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2KE20CS032

Assignment 45

Understood. To follow the provided instructions and create the files/directory using the same name and case as provided in the task steps, please provide me with the specific names and case instructions for the files/directory you want to create.

AWS

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Assignment: 11 : Create an Amazon EFS File System and Mount to an EC2 Instance

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Overview:

Creating EFS file system

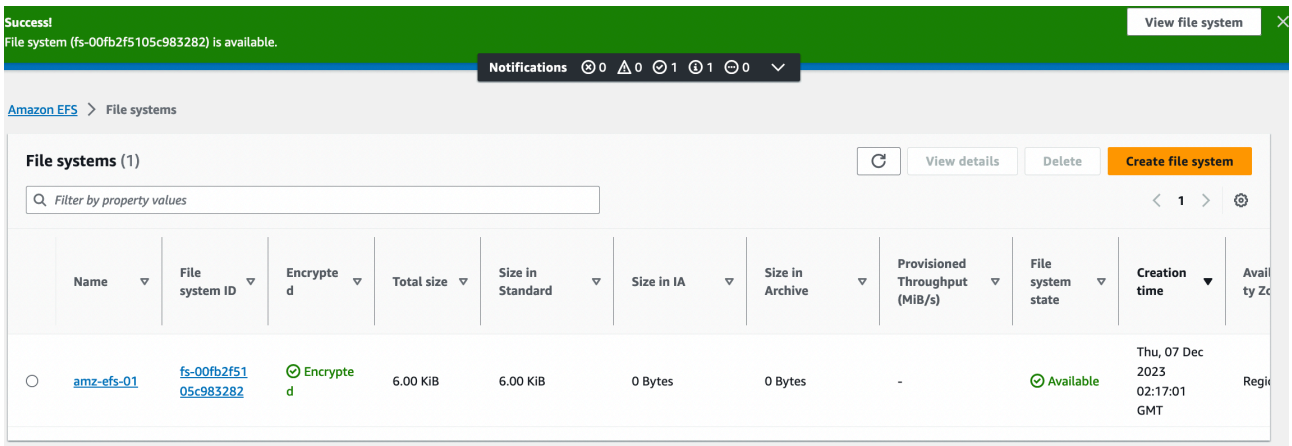
Mounting it with two instances (you can have it mounted with 2 public instances that we have launched

METHOD-01

Steps:

1 Navigate to EFS service page and click on "create file system”

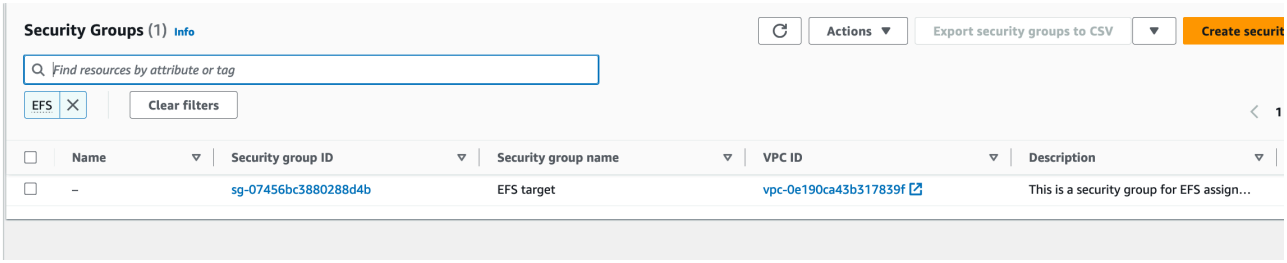
2. Provide the Name, select the VPC and click on "create" and file system is created



