Lesson 04 Demo 07

Creating and Mounting EFS on a Linux Server

Objective: To demonstrate the creation, customization, and mounting of an Amazon Elastic File System (EFS) on multiple AWS instances

Tools required: AWS Workspace

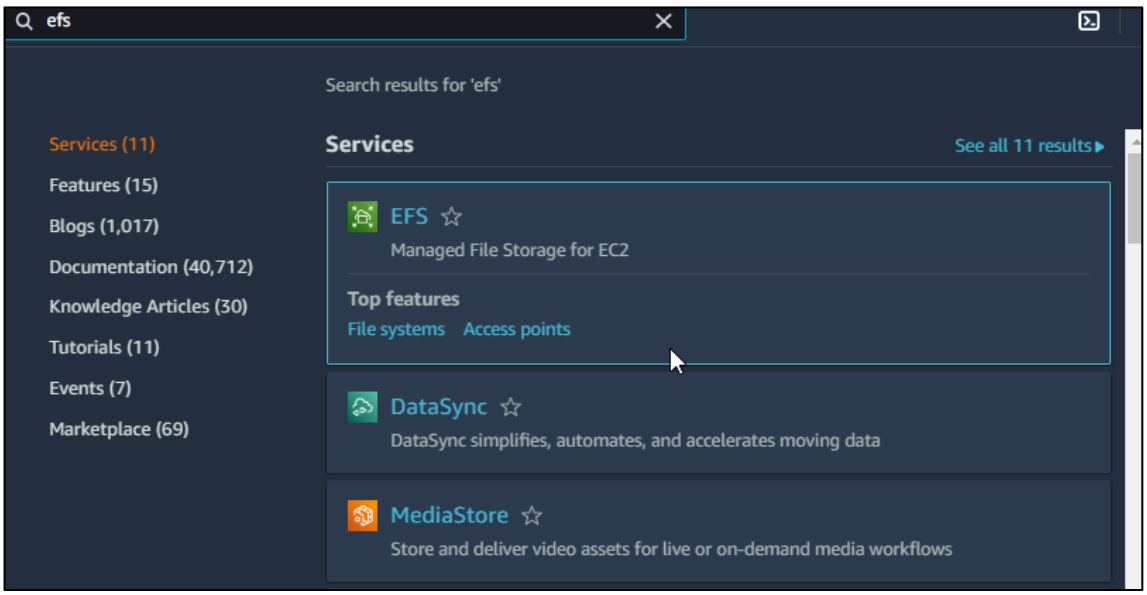
Prerequisites: AWS account with an S3 bucket created

Steps to be followed:

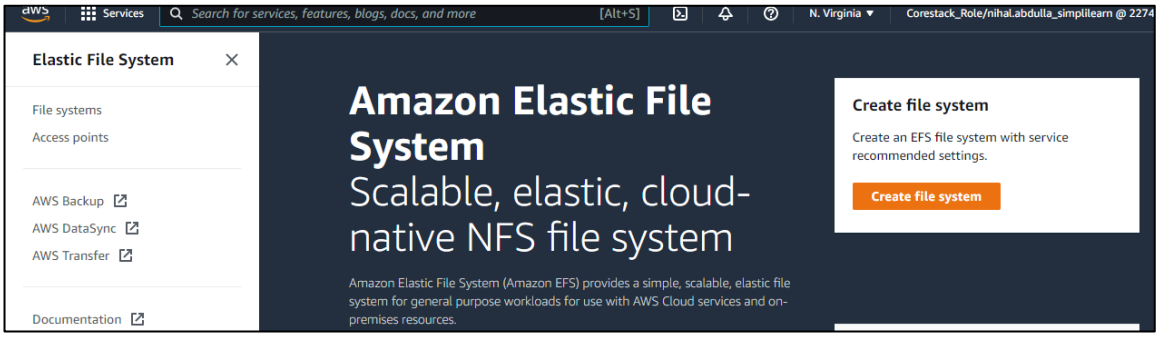
1. Create and customize an EFS
2. Create a security group to configure network access
3. Create AWS instances to access the EFS
4. Install EFS on the created instances

Step 1: Create and customize an EFS

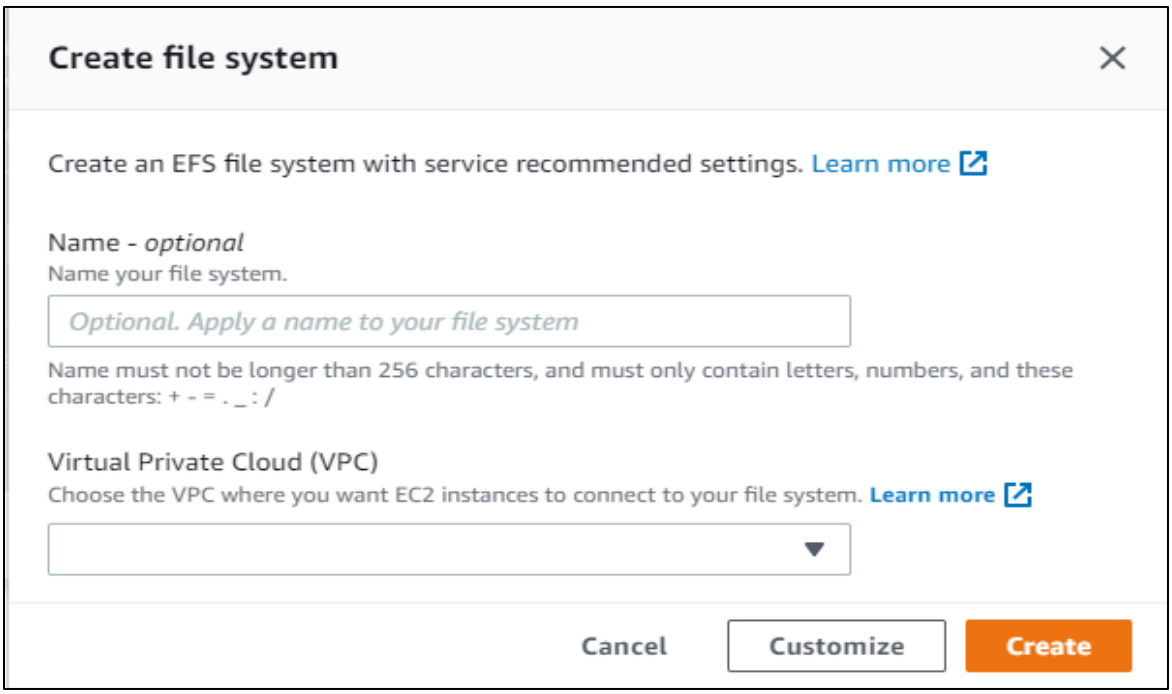
1.1 Navigate to the AWS Management Console homepage and search for the **EFS** service



