How to attach EFS to Multiple EC2 Instances

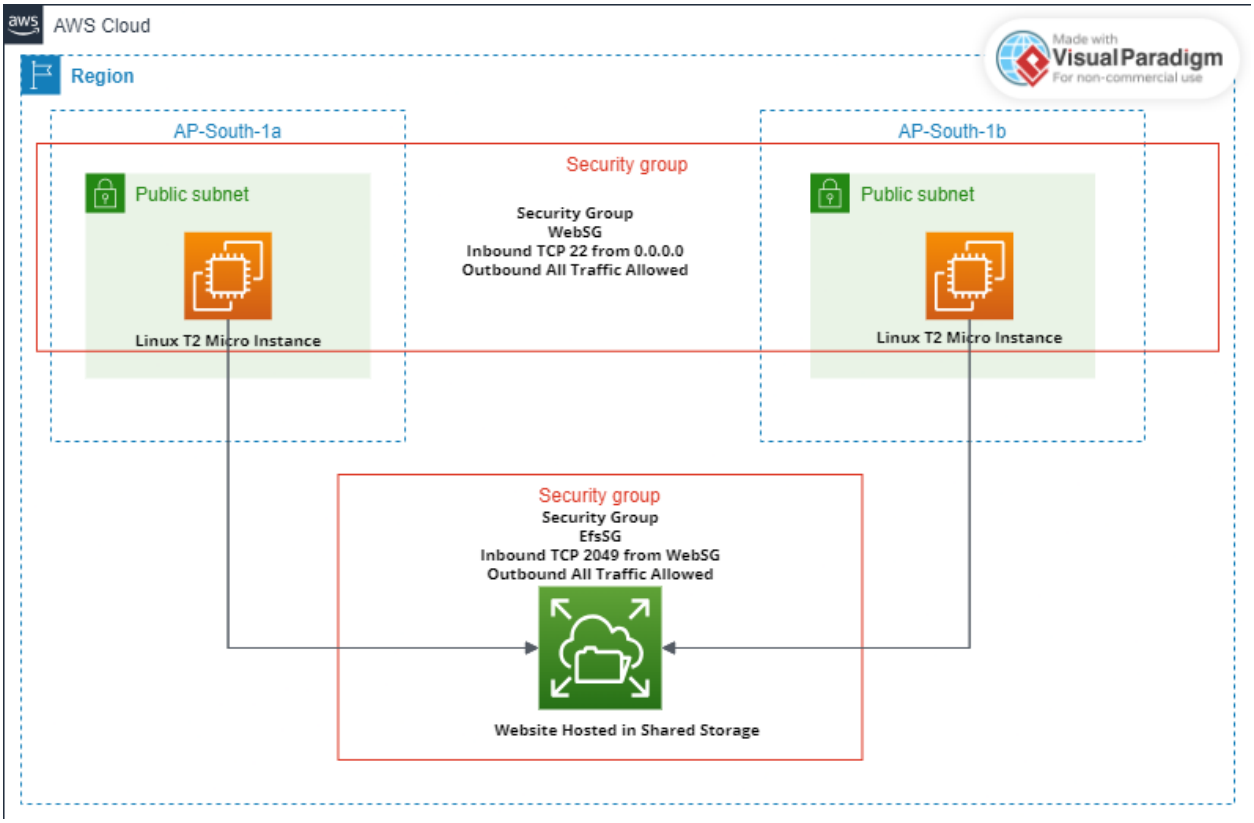
In this project we will explore how we can connect single EFS in to two or more EC2 Instances.

As we know the main disadvantage of EBS is we can't use EBS as shared storage, since EBS is a DAS (Direct Attached Storage).

EFS is a File Storage which can be used as Shared Storage across multiple Instances.

EC2 only supports Linux as EFS is a NFS (Network File System) which is part of Linux File System.

Architecture:-



Here we create EFS and attach that EFS into EC2 Instances hosted in two different AZ. We create two security group one for EFS and one more for the EC2 Instances.

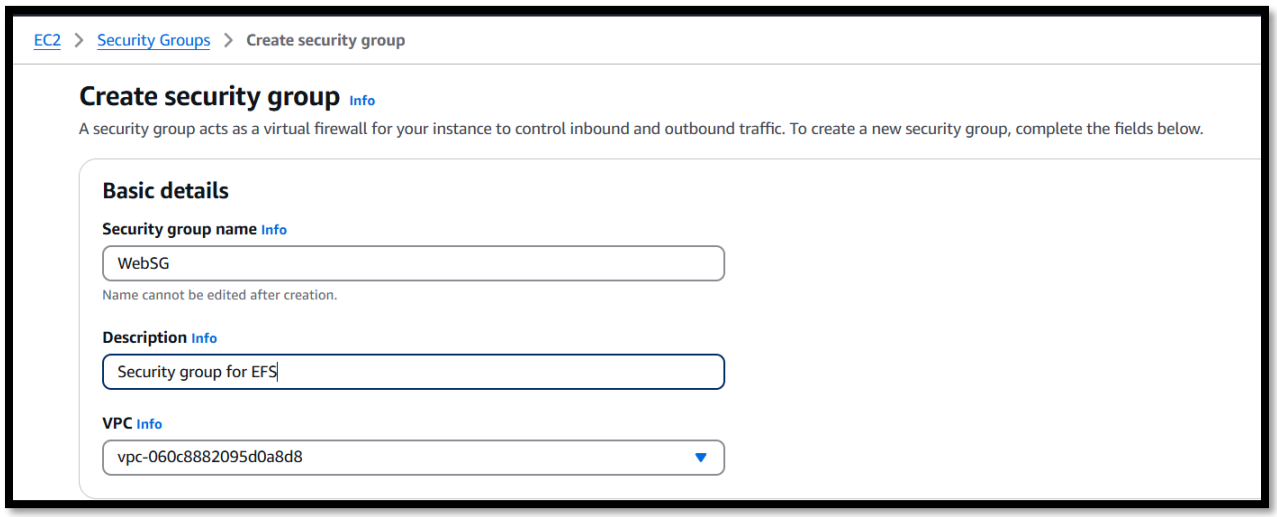
We will only allow EC2 instances to access EFS.