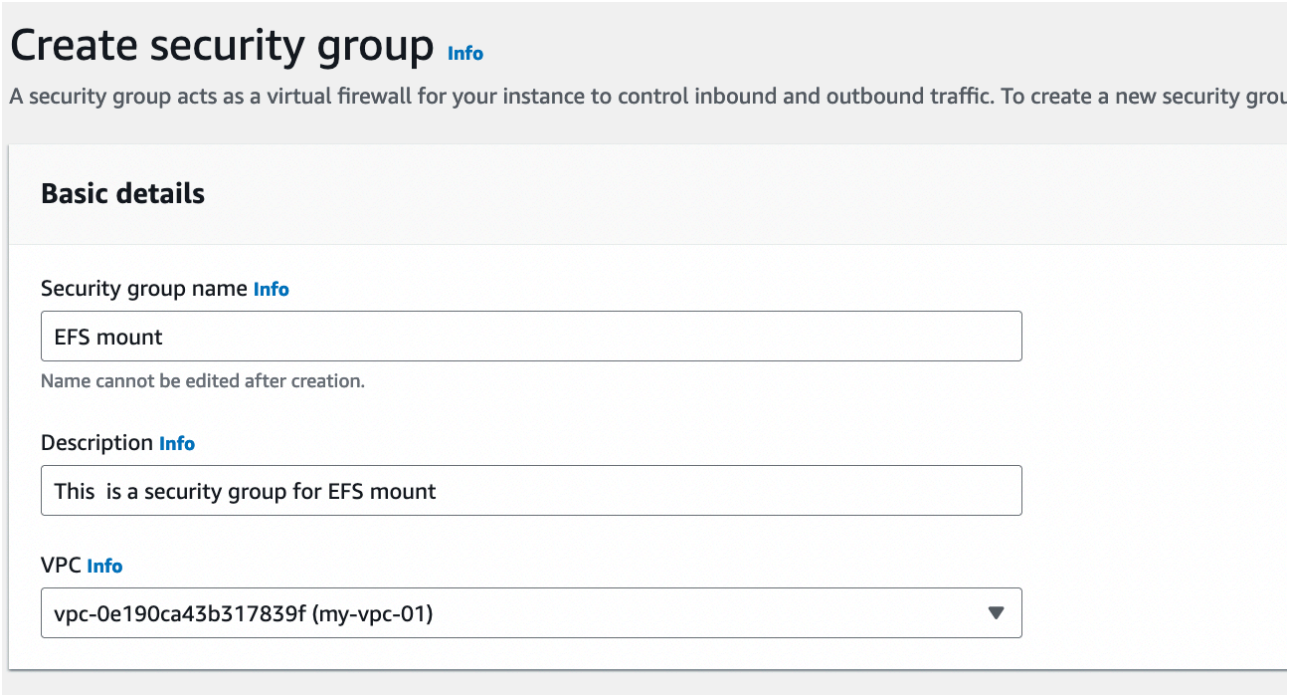
You need to have specific security groups to perform the mount, follow the document attached with the assignment and configure