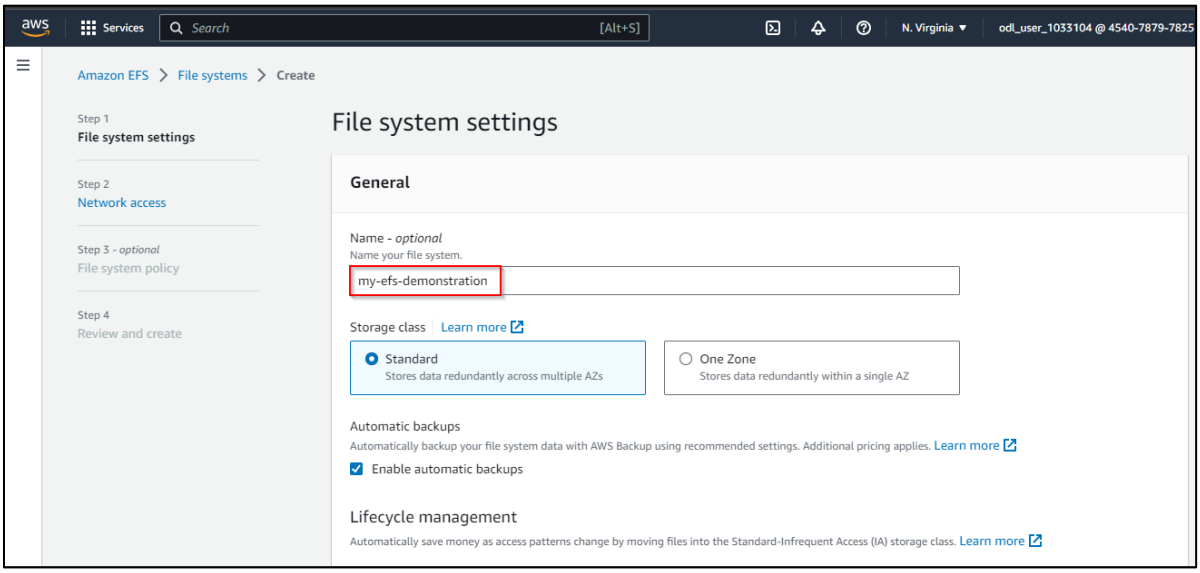
1.2 Click **Create file system**

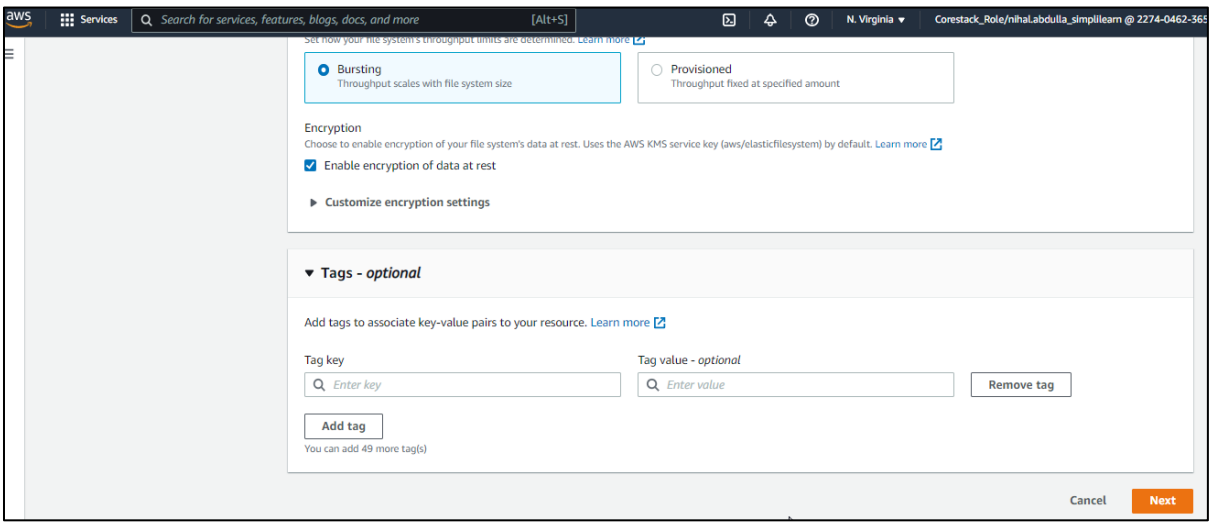


1.3 Click **Customize**

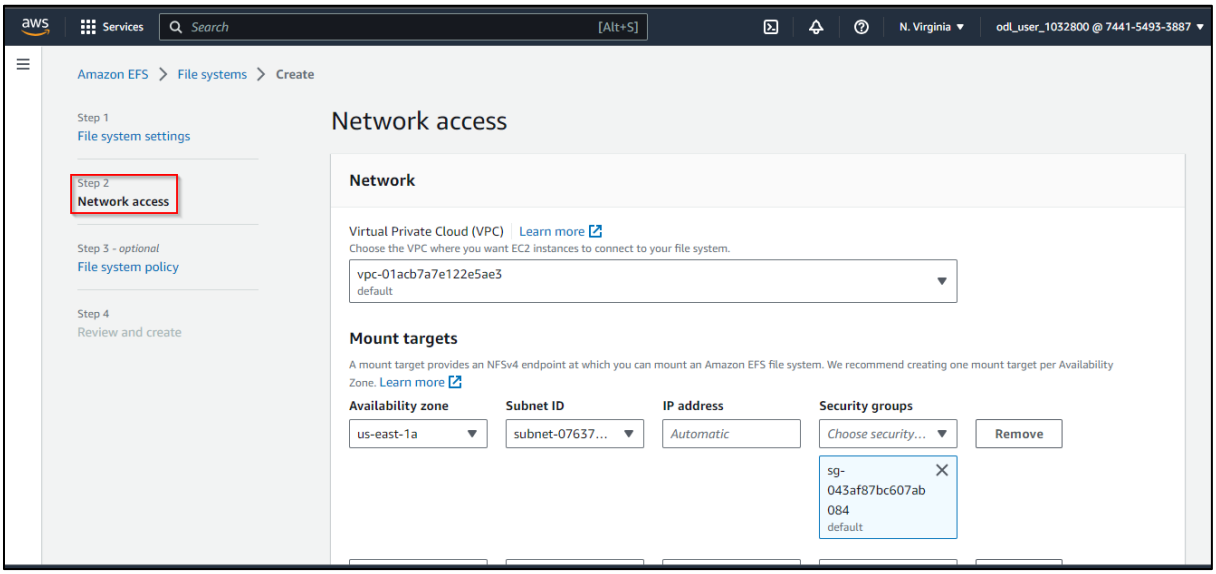


1.4 Name it **my-efs-demonstration**, select the options **Standard** and **Bursting**, and then click **Next**

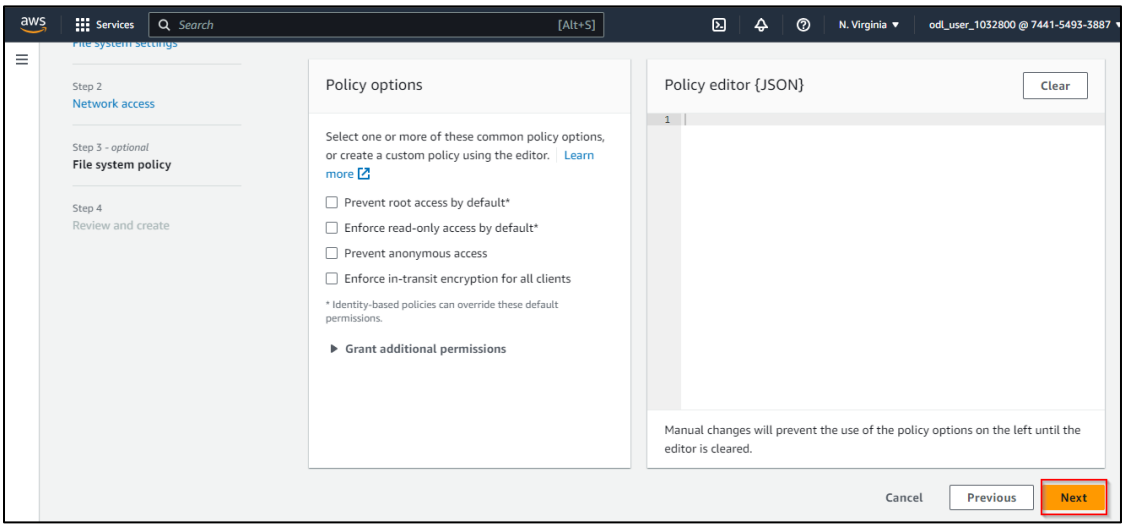




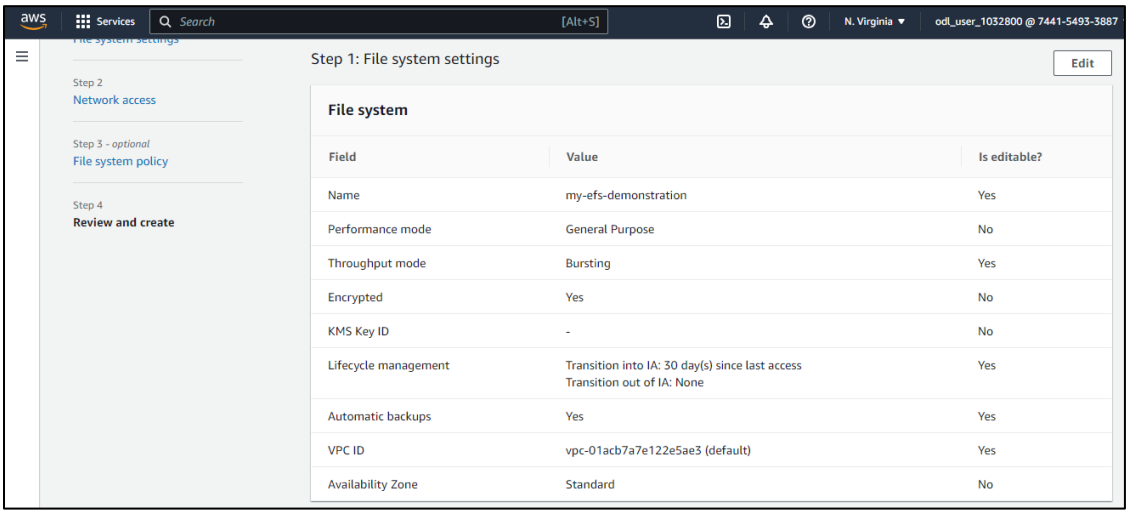
1.5 Click **Network access** and set it as default

