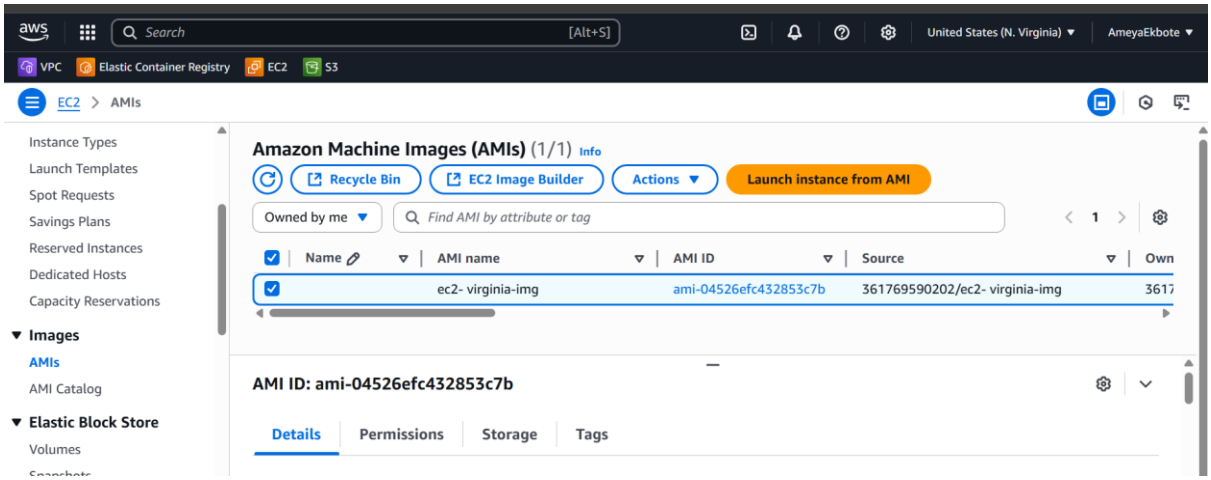
1)Created an instance in Virginia Region used Linux OS