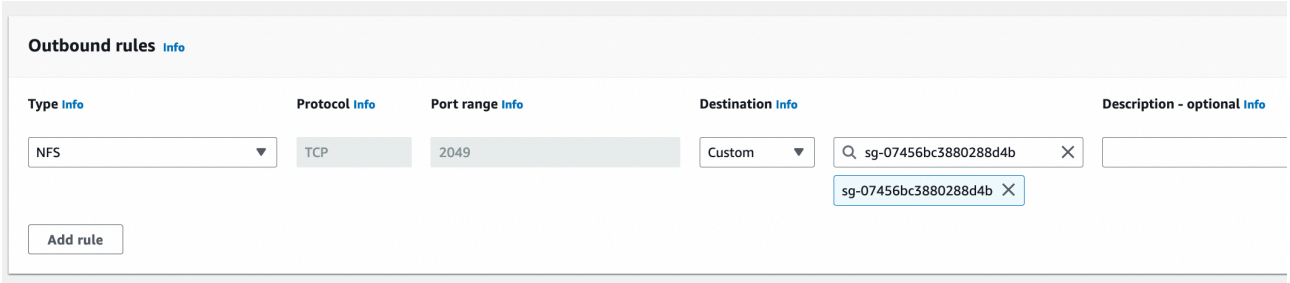
Security Group configuration for EFS

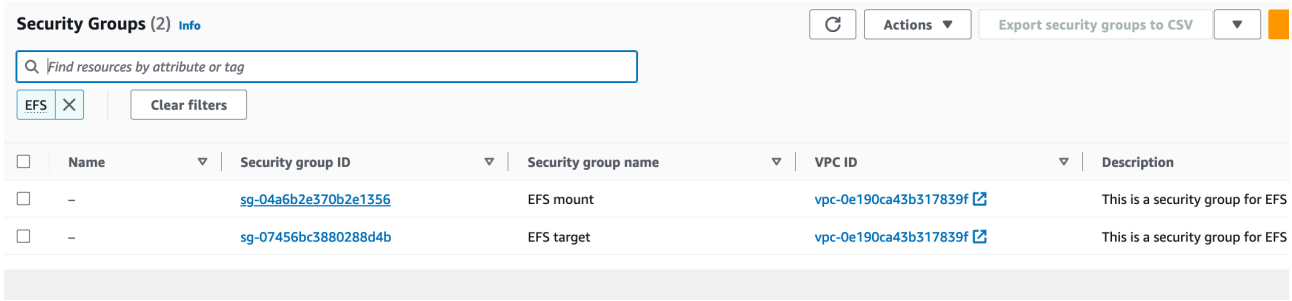
1. Create a new security group name it EFS Target, and leave all the rules blank and save it (There will be no inbound or outbound rules)



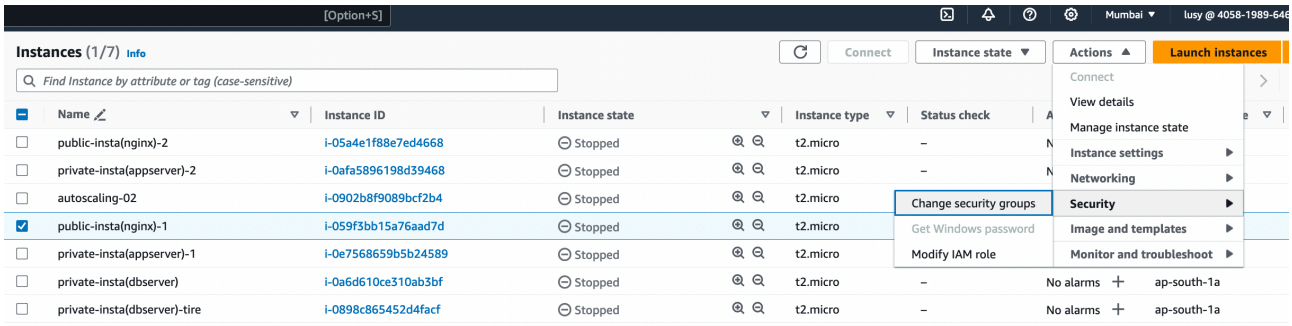
2. Create another security group named EFS Mount, and in this one add the inbound rule for NFS. Set the SOURCE for this rule to the EFS Target security group