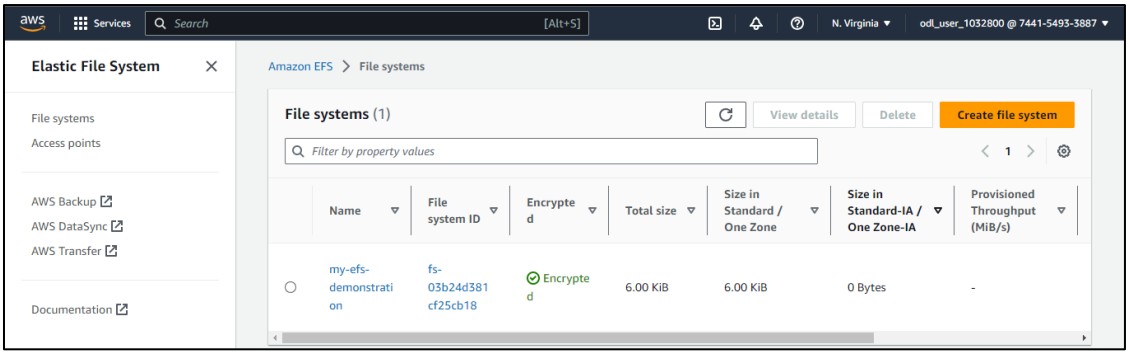


1.6 Click **Next**



1.7 Review the file system and click **Create**

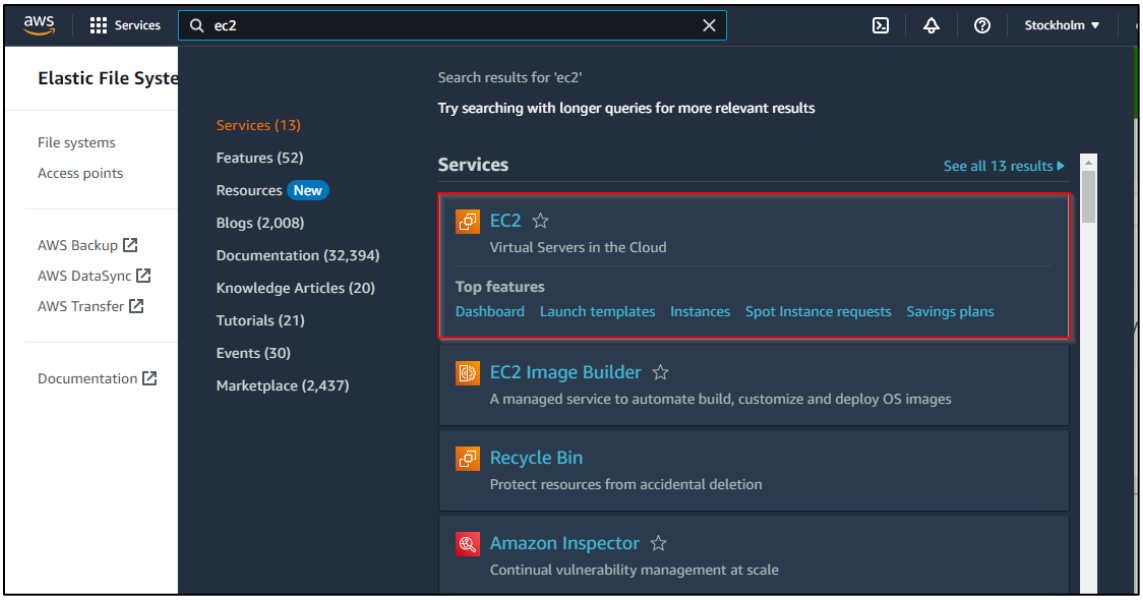




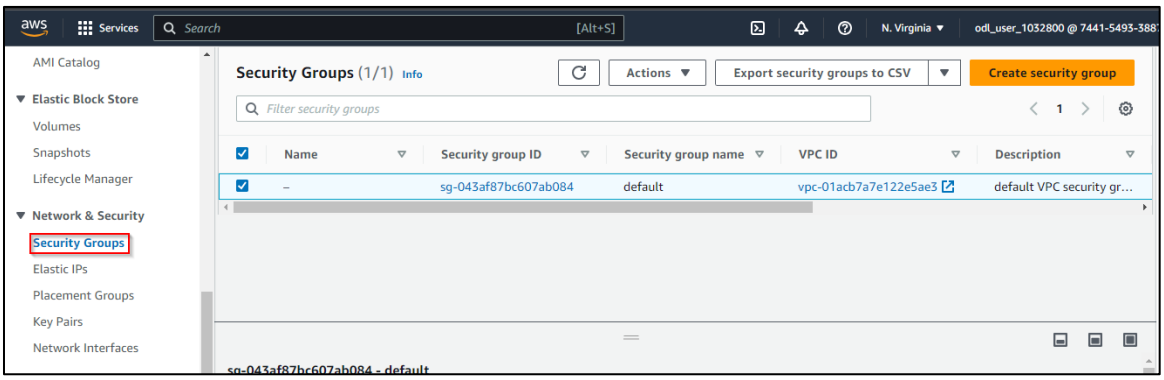
The EFS file is now successfully created.