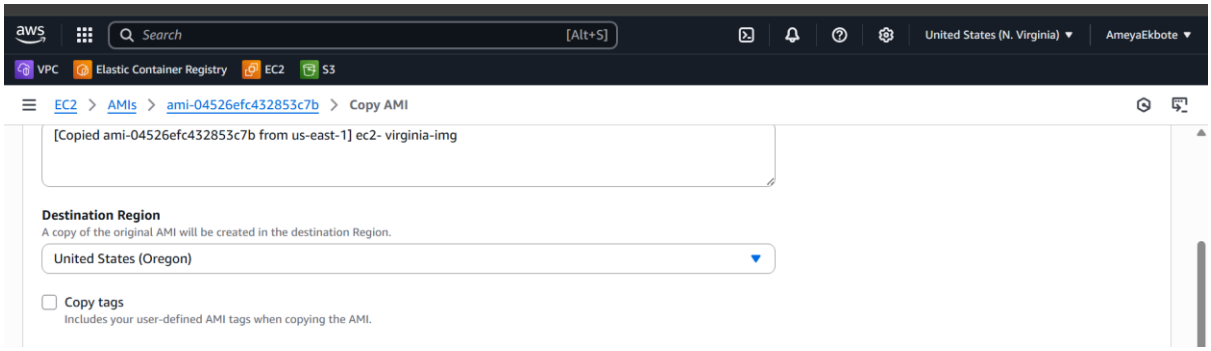


2) Created Image of Instance

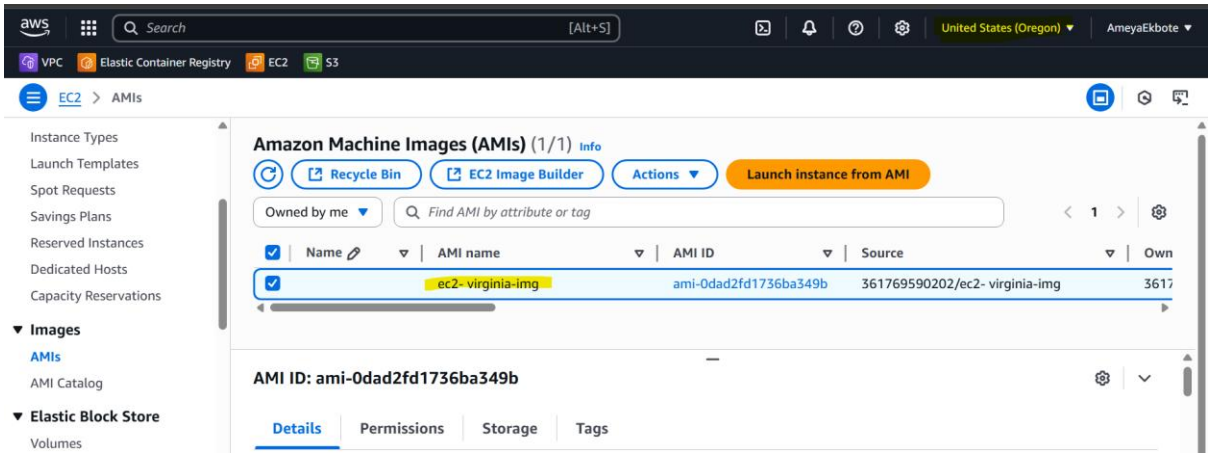


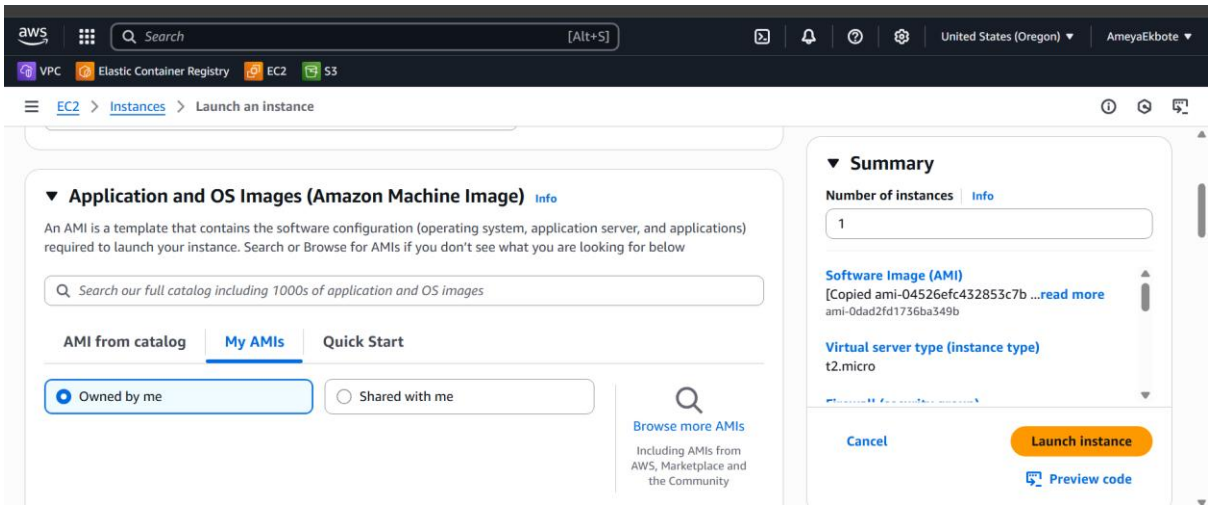


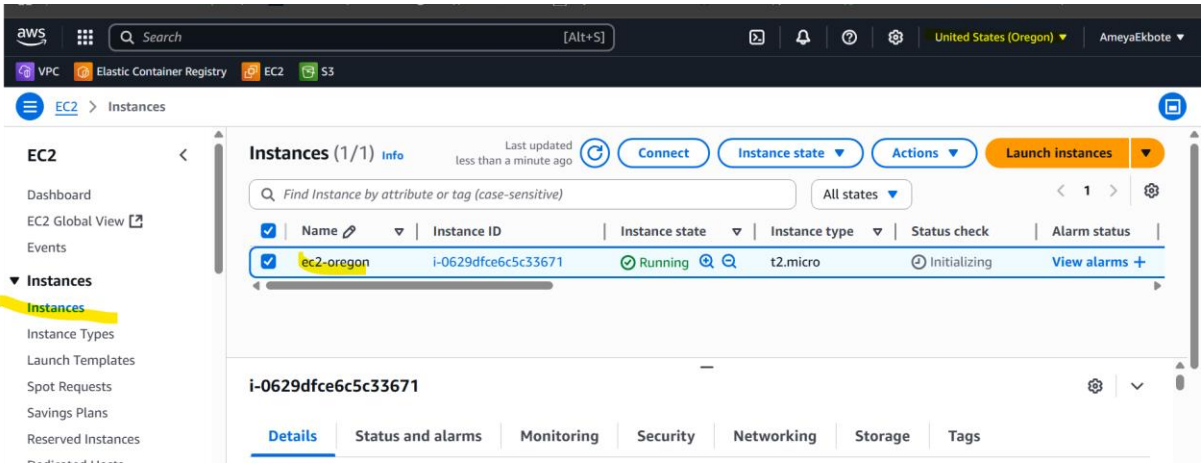
3) Copied the AMI and choose the destination region to be Oregon



4. Switched the region to US West Oregon and launched instance using the AMI.

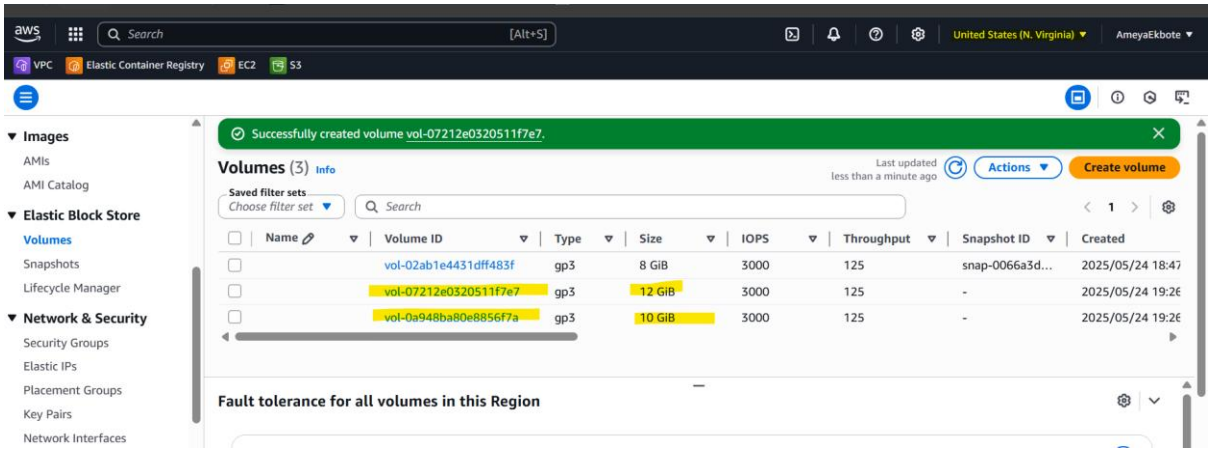




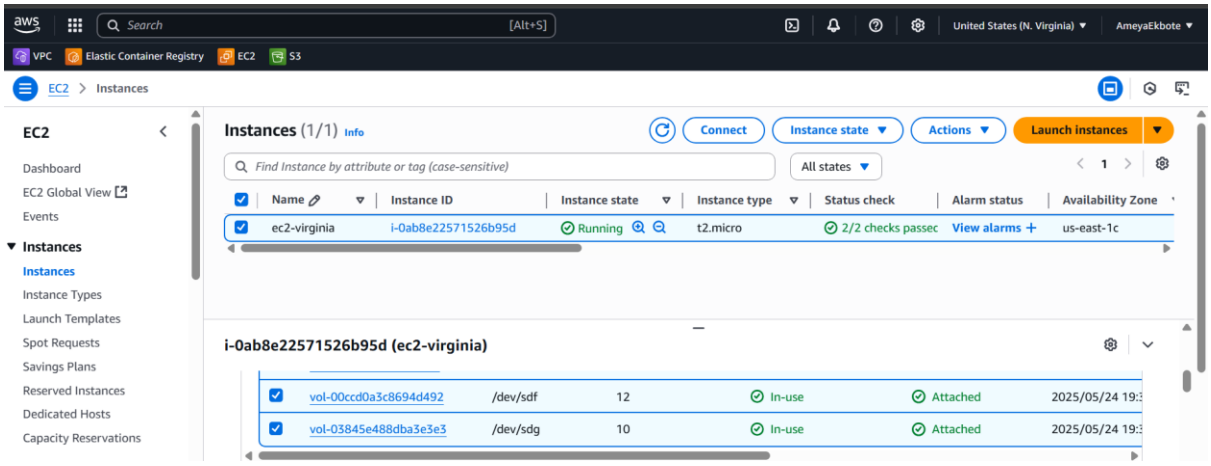


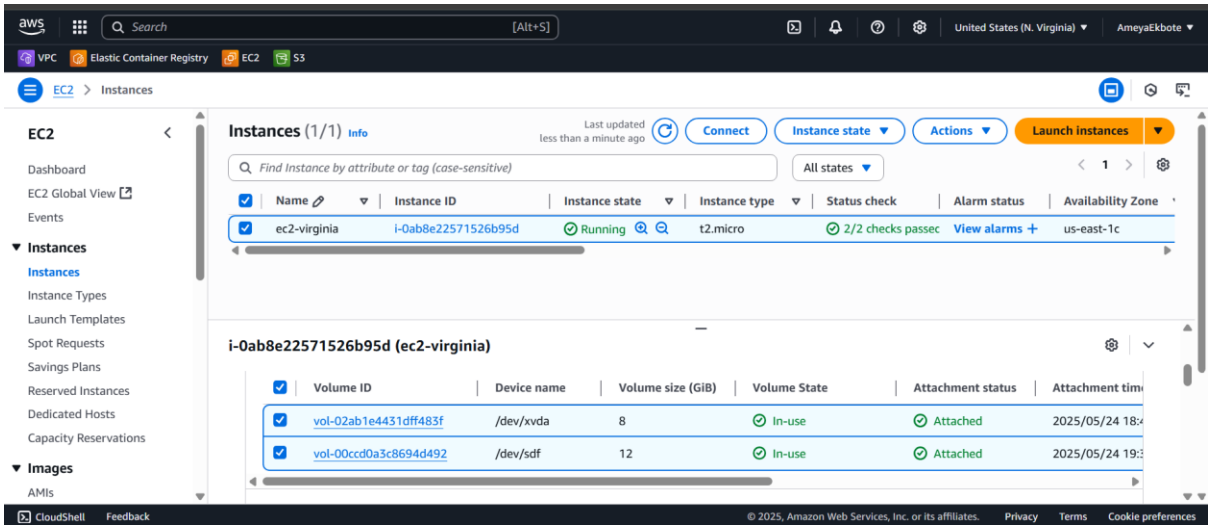
5) Created two volumes and attached it to the

instance. I have created two volumes of 10GB and 12GB respectively.