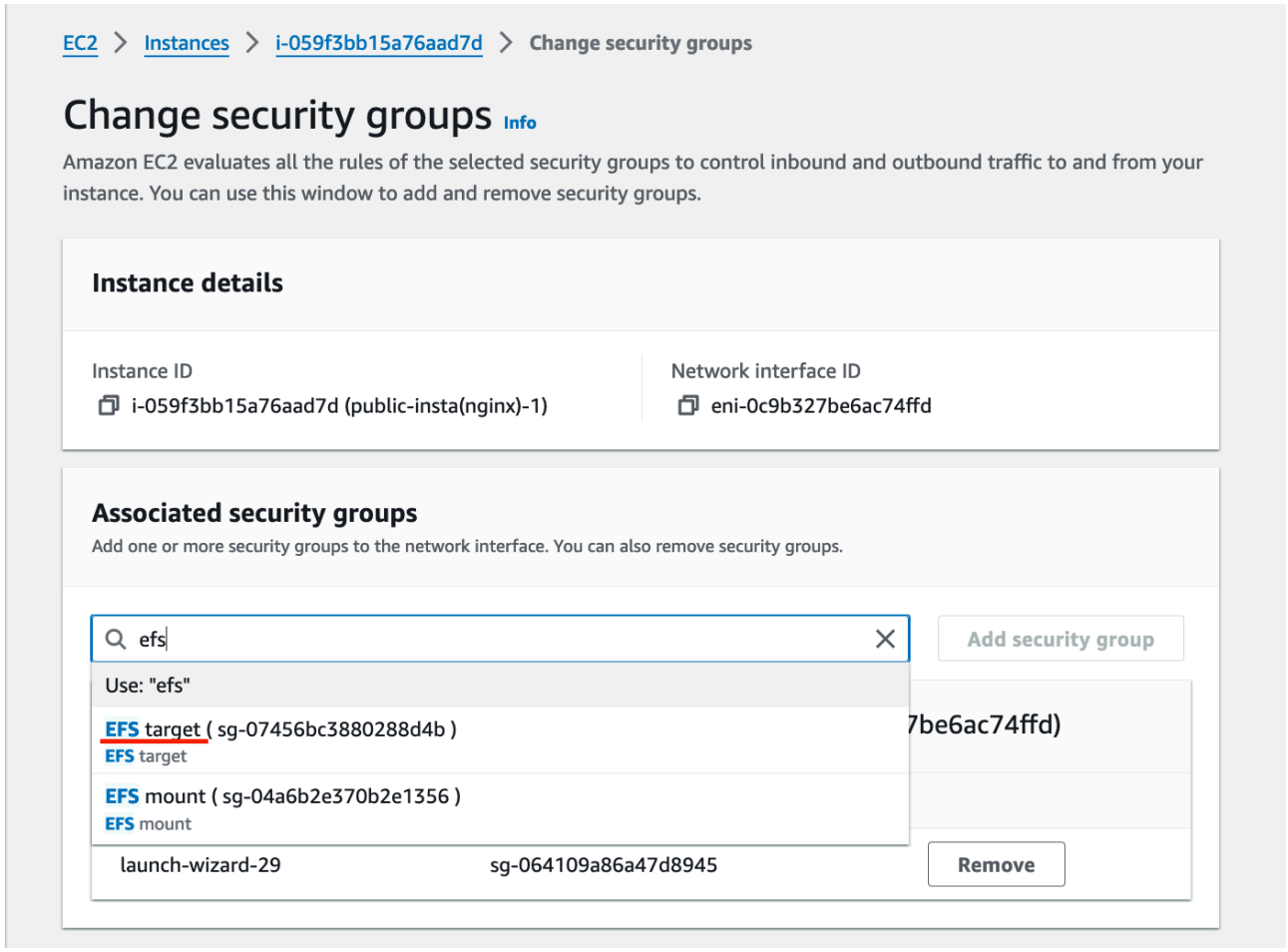




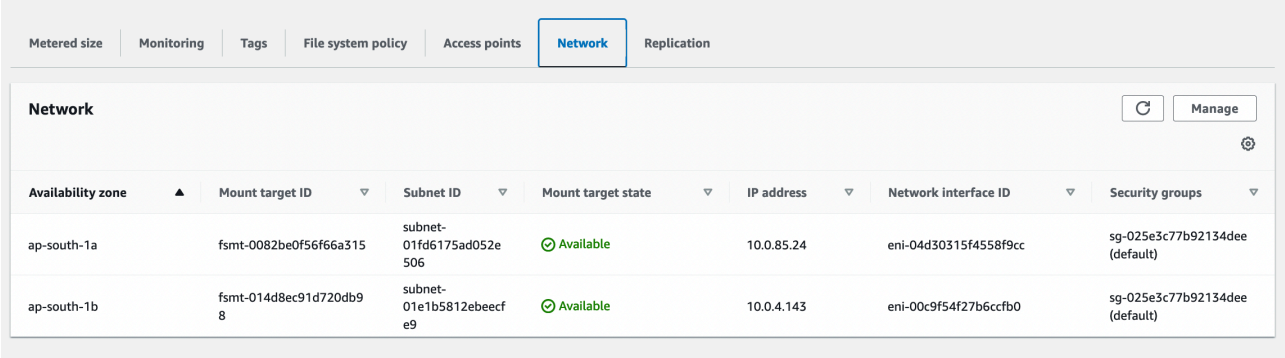


3. Add the EFS Target group to your EC2 instance, follow the screenshots





4. Go to the EFS dashboard navigate to the network tab for each EFS Mount Target (availability zone), you need to add the EFS Mount security group and remove the



VPC Default group

3. Navigate to your instance where you added the security group you need to create a directory where you will mount the EFS. Navigate to /mnt and run