Step 2: Create a security group to configure network access

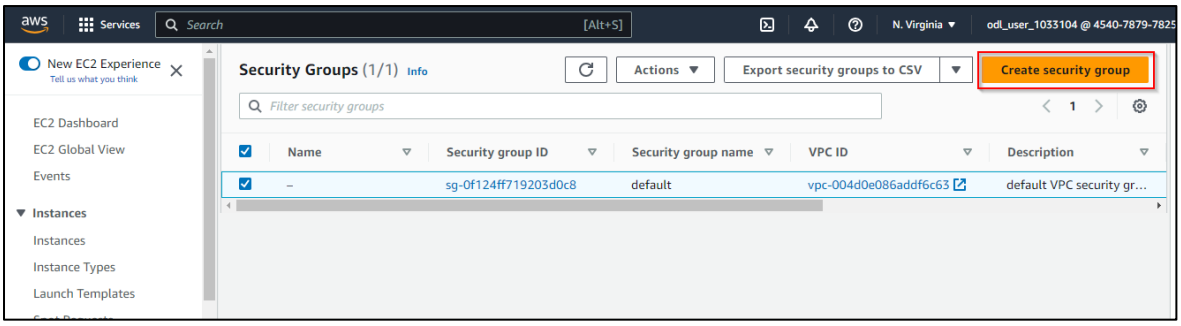
2.1 Navigate to **EC2** and click on it



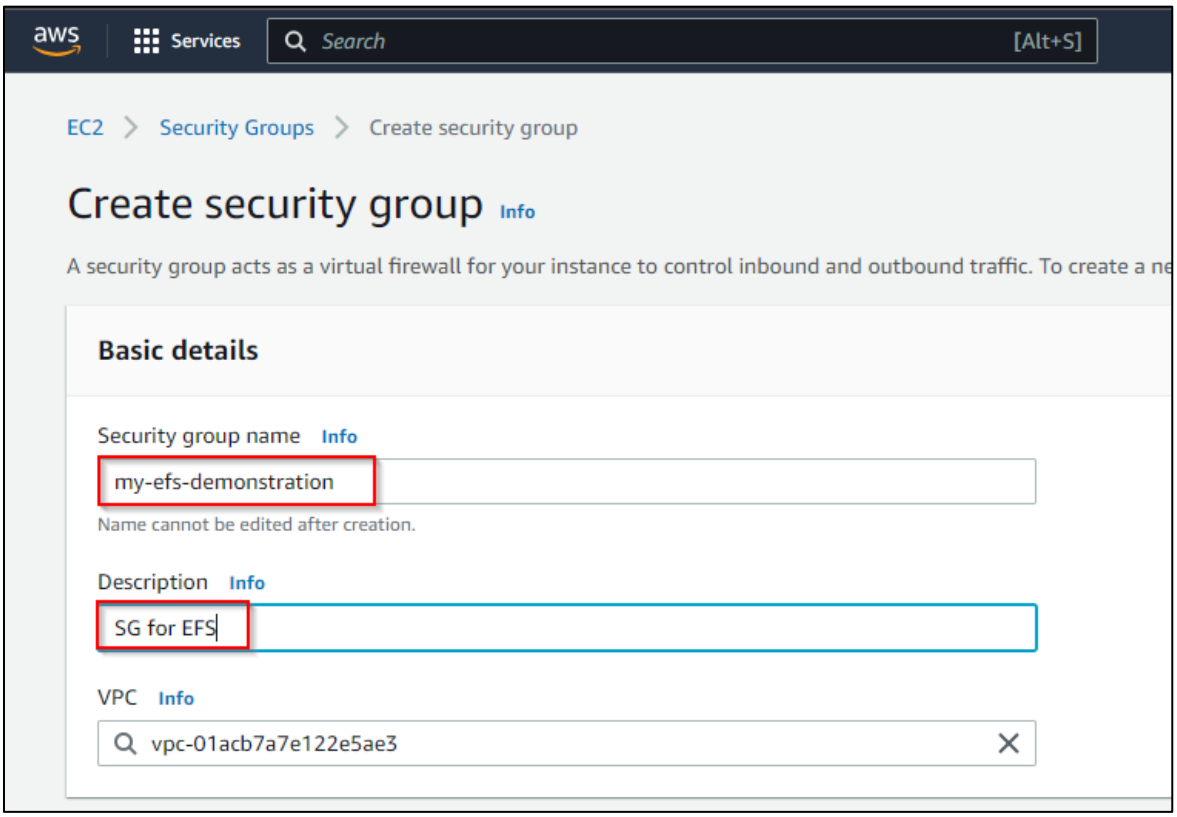
2.2 Click on **Security Groups**



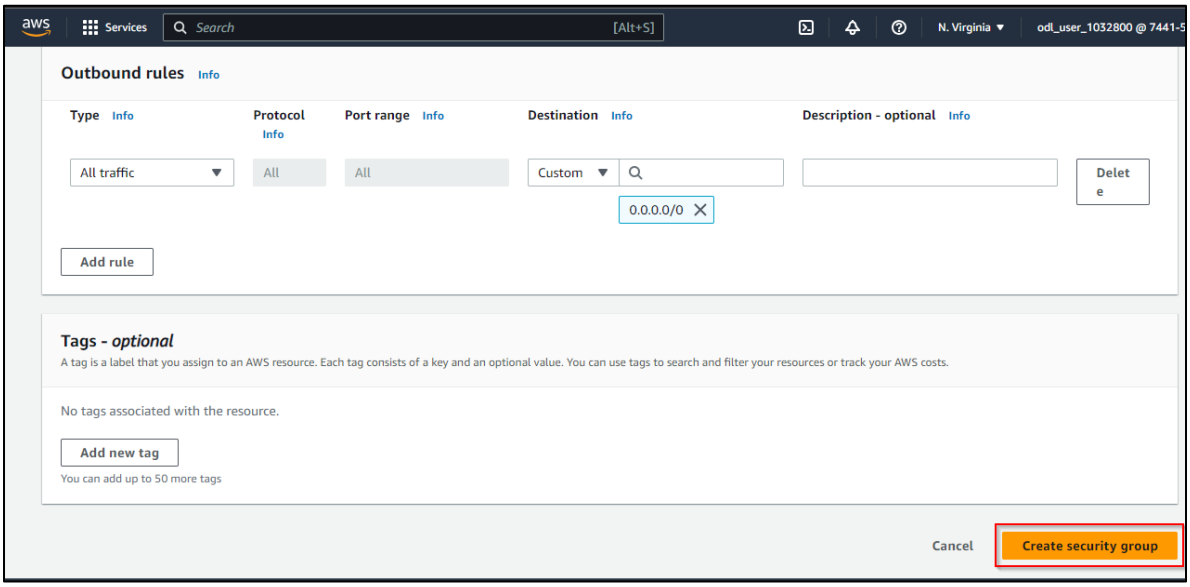
2.3 Click on the **Create security group** button

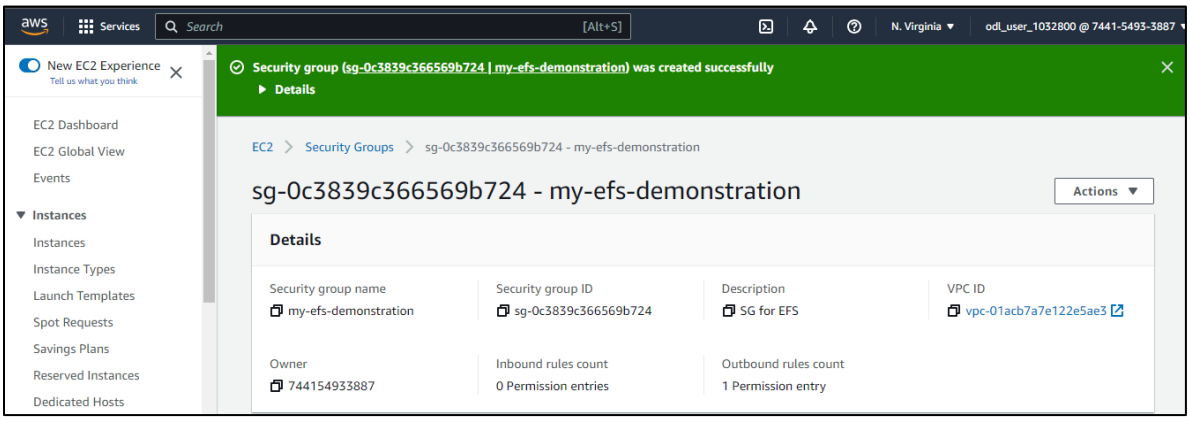


2.4 Enter the security group name as **my-efs-demonstration** and enter a description



2.5 Click on **Create security group**

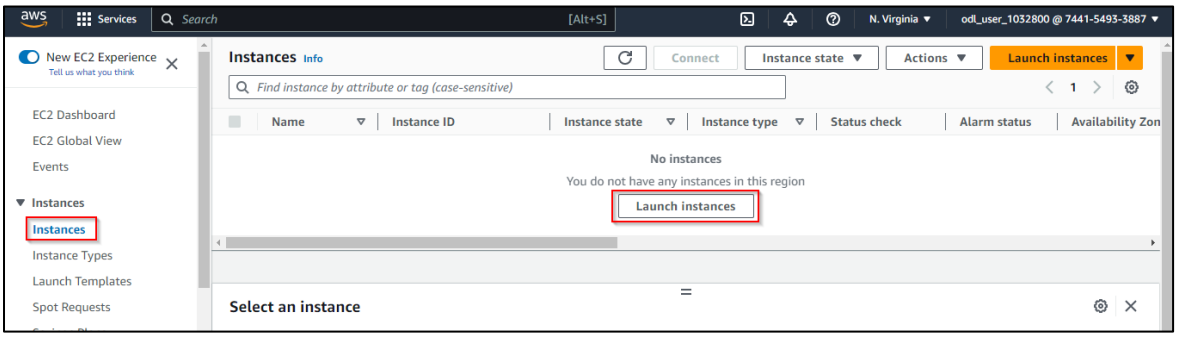




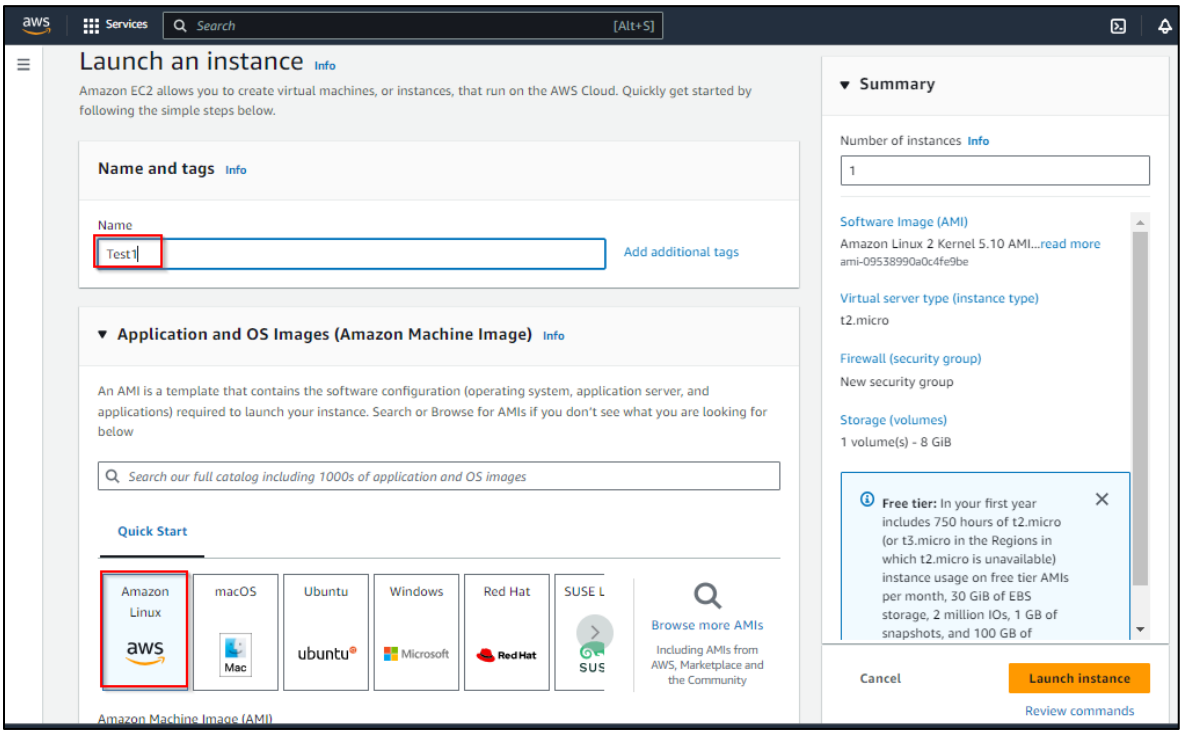
The security group has been created successfully and must be added to the EFS.