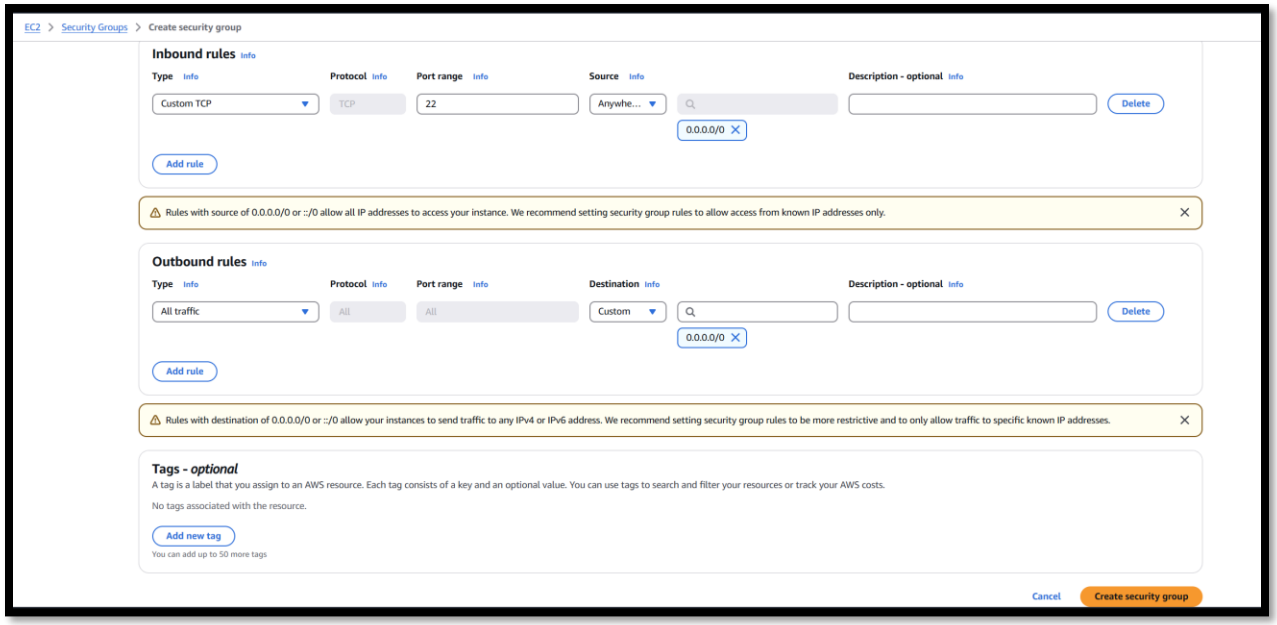
EFS is a managed storage for EC2.

We can achieve High availability with multi-AZ website hosting with shared file storage.

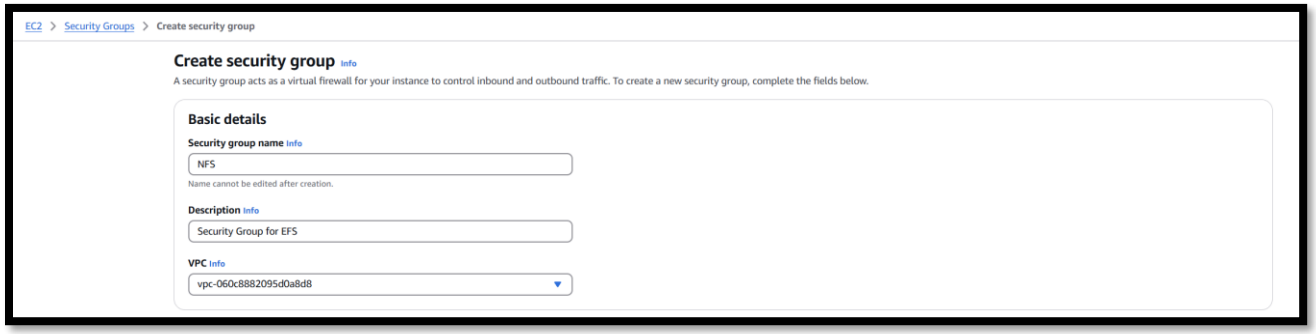
Step 1 (Create Security Group)

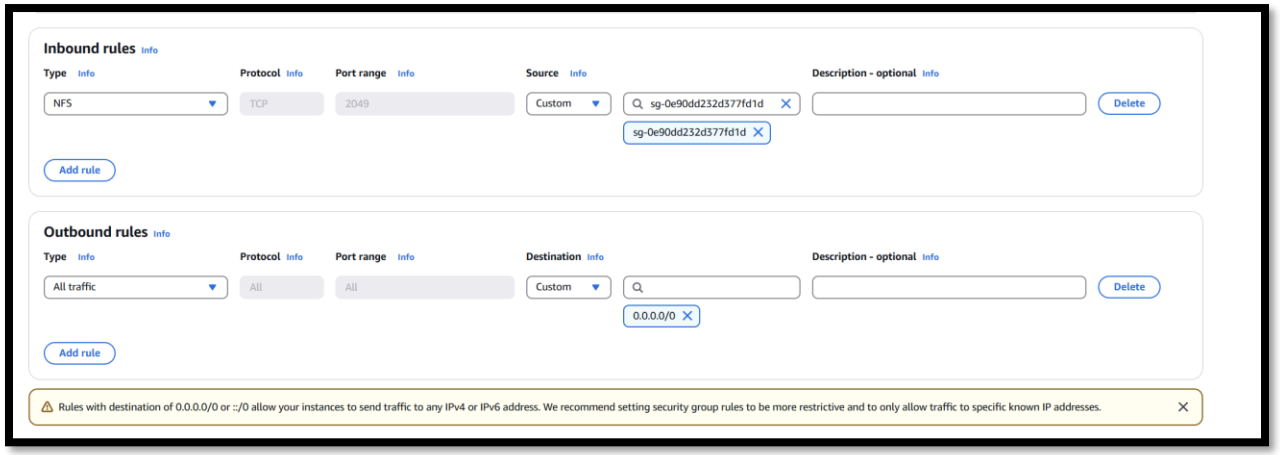
- Create Security Groups for Web Server “WebSG”.
  - Security name
  - Select VPC
  - Add Inbound rules
  - Add Outbound rules