sudo mkdir efs

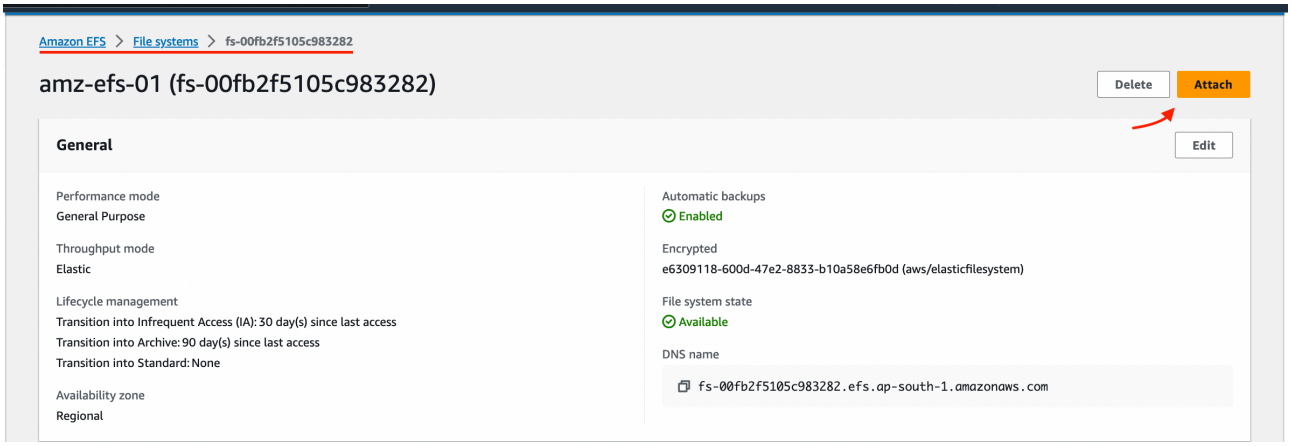
```
ec2-user@ip-10-0-1-178.ap-south-1.compute.internal:~ (0.162s)

A newer release of "Amazon Linux" is available.
  Version 2023.2.20231113:
Run "/usr/bin/dnf check-release-update" for full release and version update info

ec2-user@ip-10-0-1-178.ap-south-1.compute.internal ~ (0.158s)
sudo mkdir efs

ec2-user@ip-10-0-1-178.ap-south-1.compute.internal ~ (0.106s)
cd efs

ec2-user@ip-10-0-1-178.ap-south-1.compute.internal ~/efs (0.185s)
sudo mkdir fs2
```