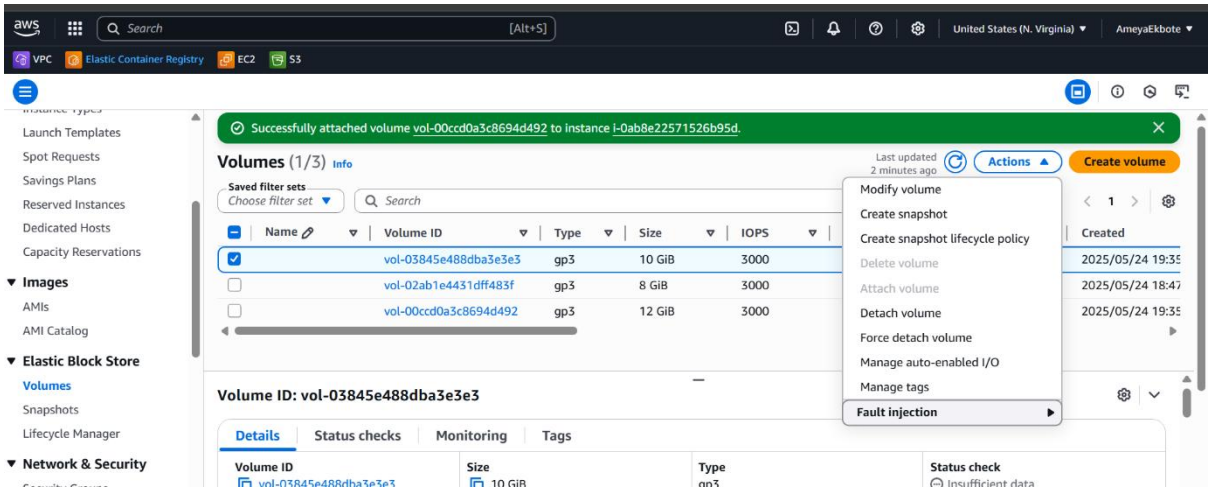


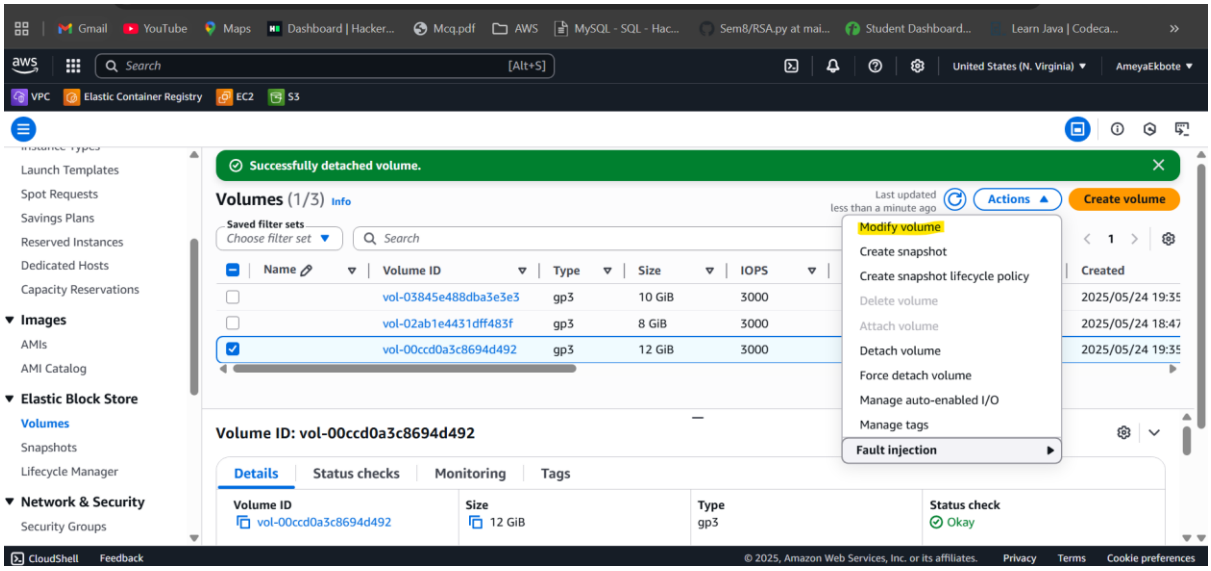
6. Attached both the volumes to the instance in Virginia region.

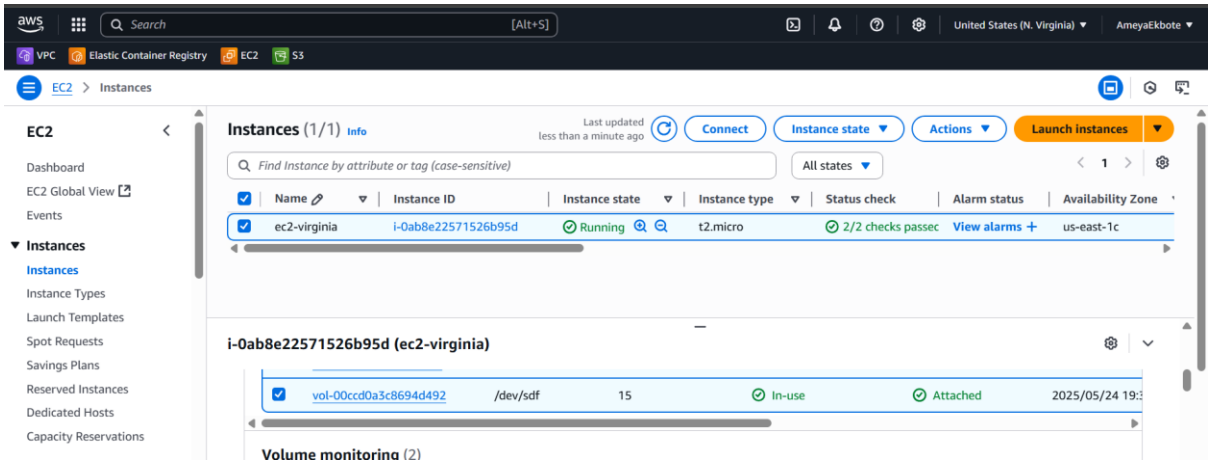




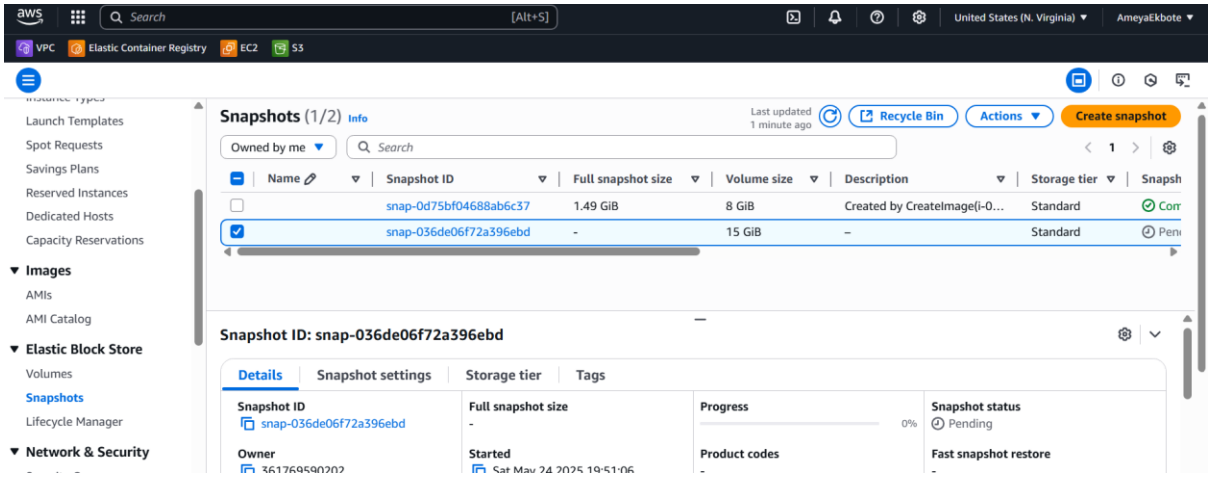
7. After attaching both the volumes detach one of them and extended the size of other by modifying the volume.