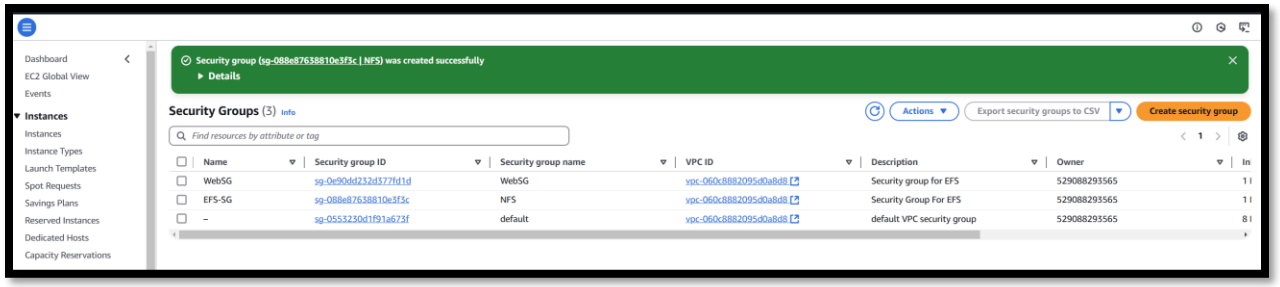


- Create Security Groups for “EFS”
    - Security name
    - Select VPC
    - Add Inbound rules (EFS default port 2049 add webserver security group as inbound traffic)
    - Add Outbound rules