Step 3: Create AWS instances to access the EFS

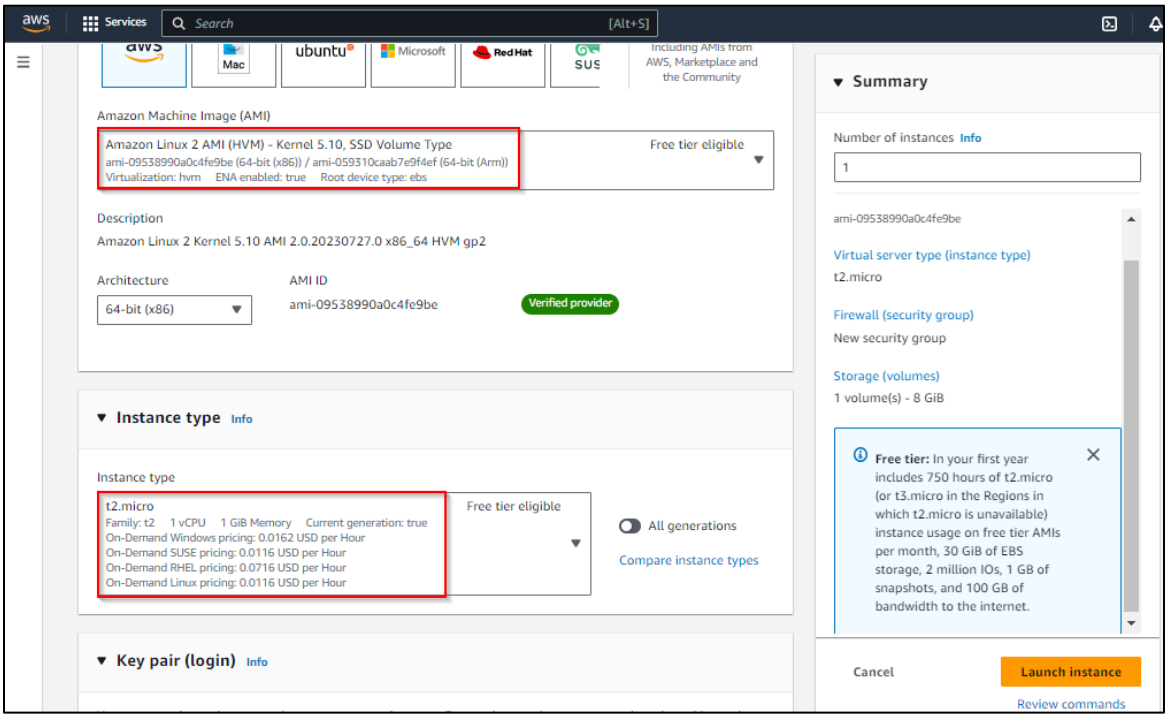
3.1 Navigate to **Instances** > **Launch instances**



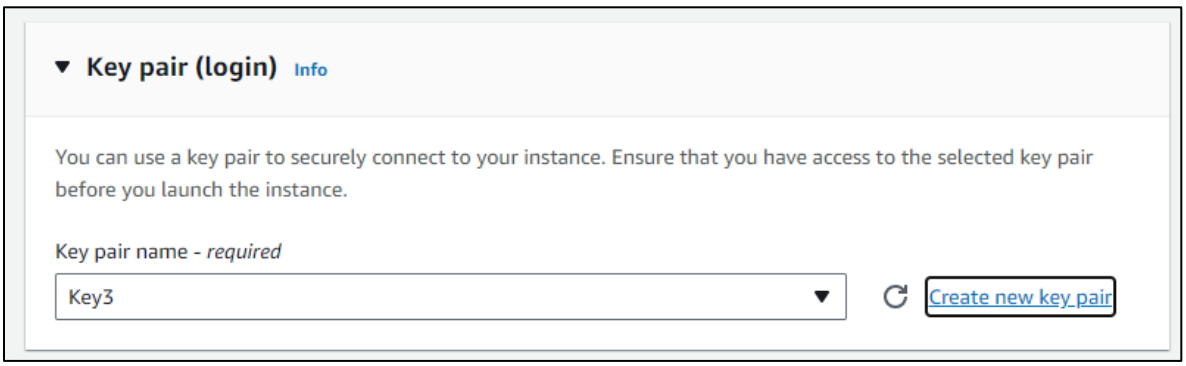
3.2 Enter the name as **Test1** and select **Amazon Linux**



3.3 Select the **Amazon Linux 2 AMI** from the **Amazon Machine Image (AMI)** and **t2.micro** from the **Instance type**