8. To take the backup of the Volume, we need to create the Snapshot of the Volume -

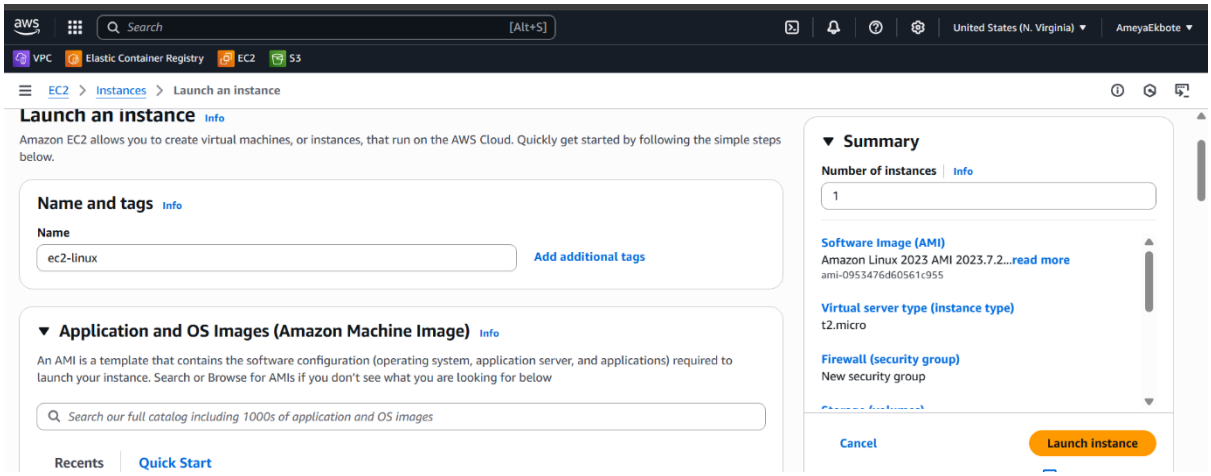


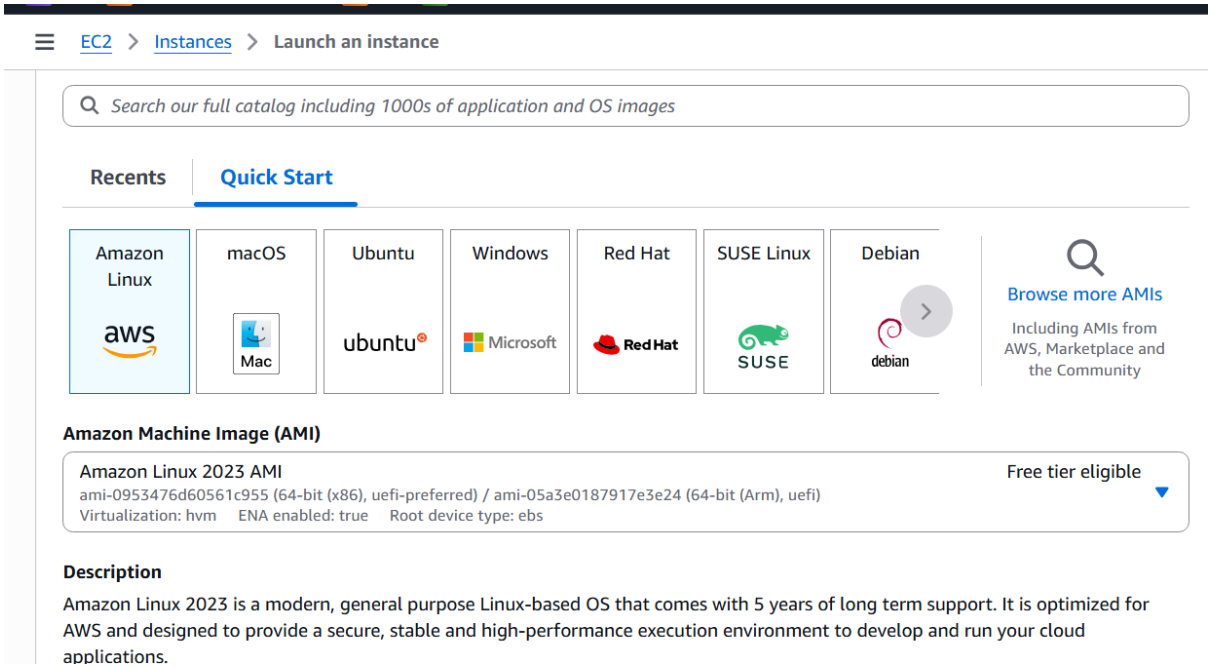
2] Tasks To Be Performed: 1. Create an EFS and connect it to 3 different EC2 instances. Make sure that all instances have different operating systems. For instance, Ubuntu, Red Hat Linux and Amazon Linux 2.