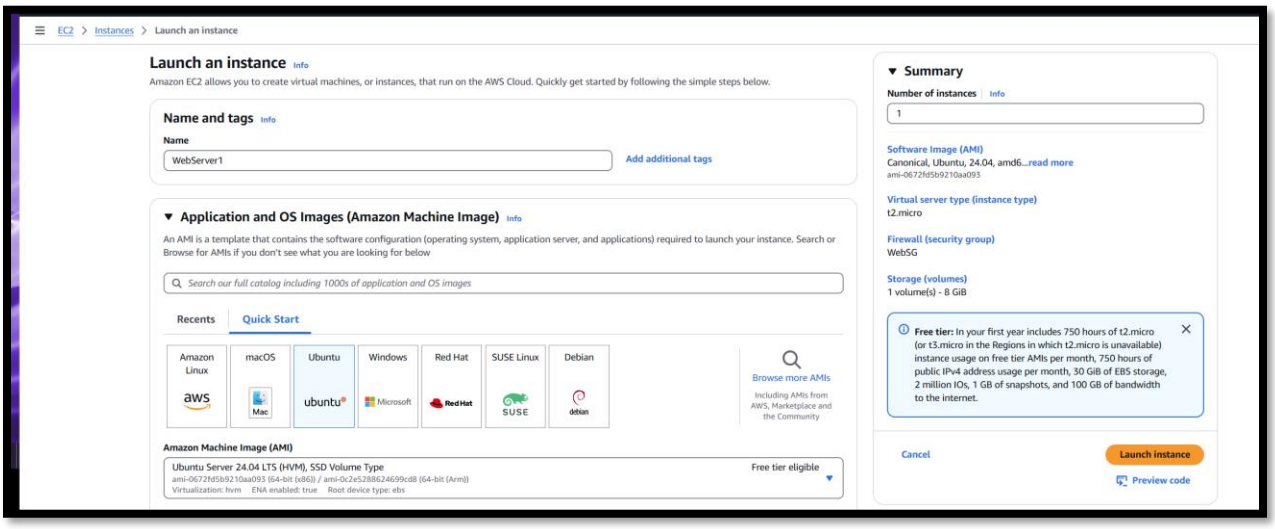


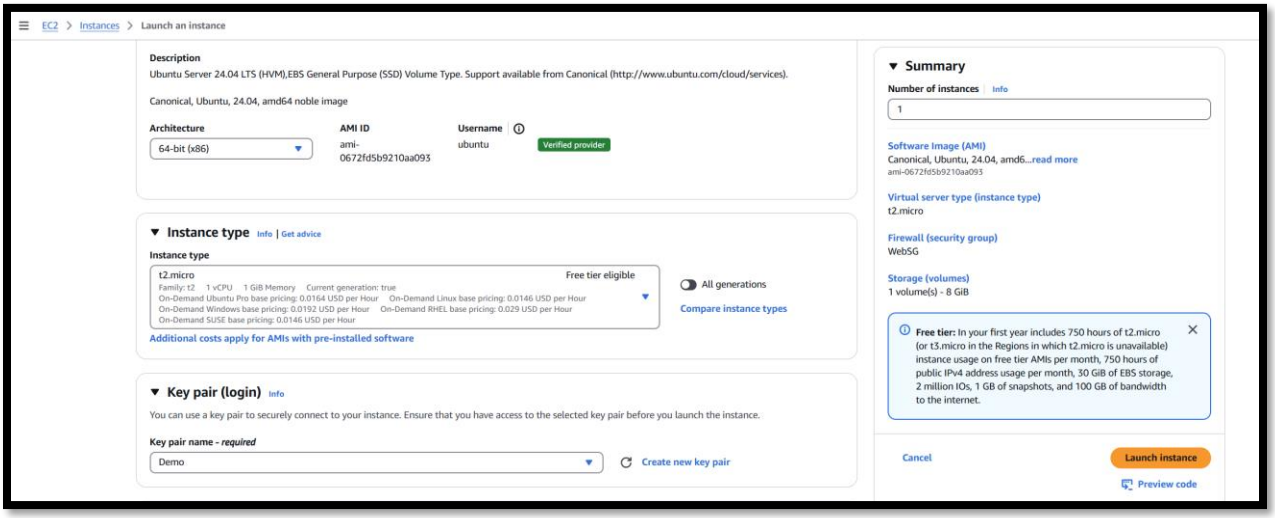
Security Group

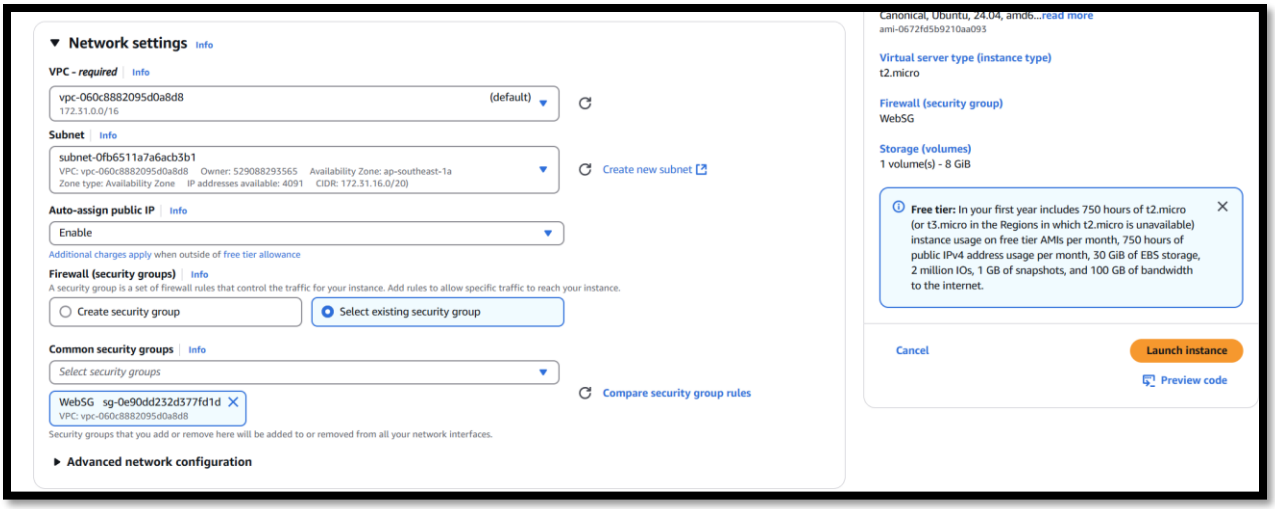


Step2 (Create EC2 Instances)

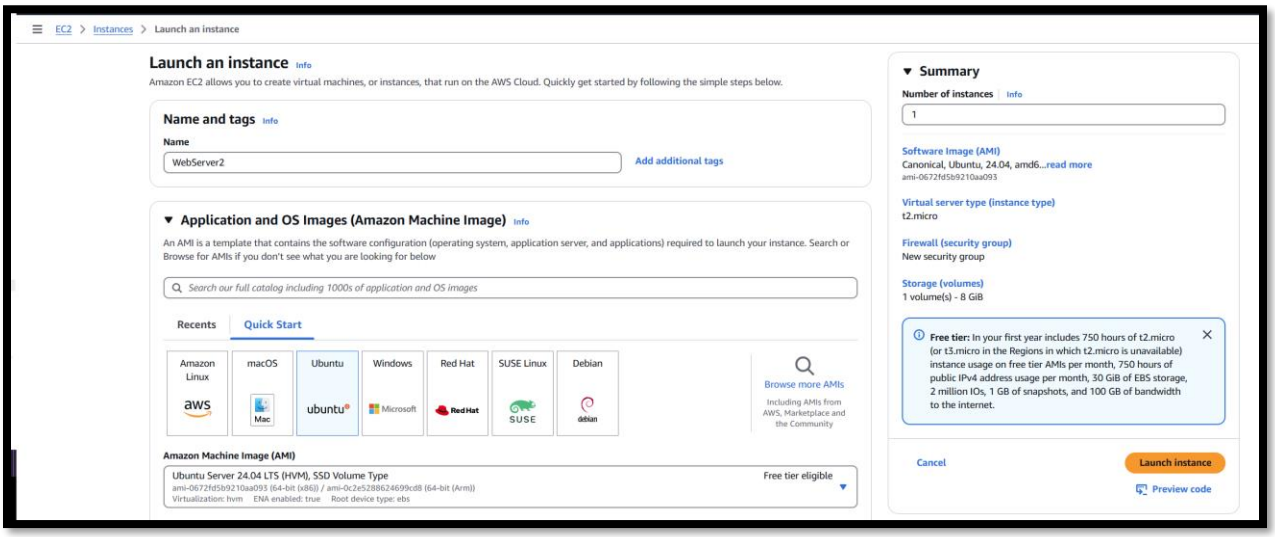
- Create 2 Linux Machine and ensure both under different AZ
    - First Linux Machine