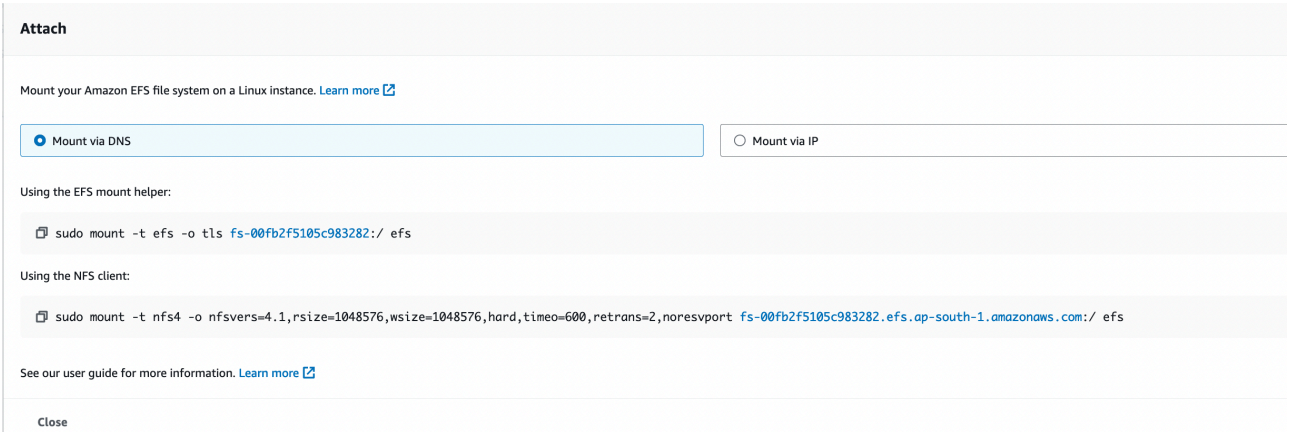
cd efs
sudo mkdir fs2

4. Now, you need to install the amazon efs utils library, which will allow us to run the

```
ec2-user@ip-10-0-1-178.ap-south-1.compute.internal ~/efs (2.719s)
sudo yum install -y amazon-efs-utils
nginx repo
Errors during downloading metadata for repository 'nginx':
  - Status code: 404 for http://nginx.org/packages/centos/2023.2.20231030/x86_64/repoda
Error: Failed to download metadata for repo 'nginx': Cannot download repomd.xml: Cannot
mirrors were tried
Ignoring repositories: nginx
Last metadata expiration check: 0:03:24 ago on Thu Dec  7 02:31:39 2023.
Dependencies resolved.
================================================================================
 Package                    Architecture        Version
================================================================================
Installing:
 amazon-efs-utils           noarch              1.35.0-1.amzn2023
Installing dependencies:
 stunnel                    x86_64              5.58-1.amzn2023.0.2

Transaction Summary
```

connection command and mount the EFS. Run the command
sudo yum install -y amazon-efs-utils
5. Access the file system that you created, and click on the button “Attach."