Solution ➔

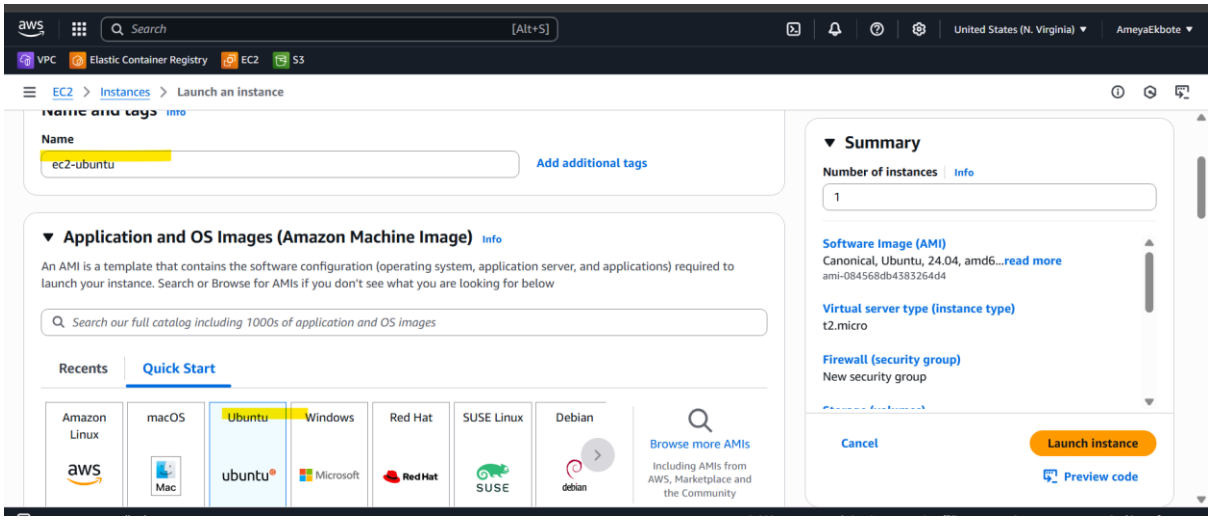
Creating 3 instances

1) Linux Instance creation =>

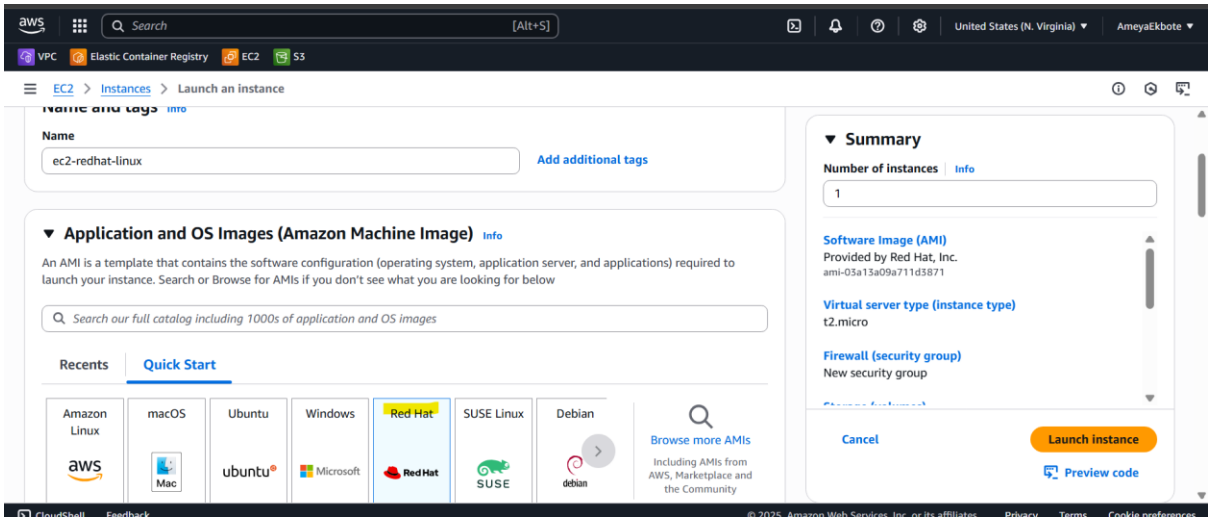


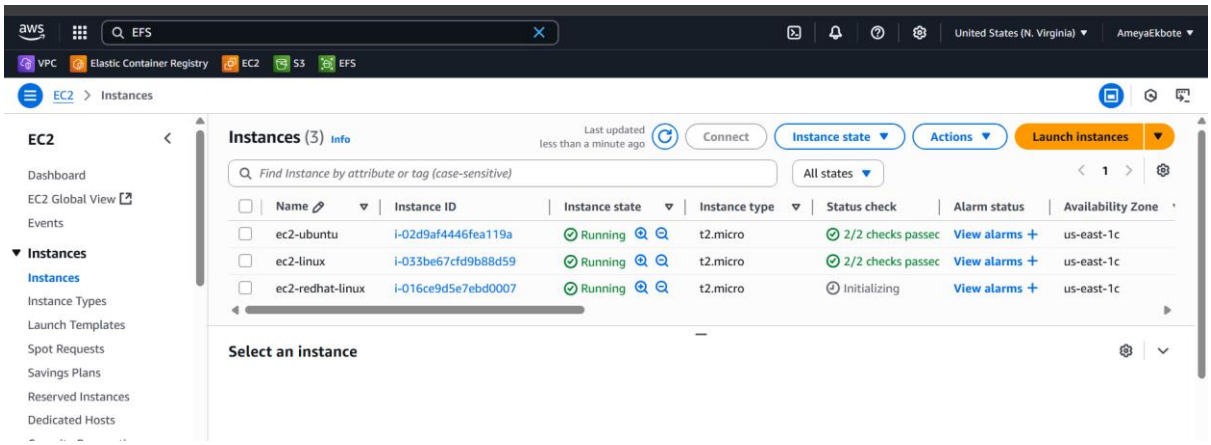


2) Ubuntu Instance creation =>

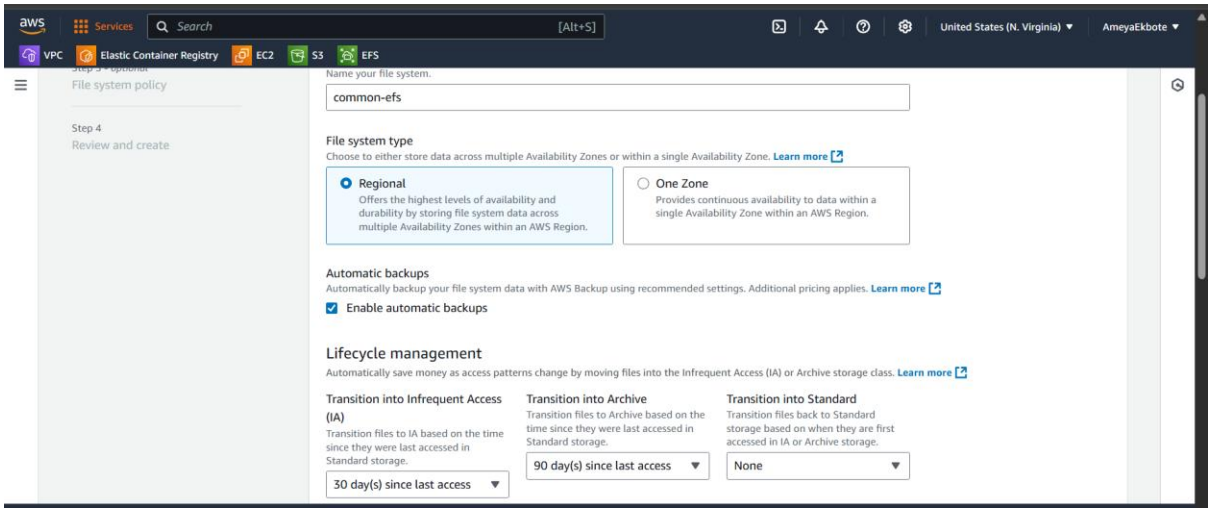


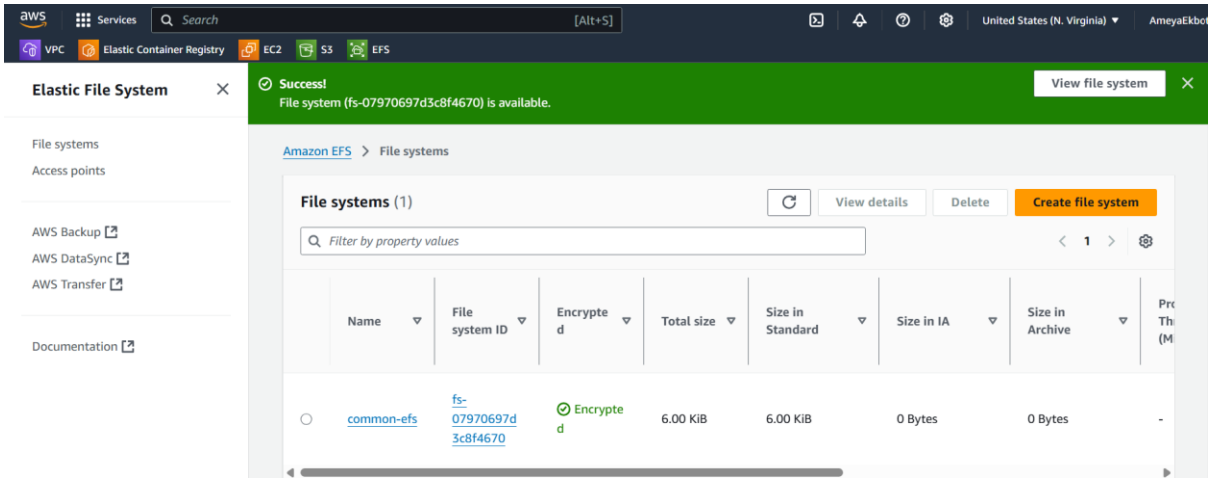