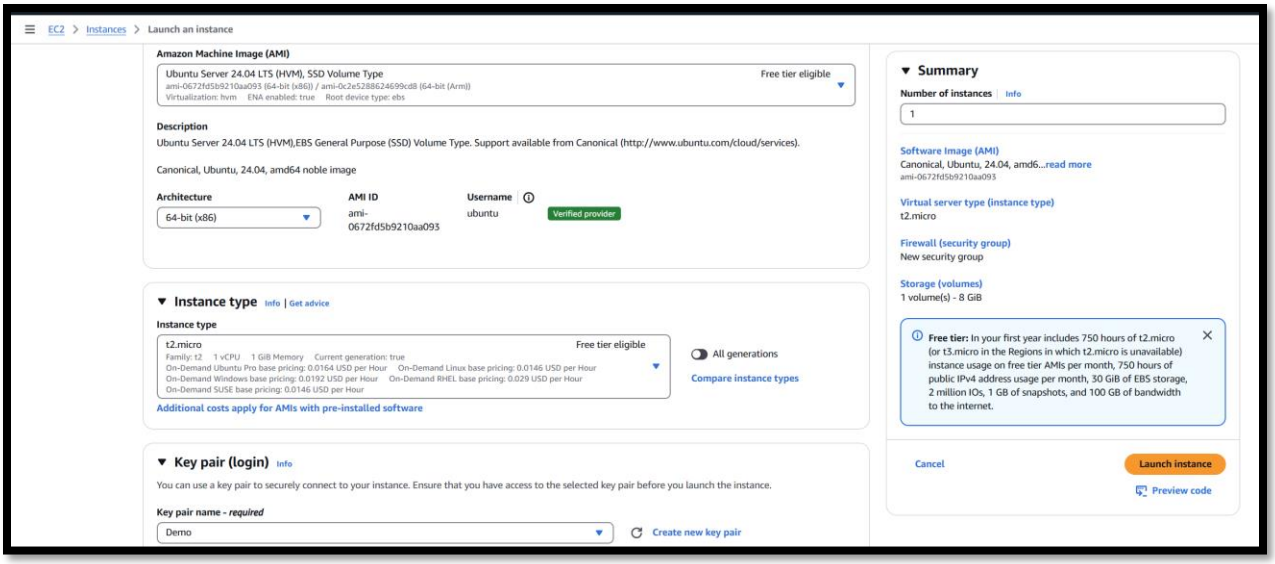


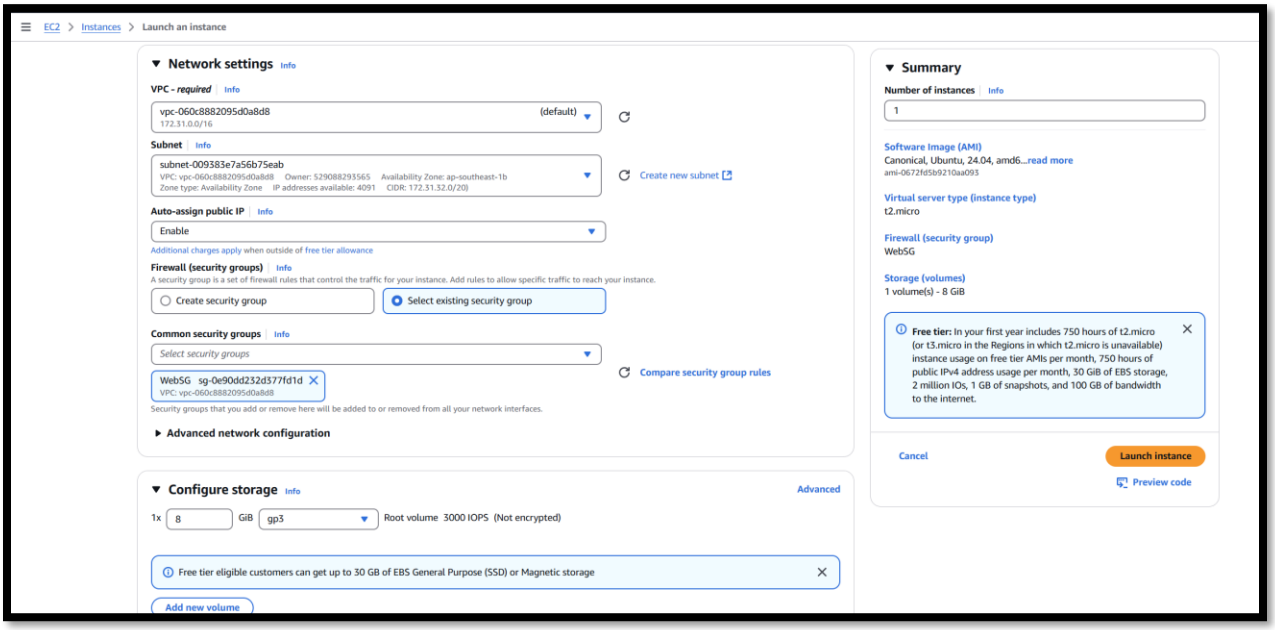




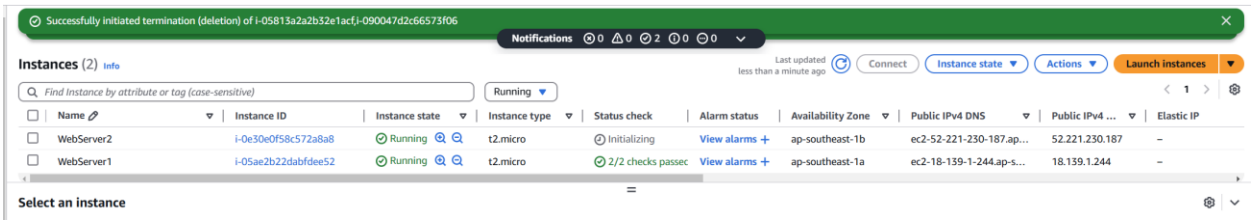
- Second Linux Machine





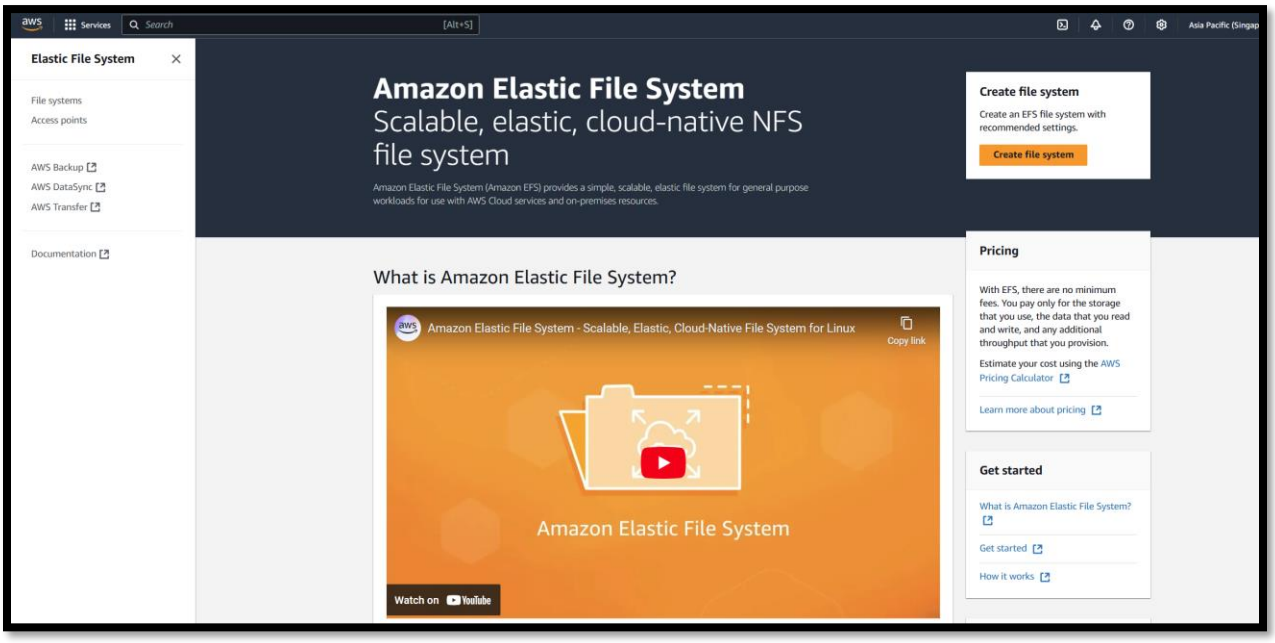


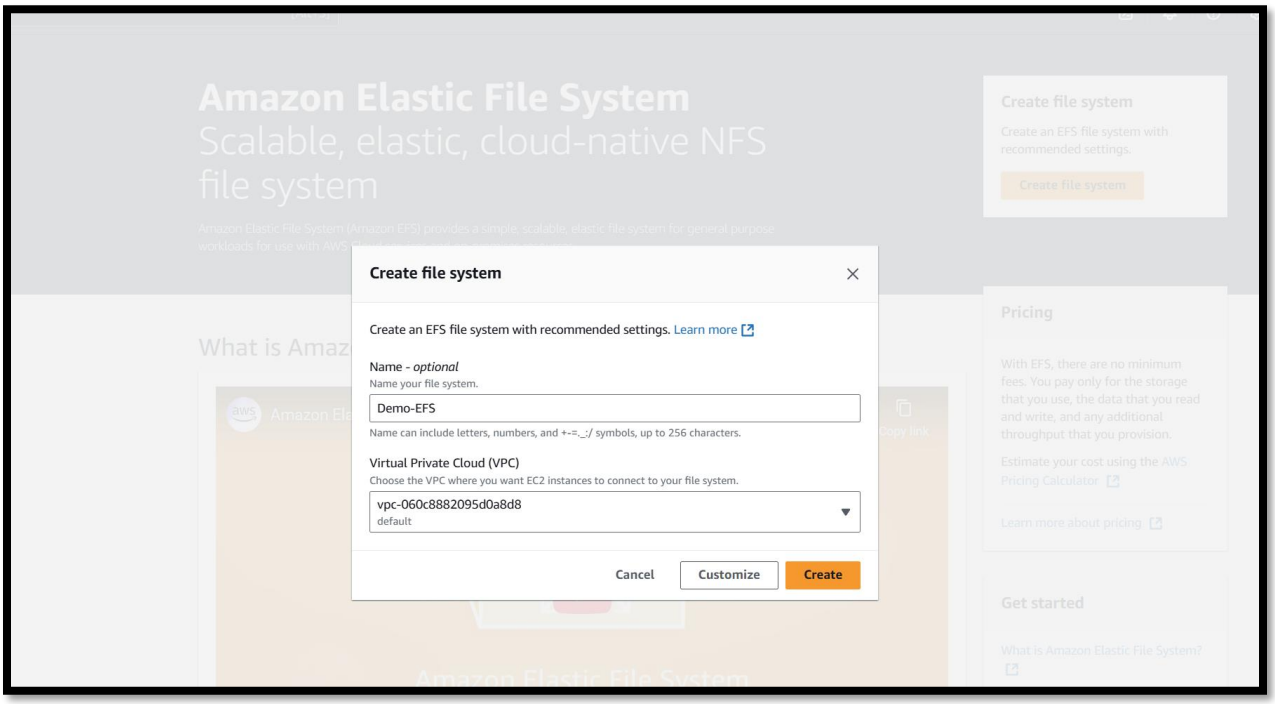