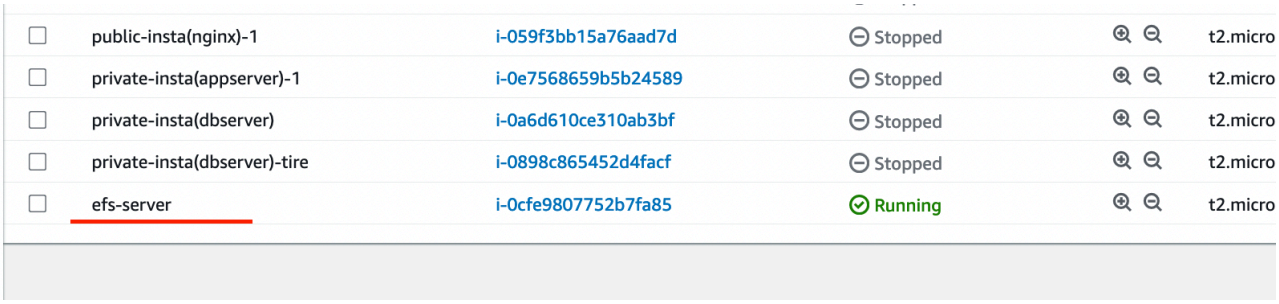


Now you can mount and enjoy the EFS

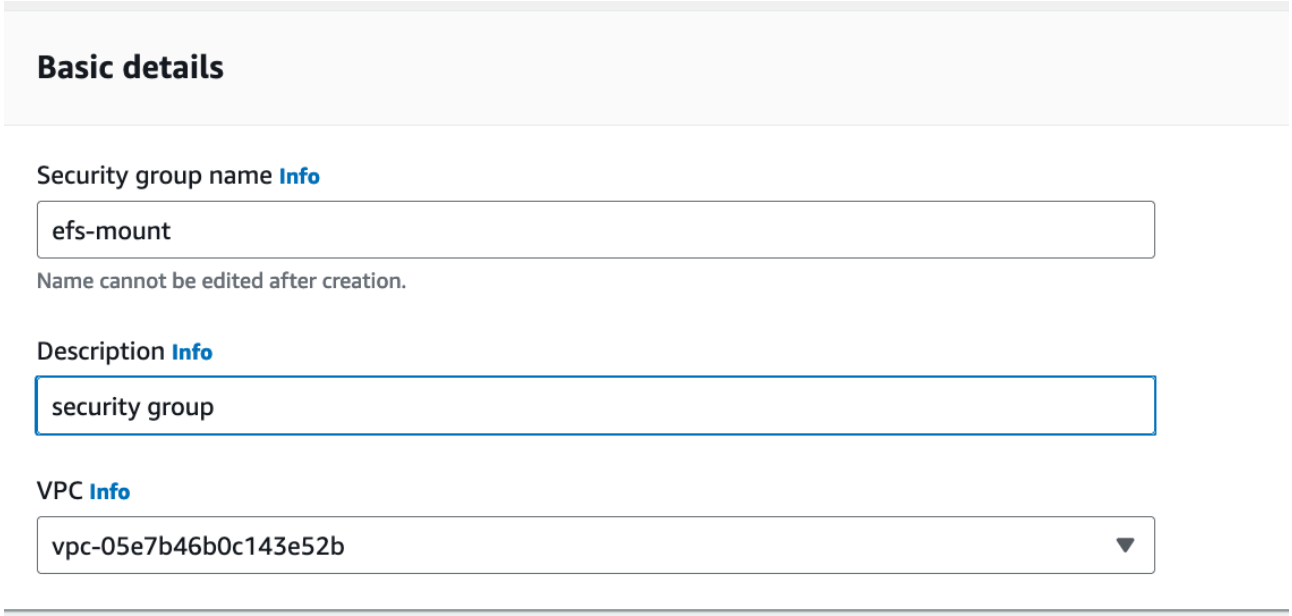
```
ec2-user@ip-10-0-1-132.ap-south-1.compute.internal /efs (0.166s)
df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        4.0M     0  4.0M   0% /dev
tmpfs           475M     0  475M   0% /dev/shm
tmpfs           190M  3.0M  188M   2% /run
/dev/xvda1      8.0G  1.6G  6.4G  20% /
tmpfs           475M     0  475M   0% /tmp
/dev/xvda128     10M  1.3M  8.7M  13% /boot/efi
tmpfs            95M     0   95M   0% /run/user/1000
127.0.0.1:/     8.0E     0  8.0E   0% /efs
127.0.0.1:/     8.0E     0  8.0E   0% /efs/fs2
```