3) Red Hat Linux Instance creation =>



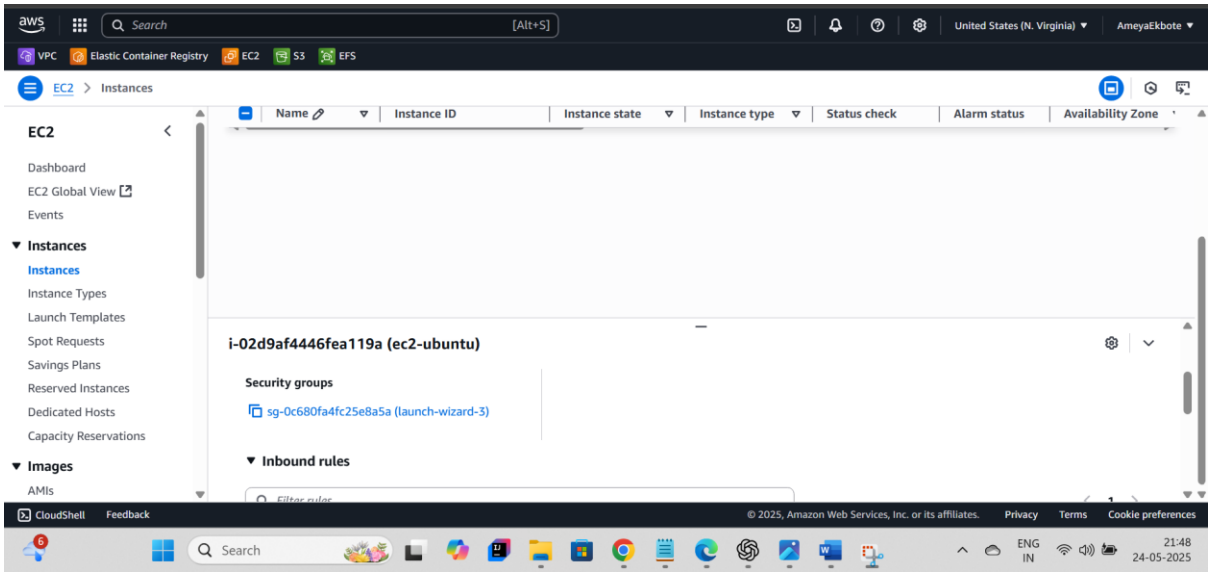


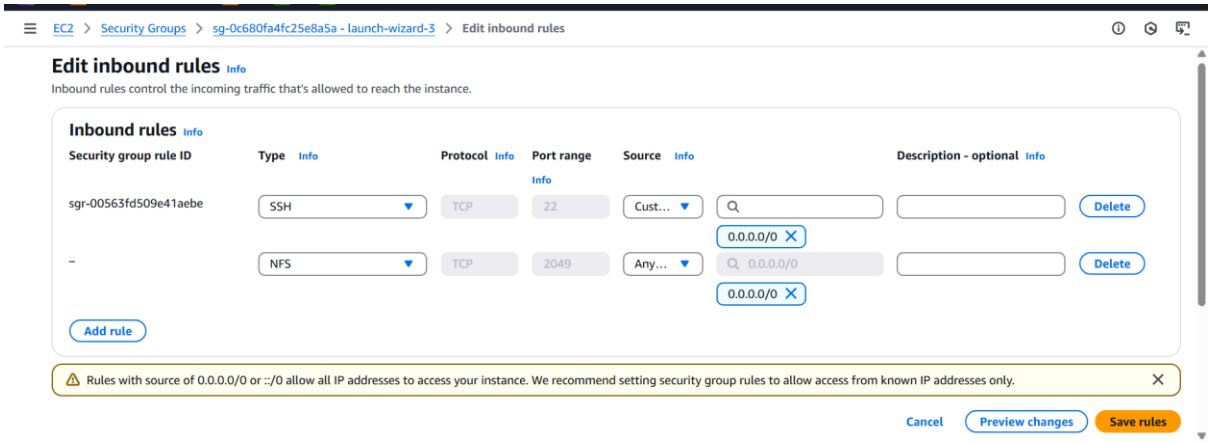
4) Creating common EFS =>



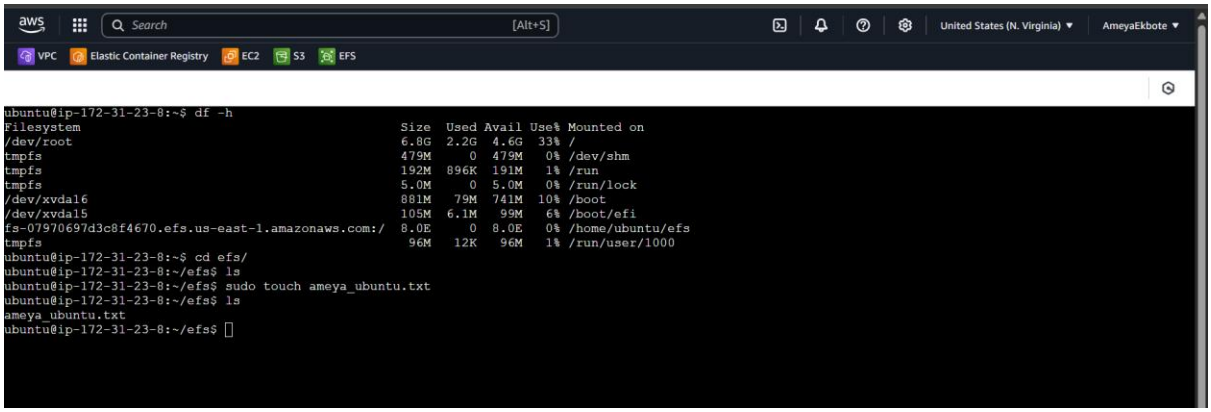


5) Attaching EFS to ubuntu instance , updating security group and inbound connectivity opened to NFS services .