- Running EC2 Instances

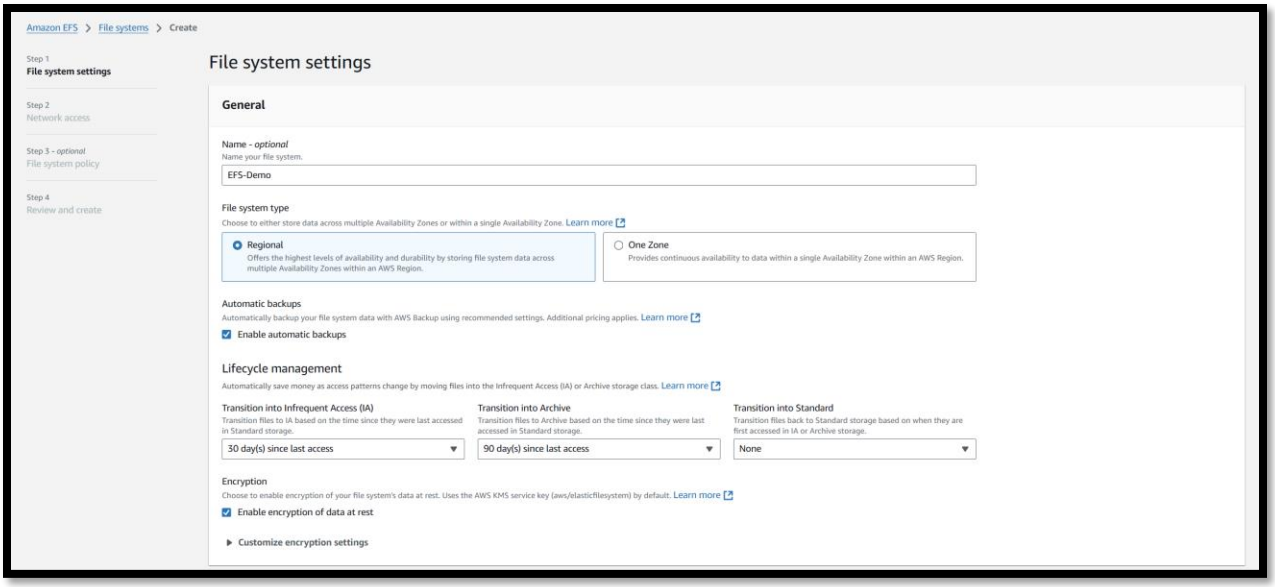


Step3 (Create a File System (EFS))

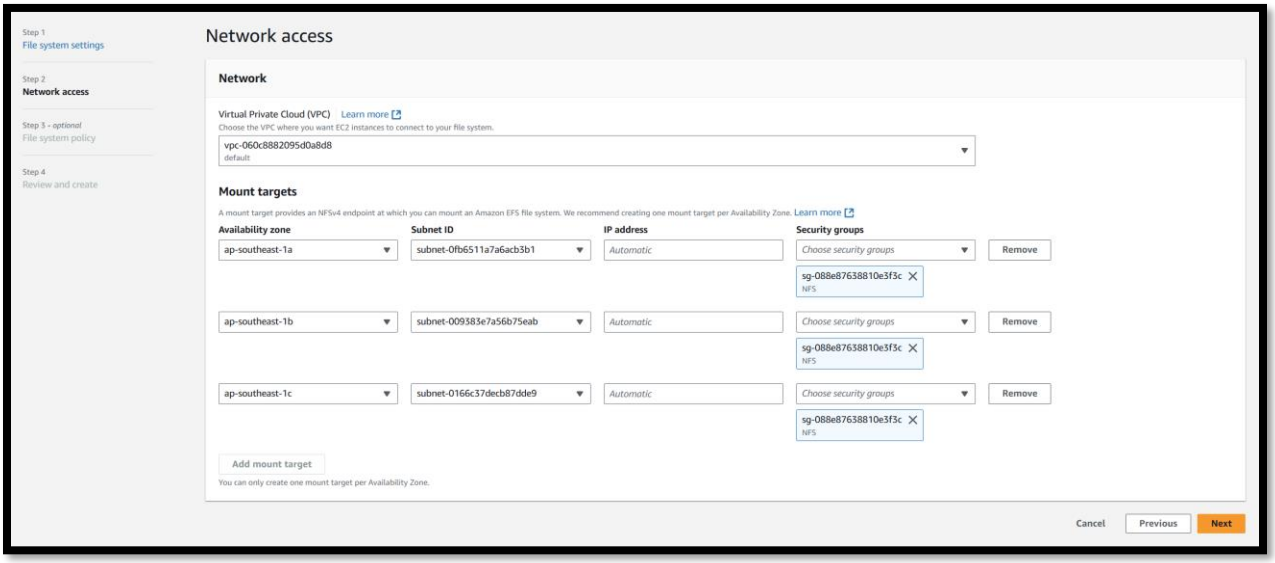
- Navigate to EFS Dashboard
- Create file
- Click on file server and select VPC then click on “Customize”.