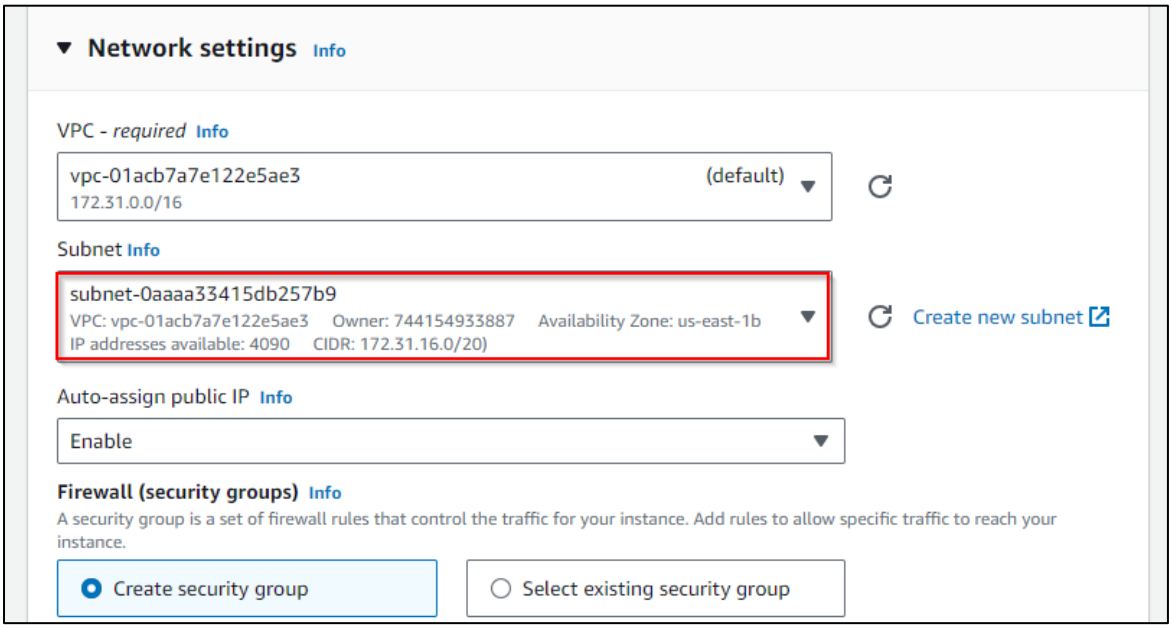


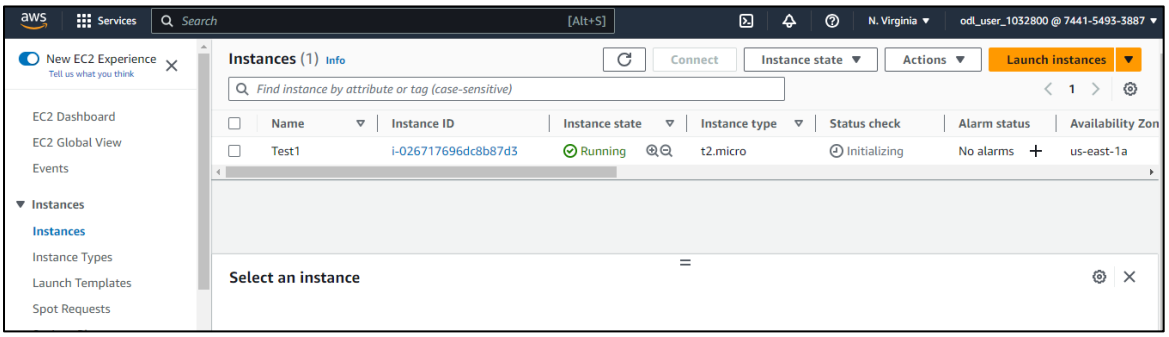
3.4 Click on **Create new key pair**



Note: Download the **pem.key** file

3.5 Under **Network settings**, change the **Subnet** to a different Availability Zone and click on **Create**

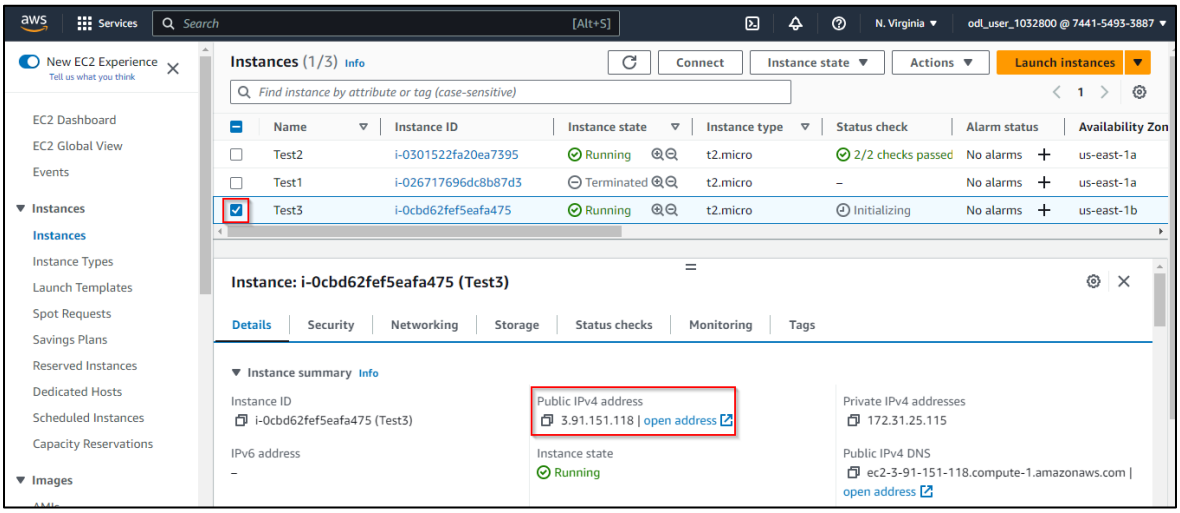




The **Test1** instance has been created successfully. Wait for initialization to be completed.

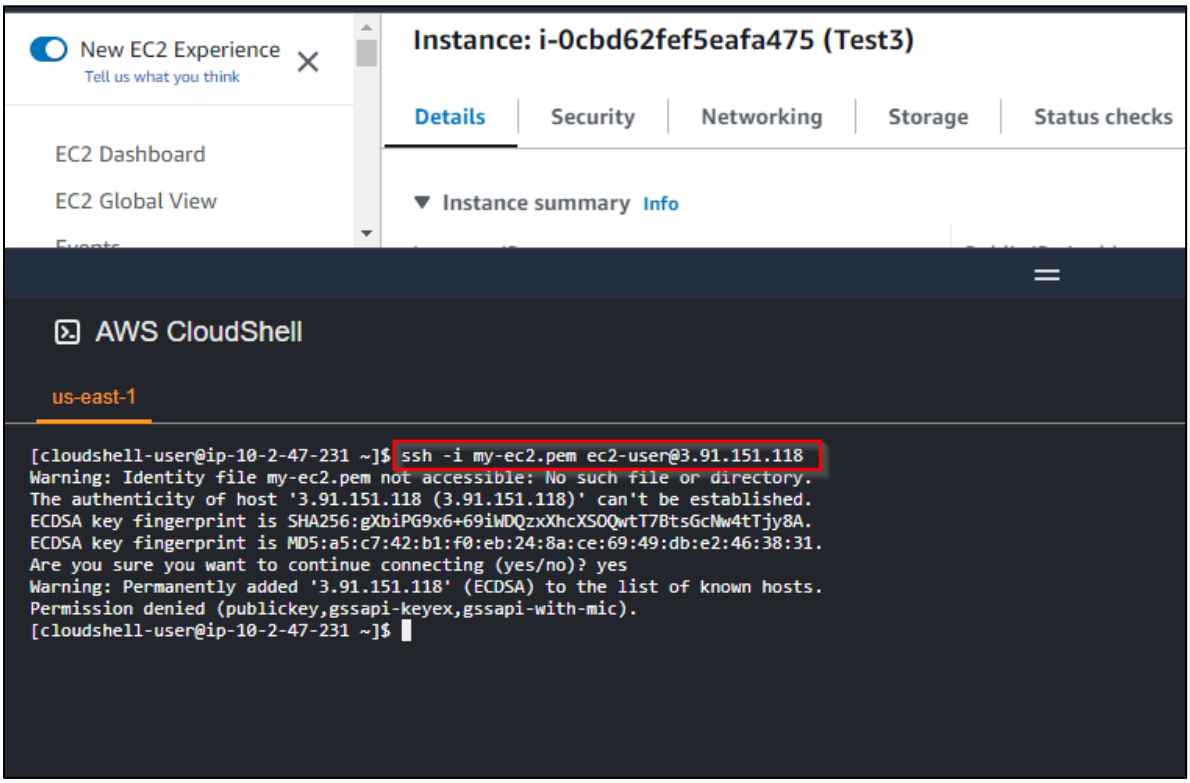
Repeat steps **3.1** to **3.5** to create another instance with a different Availability Zone.

3.6 Note down the **Public IPv4 address** of the current instance



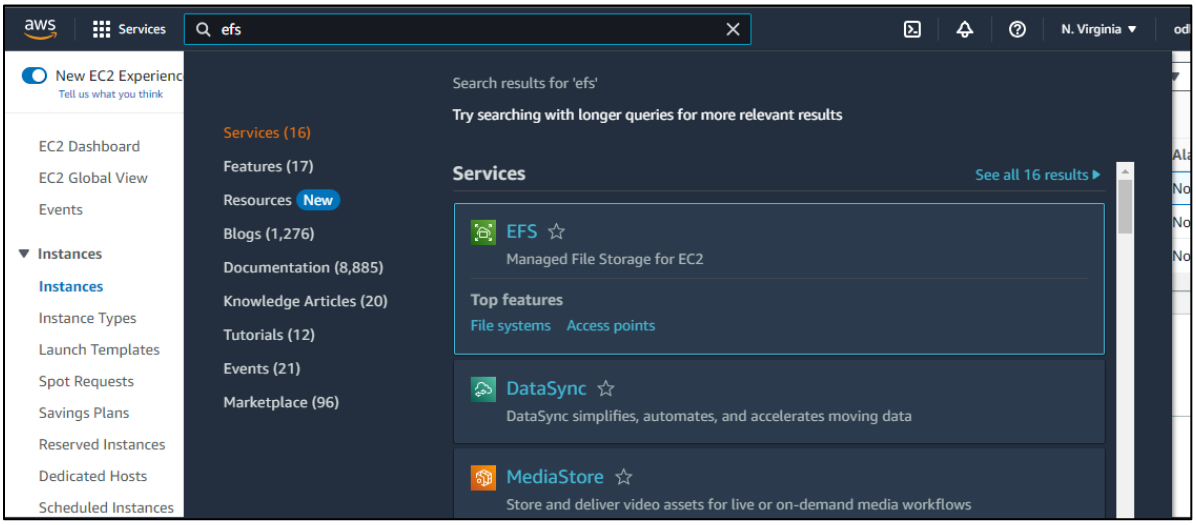
3.7 Open the **AWS CloudShell** and use SSH to connect to the instance:

ssh -i my-ec2.pem ec2-user@3.91.151.118

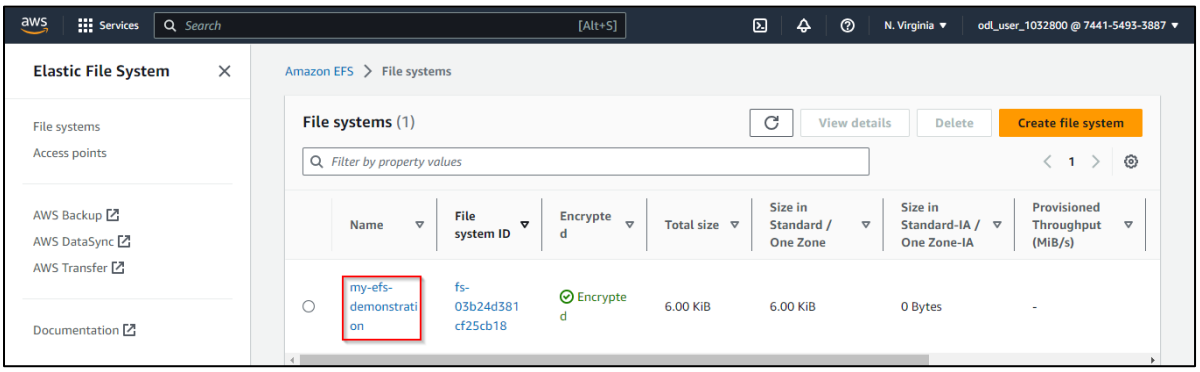


Step 4: Install EFS on the created instances

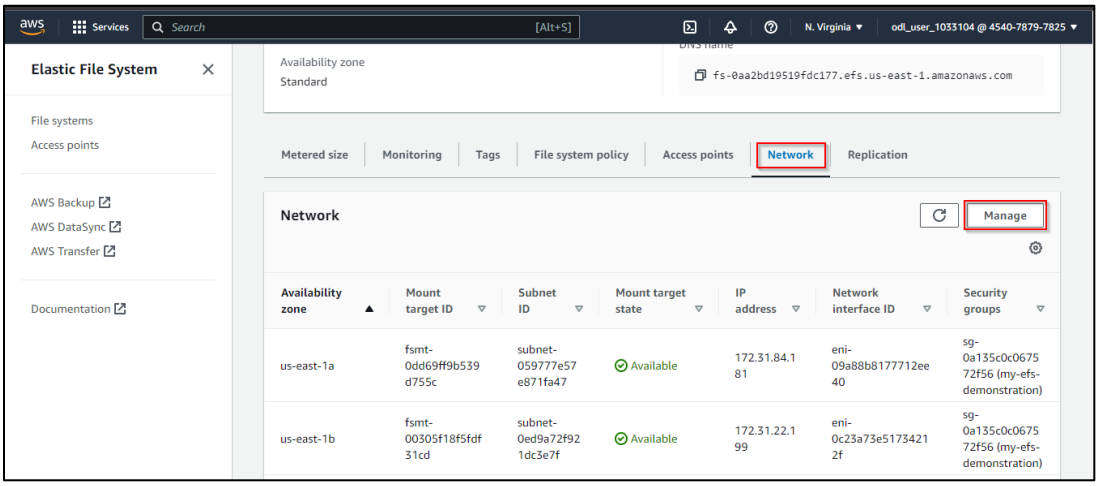
4.1 Open the **EFS** section in the AWS Management Console



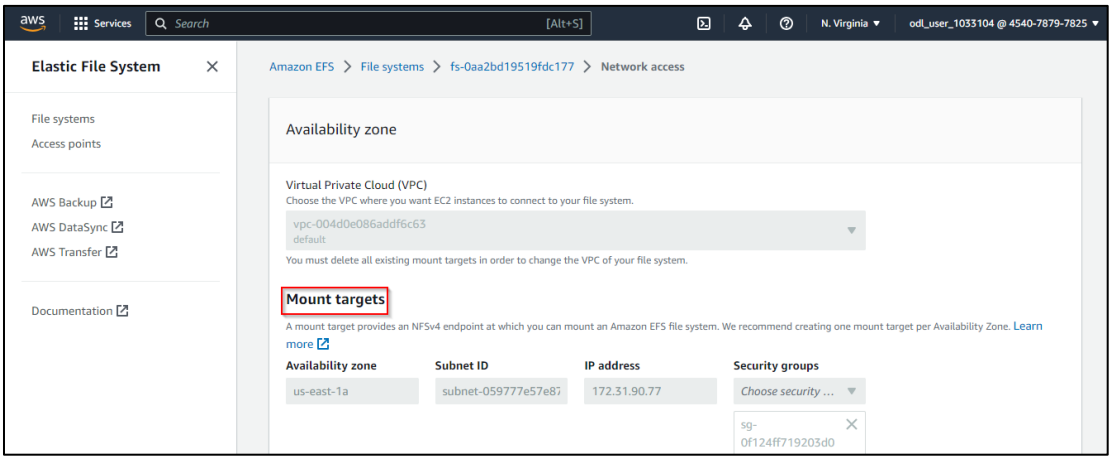
4.2 Access the **Elastic File System** you created in **Step 1**



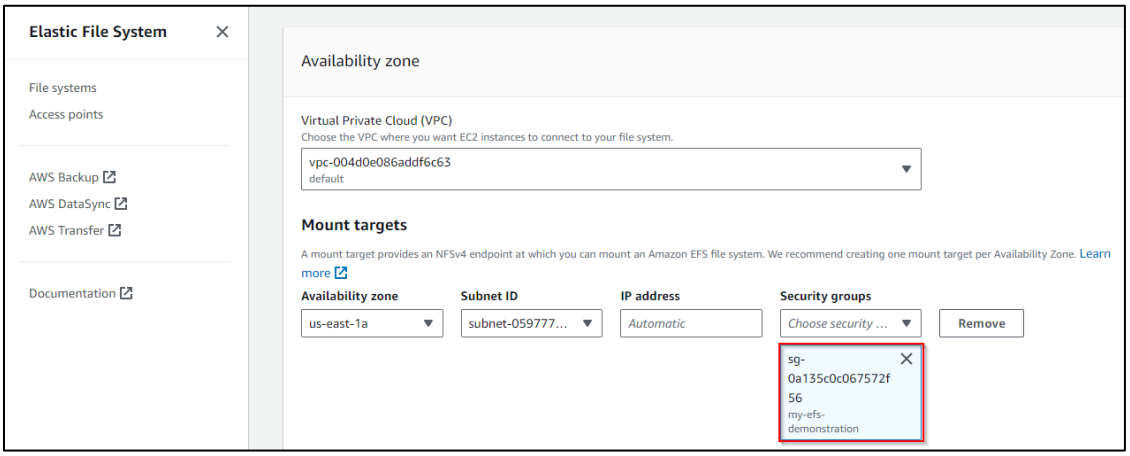
4.3 Click on **Network** and then **Manage**



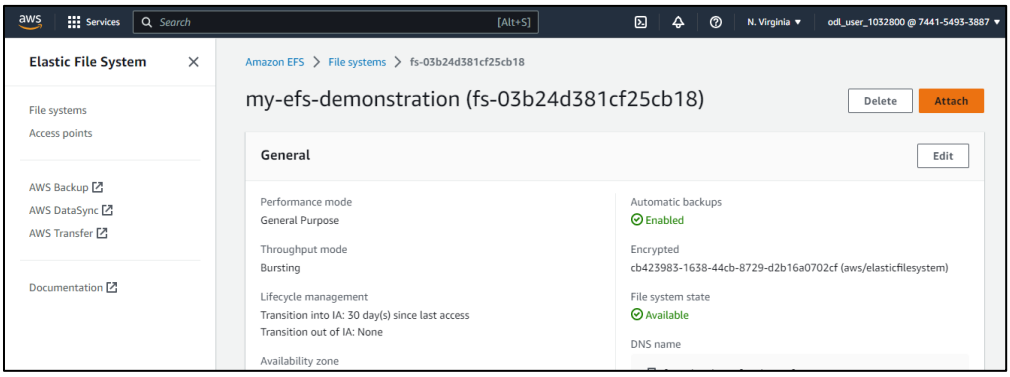
4.4 Remove existing mount targets' availability zones

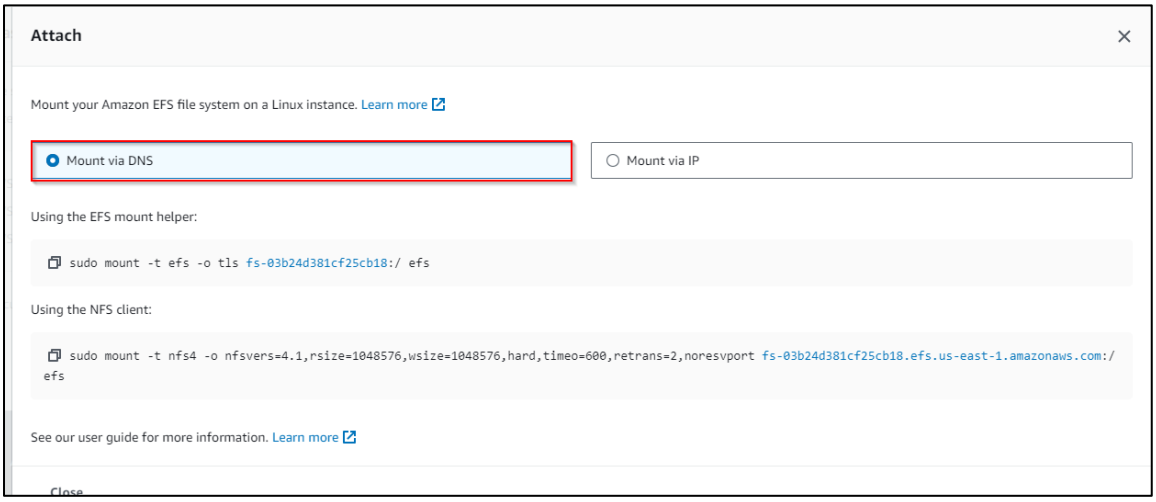


4.5 Add the availability zone of your EFS, **my-efs-demonstration**



4.6 Click **Attach** and then **Mount via DNS**





4.7 Follow the guide to install the **amazon-efs-utils** package on both instances:
https://docs.aws.amazon.com/efs/latest/ug/installing-amazon-efs-utils.html