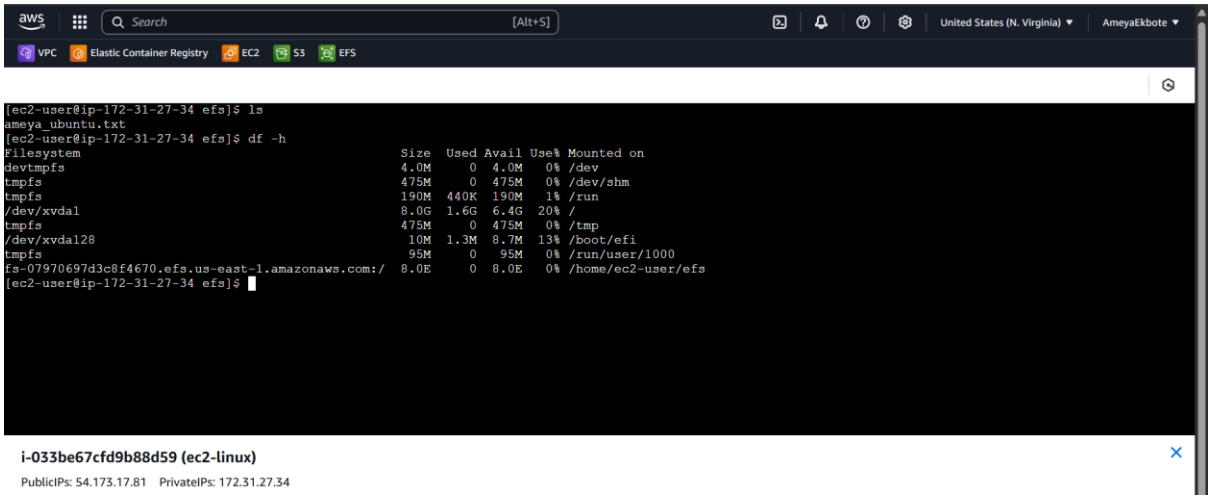


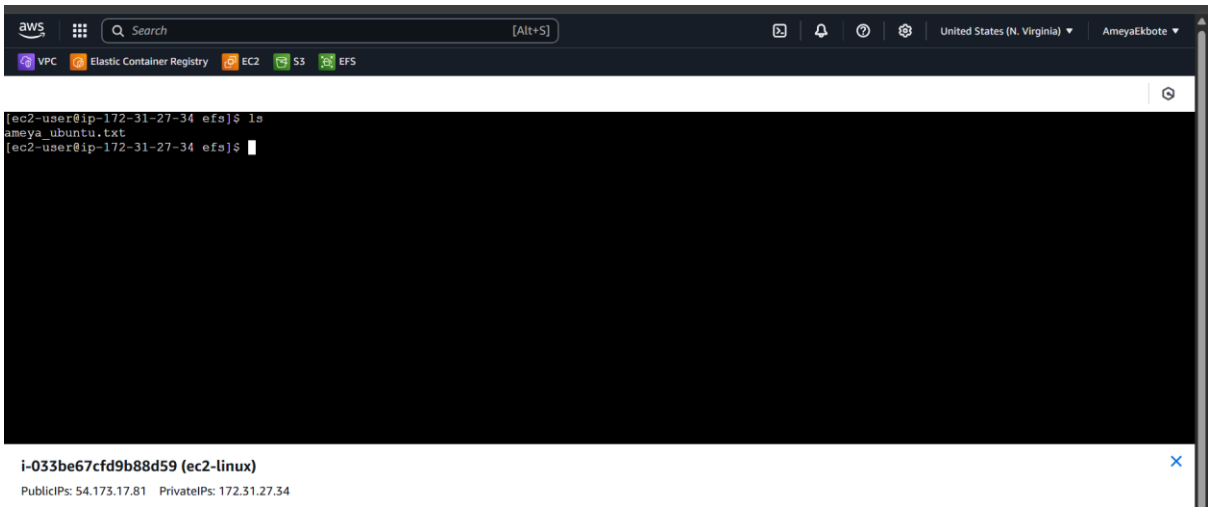


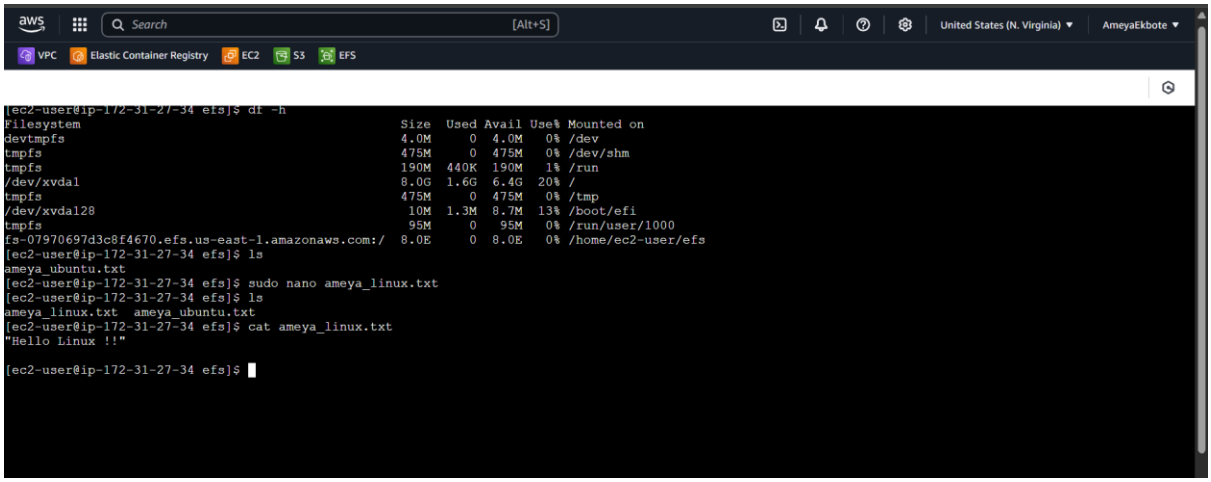
6) Attached EFS to ubuntu instance and created Ameya_ubuntu.txt file , will see this file after attaching EFS to linux instance =>



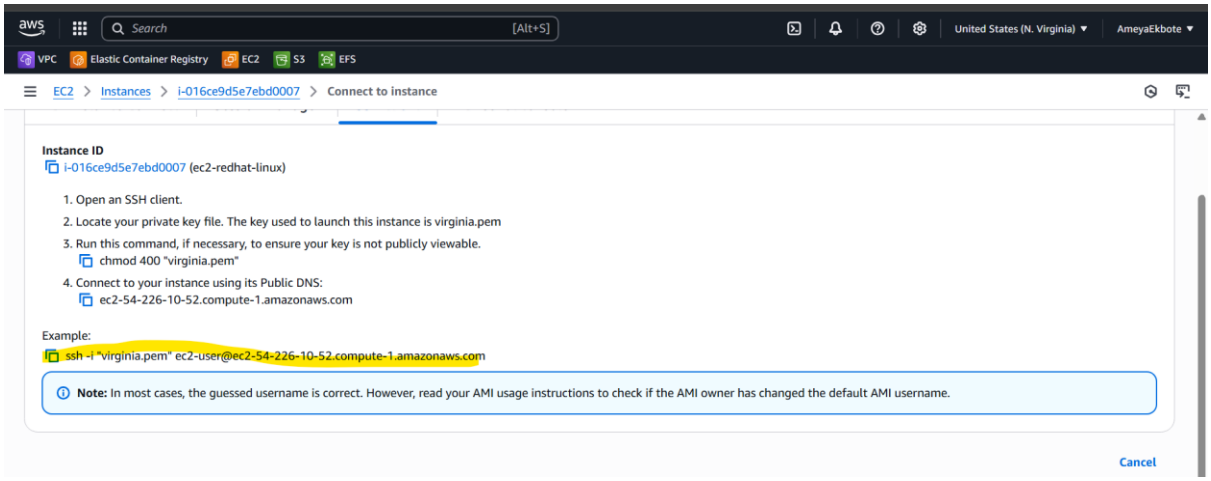
7) Linux – Attached Common EFS to linux instance and able to see ubuntu.txt file , created one more txt file Ameya_linux.txt which will be check in redhat linux instance.