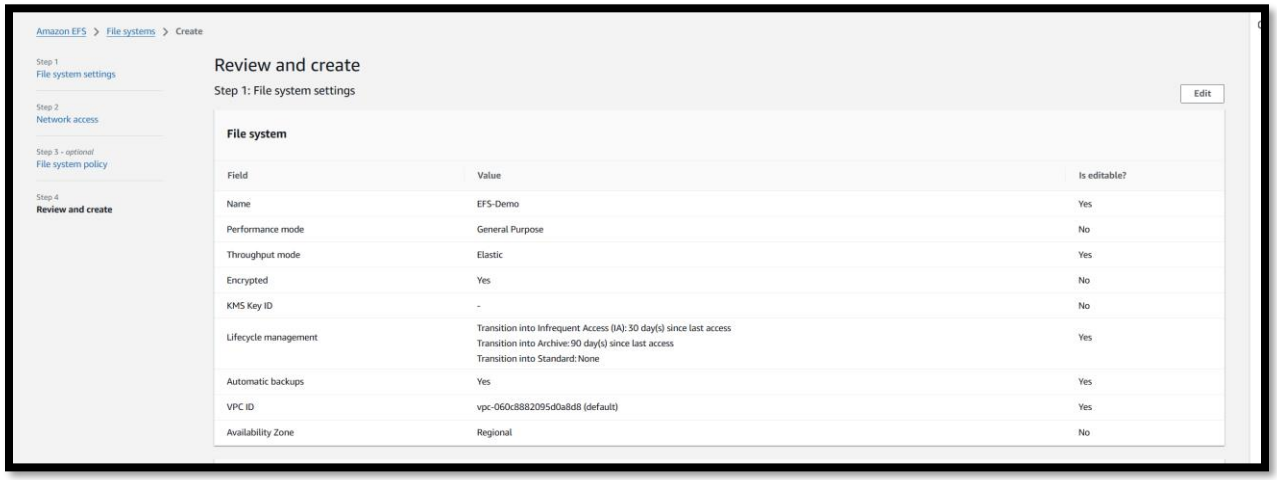


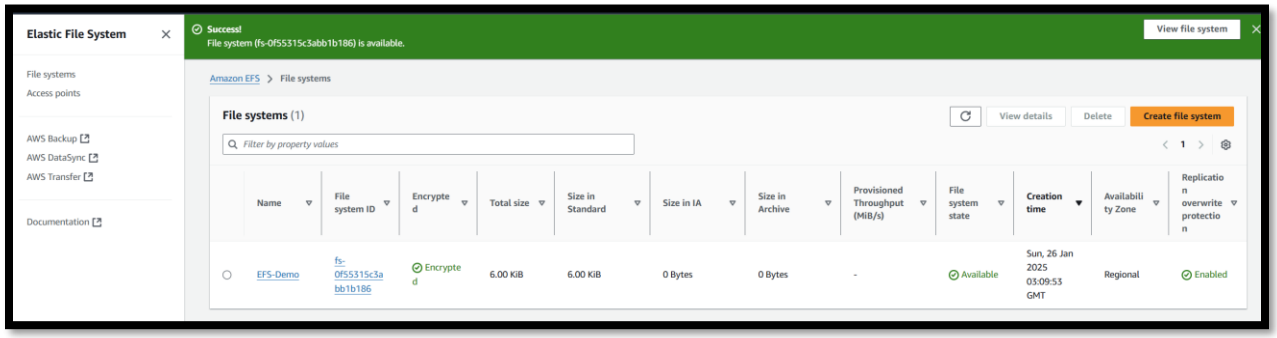


- Click next for Network Settings
    - Remove the default security group and add created security group in Mount Target section.