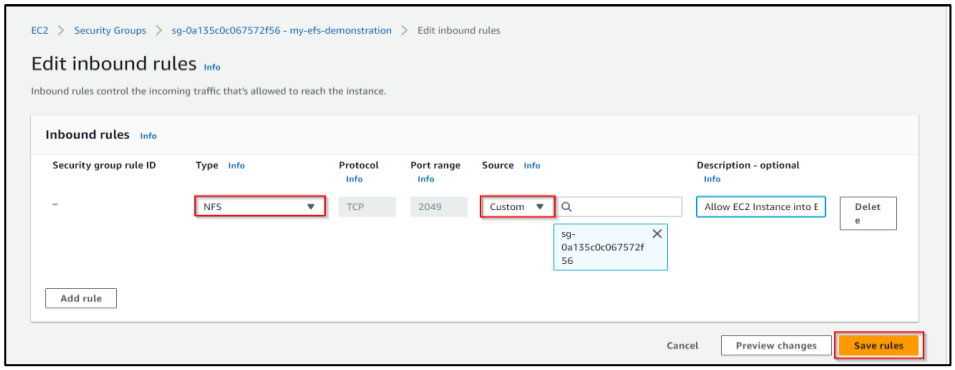
4.8 Execute the command **sudo yum install -y amazon-efs-utils** in the **AWS CloudShell** of both instances

```
[ec2-user@ip-172-31-47-151 ~]$ sudo yum install -y amazon-efs-utils
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
Resolving Dependencies
--> Running transaction check
---> Package amazon-efs-utils.noarch 0:1.27.1-1.amzn2 will be installed
--> Processing Dependency: stunnel >= 4.56 for package: amazon-efs-utils-1.27.1-1.amzn2.noarch
--> Running transaction check
---> Package stunnel.x86_64 0:4.56-6.amzn2.0.3 will be installed
--> Finished Dependency Resolution

Dependencies Resolved
```

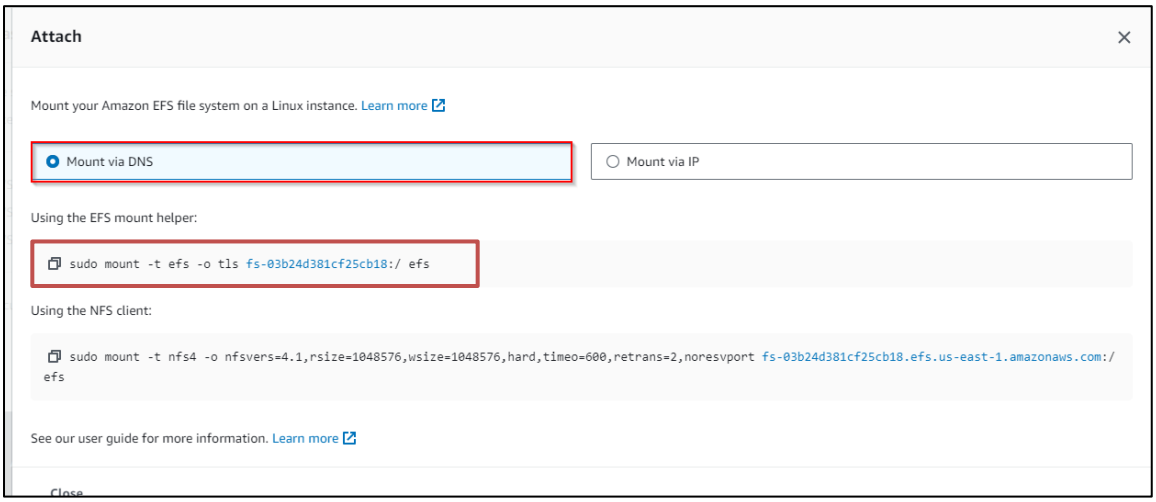
```
[ec2-user@ip-172-31-80-38 ~]$ sudo yum install -y amazon-efs-utils
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
Resolving Dependencies
--> Running transaction check
---> Package amazon-efs-utils.noarch 0:1.27.1-1.amzn2 will be installed
--> Processing Dependency: stunnel >= 4.56 for package: amazon-efs-utils-1.27.1-1.amzn2.noarch
--> Running transaction check
---> Package stunnel.x86_64 0:4.56-6.amzn2.0.3 will be installed
--> Finished Dependency Resolution

Dependencies Resolved
```

4.9 Create an **efs** directory on both instances using:
mkdir efs

4.10 Navigate to the security group and add inbound rules for EFS



4.11 On the instances, use the EFS mount helper to mount the EFS

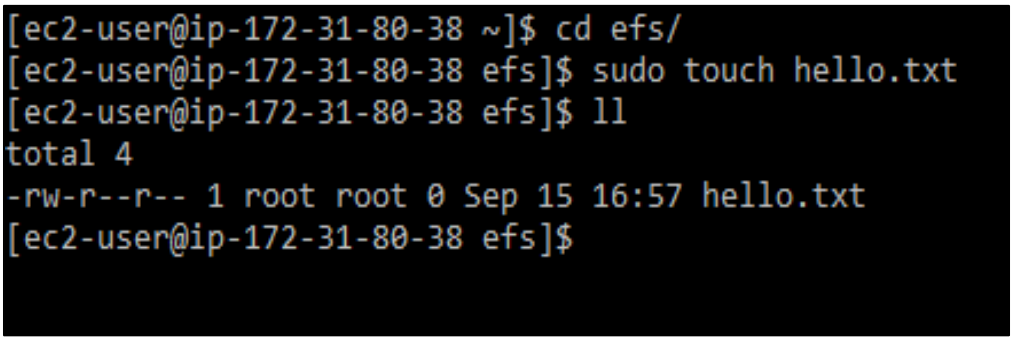


4.12 Log into one of the instances and create a file such as **hello.txt:**

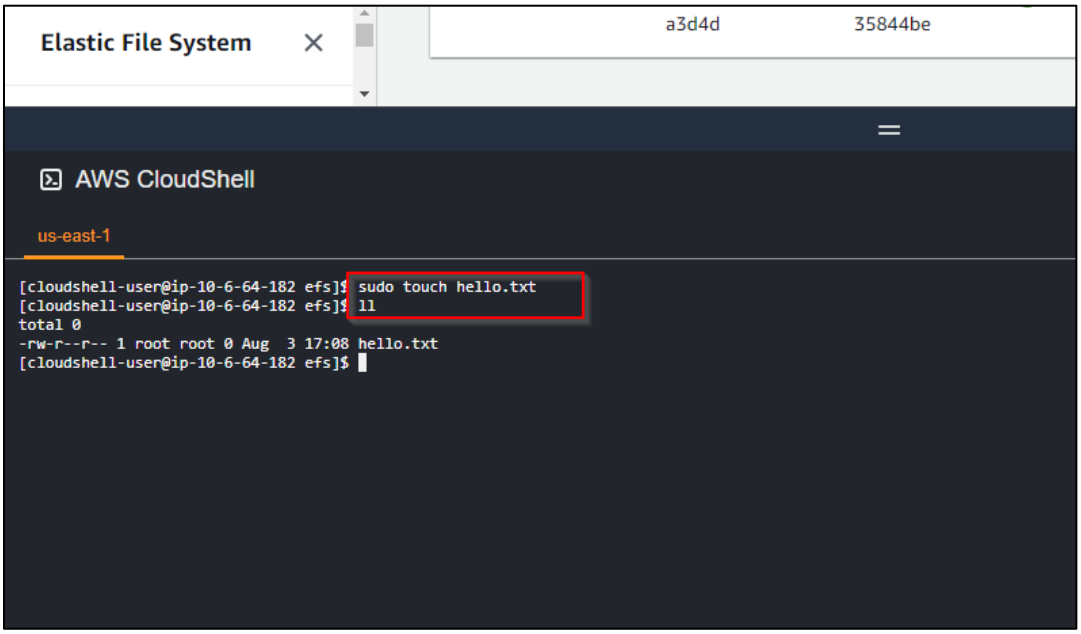
cd efs/

sudo touch hello.txt

ll



4.13 Log in to the other instance, and you will be able to see the same file, **hello.txt**, in that instance as well.



By following these steps, you have effectively established and mounted an Amazon Elastic File System (EFS) on multiple instances, showcasing the seamless sharing and accessibility of files across your AWS environment.