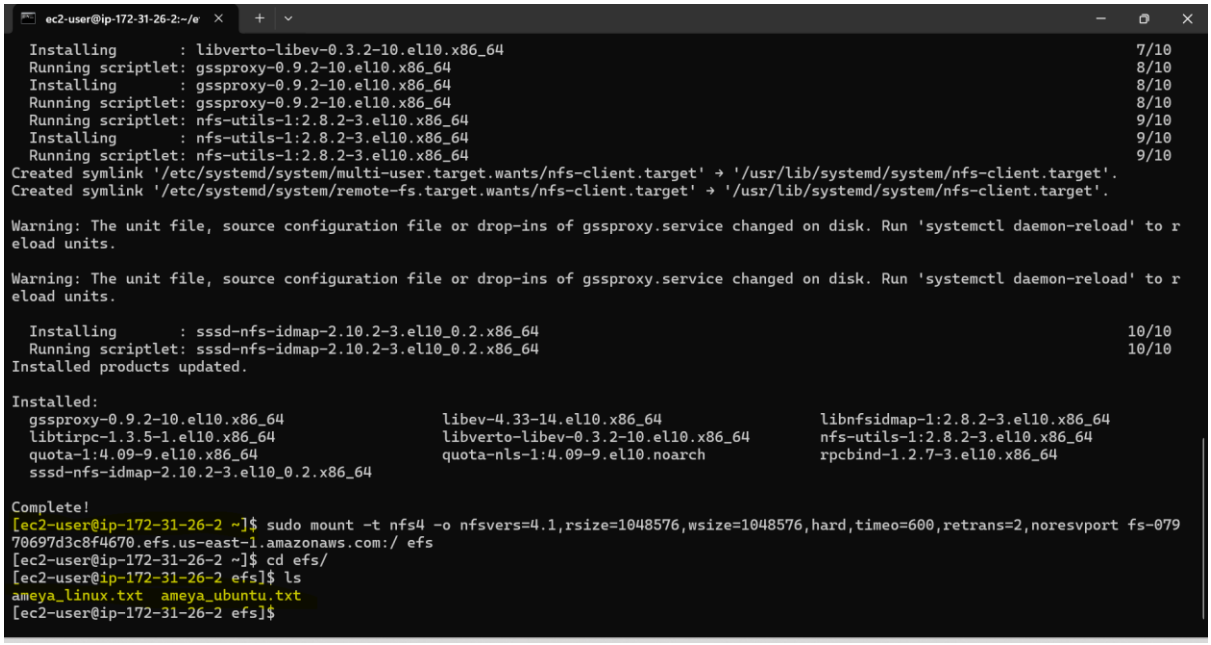




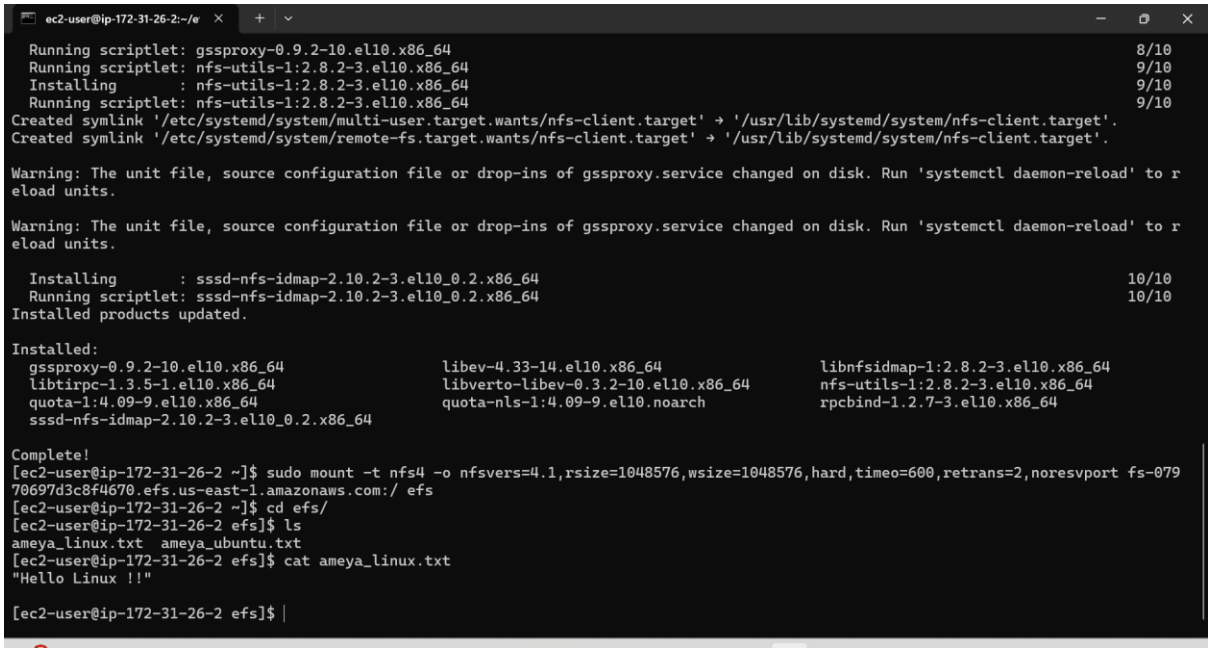


8) Redhat – Connected redhat instance using SSH connection with key pair and attached common efs to this instance as well . Able to see both Ameya_ubuntu.txt and Ameya_linux.txt files .





```
  Installing       : libverto-libev-0.3.2-10.el10.x86_64                                                    7/10
  Running scriptlet: gssproxy-0.9.2-10.el10.x86_64                                                          8/10
  Installing       : gssproxy-0.9.2-10.el10.x86_64                                                          8/10
  Running scriptlet: gssproxy-0.9.2-10.el10.x86_64                                                          8/10
  Running scriptlet: nfs-utils-1:2.8.2-3.el10.x86_64                                                        9/10
  Installing       : nfs-utils-1:2.8.2-3.el10.x86_64                                                        9/10
  Running scriptlet: nfs-utils-1:2.8.2-3.el10.x86_64                                                        9/10
Created symlink '/etc/systemd/system/multi-user.target.wants/nfs-client.target' → '/usr/lib/systemd/system/nfs-client.target'.
Created symlink '/etc/systemd/system/remote-fs.target.wants/nfs-client.target' → '/usr/lib/systemd/system/nfs-client.target'.

Warning: The unit file, source configuration file or drop-ins of gssproxy.service changed on disk. Run 'systemctl daemon-reload' to r
eload units.

Warning: The unit file, source configuration file or drop-ins of gssproxy.service changed on disk. Run 'systemctl daemon-reload' to r
eload units.

  Installing       : sssd-nfs-idmap-2.10.2-3.el10_0.2.x86_64                                               10/10
  Running scriptlet: sssd-nfs-idmap-2.10.2-3.el10_0.2.x86_64                                               10/10
Installed products updated.

Installed:
  gssproxy-0.9.2-10.el10.x86_64                libev-4.33-14.el10.x86_64                libnfsidmap-1:2.8.2-3.el10.x86_64
  libtirpc-1.3.5-1.el10.x86_64                 libverto-libev-0.3.2-10.el10.x86_64      nfs-utils-1:2.8.2-3.el10.x86_64
  quota-1:4.09-9.el10.x86_64                   quota-nls-1:4.09-9.el10.noarch           rpcbind-1.2.7-3.el10.x86_64
  sssd-nfs-idmap-2.10.2-3.el10_0.x86_64

Complete!
[ec2-user@ip-172-31-26-2 ~]$ sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,noresvport fs-079
70697d3c8f4670.efs.us-east-1.amazonaws.com:/ efs
[ec2-user@ip-172-31-26-2 ~]$ cd efs/
[ec2-user@ip-172-31-26-2 efs]$ ls
ameya_linux.txt  ameya_ubuntu.txt
[ec2-user@ip-172-31-26-2 efs]$
```



```
  Running scriptlet: gssproxy-0.9.2-10.el10.x86_64                                                          8/10
  Running scriptlet: nfs-utils-1:2.8.2-3.el10.x86_64                                                        9/10
  Installing       : nfs-utils-1:2.8.2-3.el10.x86_64                                                        9/10
  Running scriptlet: nfs-utils-1:2.8.2-3.el10.x86_64                                                        9/10
Created symlink '/etc/systemd/system/multi-user.target.wants/nfs-client.target' → '/usr/lib/systemd/system/nfs-client.target'.
Created symlink '/etc/systemd/system/remote-fs.target.wants/nfs-client.target' → '/usr/lib/systemd/system/nfs-client.target'.

Warning: The unit file, source configuration file or drop-ins of gssproxy.service changed on disk. Run 'systemctl daemon-reload' to r
eload units.

Warning: The unit file, source configuration file or drop-ins of gssproxy.service changed on disk. Run 'systemctl daemon-reload' to r
eload units.

  Installing       : sssd-nfs-idmap-2.10.2-3.el10_0.2.x86_64                                               10/10
  Running scriptlet: sssd-nfs-idmap-2.10.2-3.el10_0.2.x86_64                                               10/10
Installed products updated.

Installed:
  gssproxy-0.9.2-10.el10.x86_64                libev-4.33-14.el10.x86_64                libnfsidmap-1:2.8.2-3.el10.x86_64
  libtirpc-1.3.5-1.el10.x86_64                 libverto-libev-0.3.2-10.el10.x86_64      nfs-utils-1:2.8.2-3.el10.x86_64
  quota-1:4.09-9.el10.x86_64                   quota-nls-1:4.09-9.el10.noarch           rpcbind-1.2.7-3.el10.x86_64
  sssd-nfs-idmap-2.10.2-3.el10_0.x86_64

Complete!
[ec2-user@ip-172-31-26-2 ~]$ sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,noresvport fs-079
70697d3c8f4670.efs.us-east-1.amazonaws.com:/ efs
[ec2-user@ip-172-31-26-2 ~]$ cd efs/
[ec2-user@ip-172-31-26-2 efs]$ ls
ameya_linux.txt  ameya_ubuntu.txt
[ec2-user@ip-172-31-26-2 efs]$ cat ameya_linux.txt
"Hello Linux !!"

[ec2-user@ip-172-31-26-2 efs]$
```

Assignment is completed !!