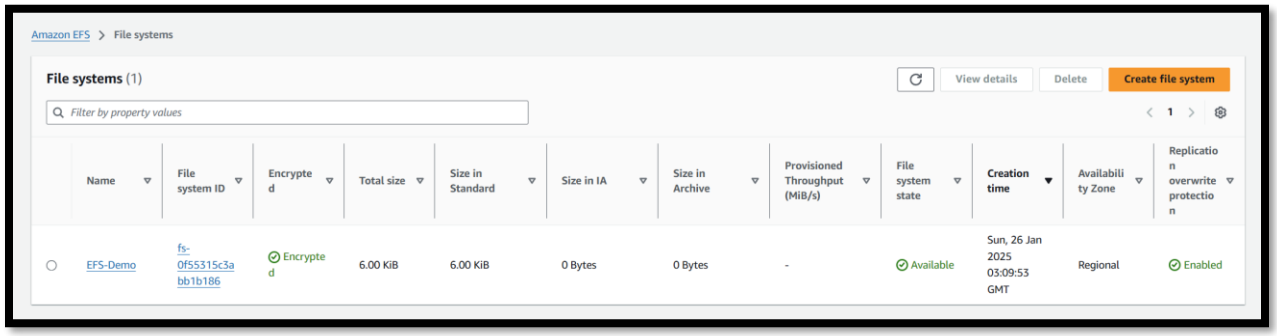
- Review and create



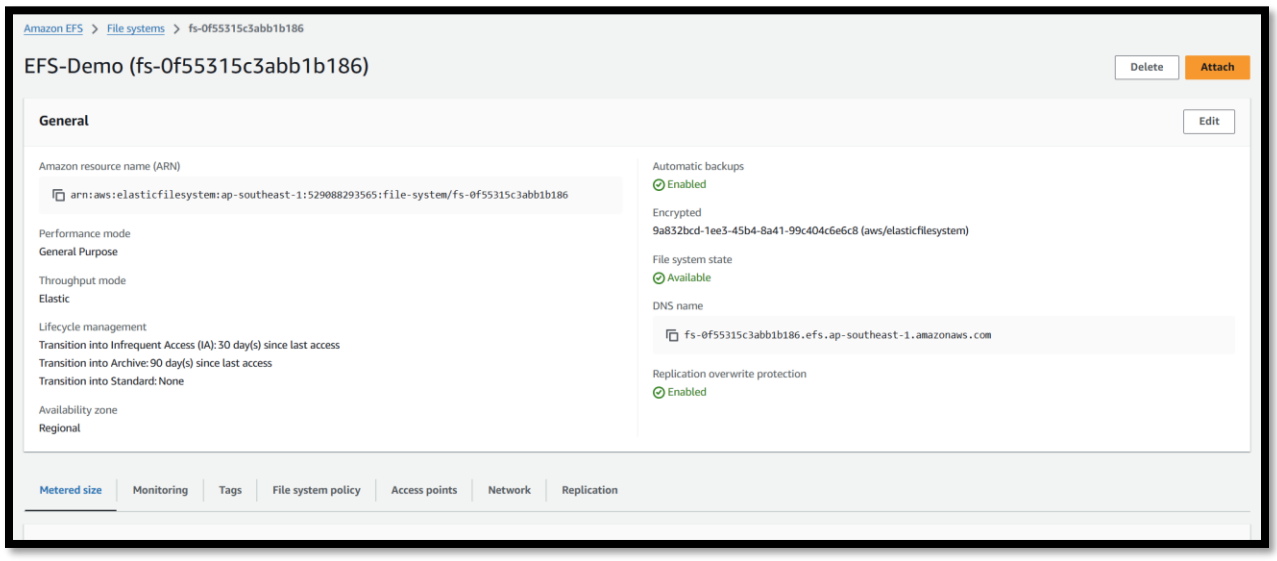


Step4 (Accessing our EC2 instances from CMD)

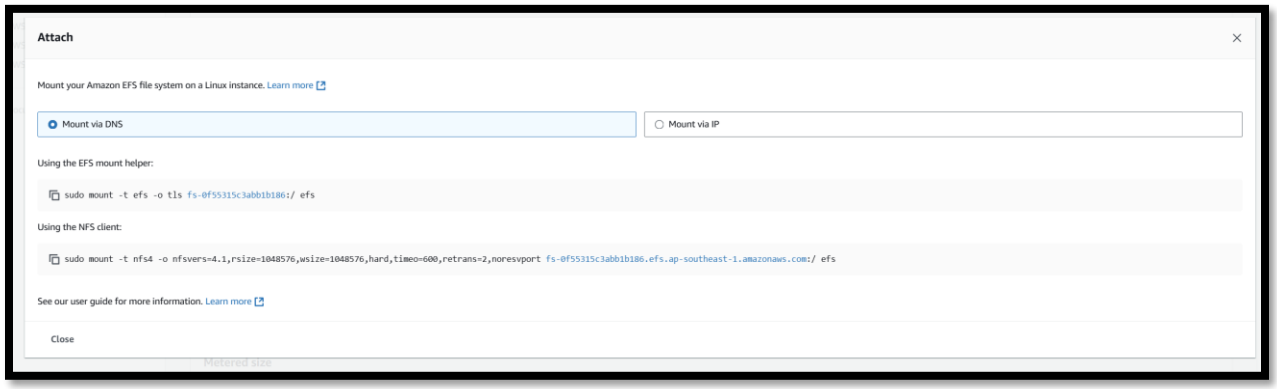
- Accessing VM1 & VM2
- sudo apt install -y nfs-common
- Navigate to EFS dashboard (AWS)



- View details
- Click Attach

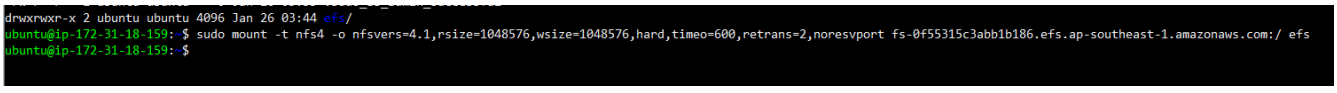


- Run below command in the VM1 & VM2



Step5 (Mount the EFS) do this for both vm

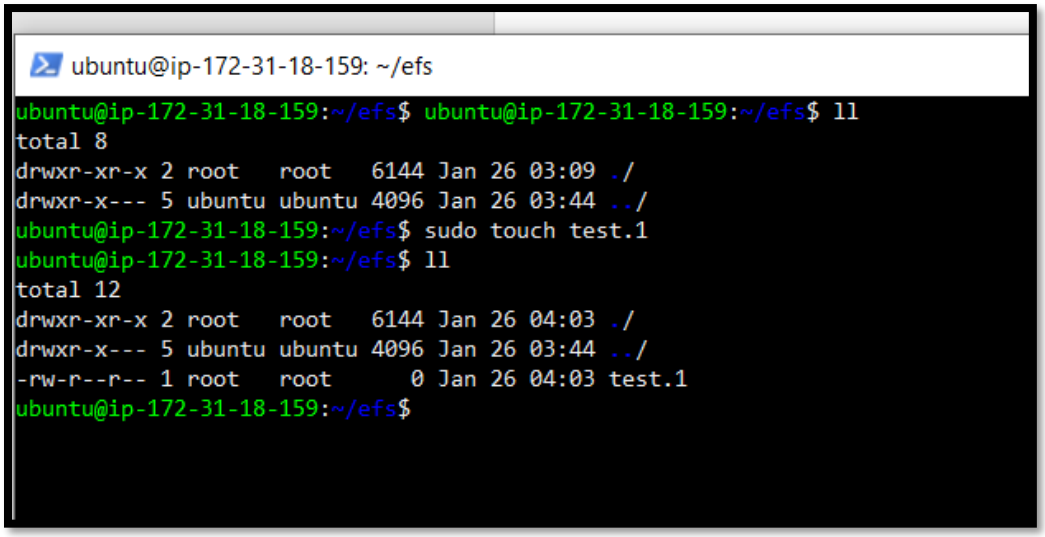
- Create efs directory (mkdir efs)
- sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,noresvport fs-0f55315c3abb1b186.efs.ap-southeast-1.amazonaws.com:/ efs



Step6 (Verification of attached EFS)

- Navigate to EFS dir in VM1
- Create test file
- Confirm if the file available in VM2

VM1



VM2