METHOD-02

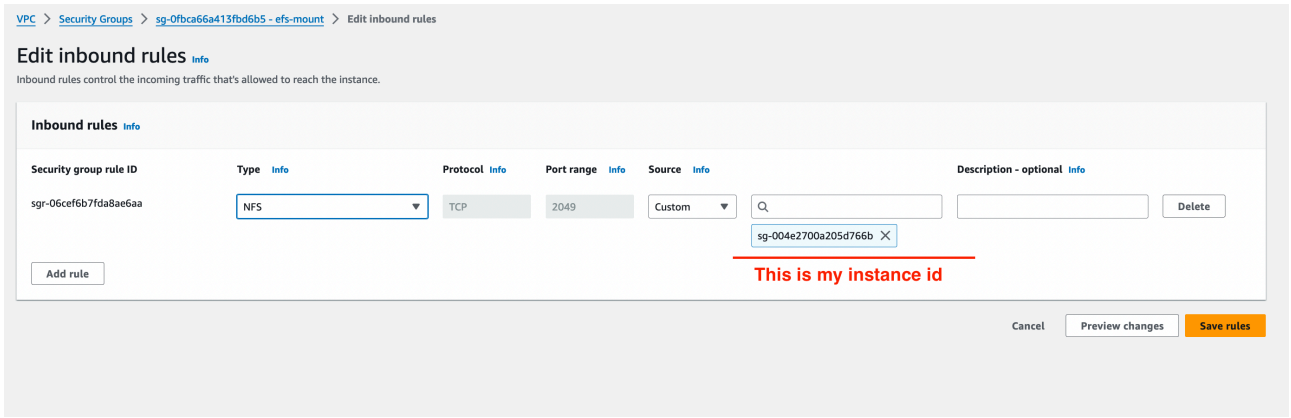
1: I have created my new instnce for c=test the file sytem

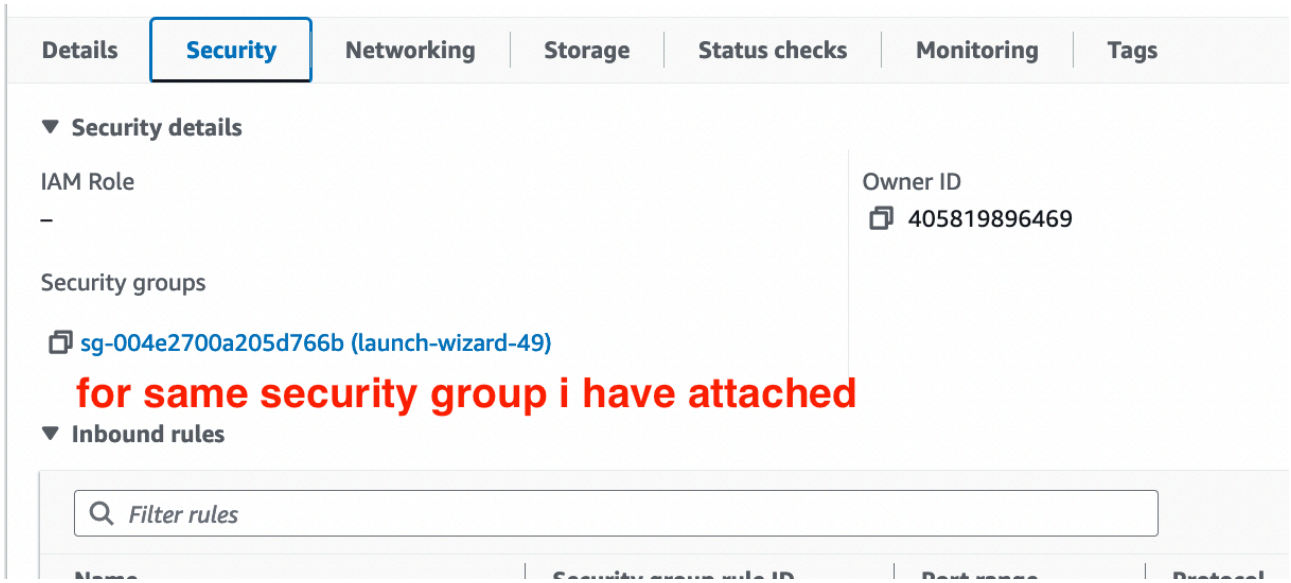


2: creating the security group

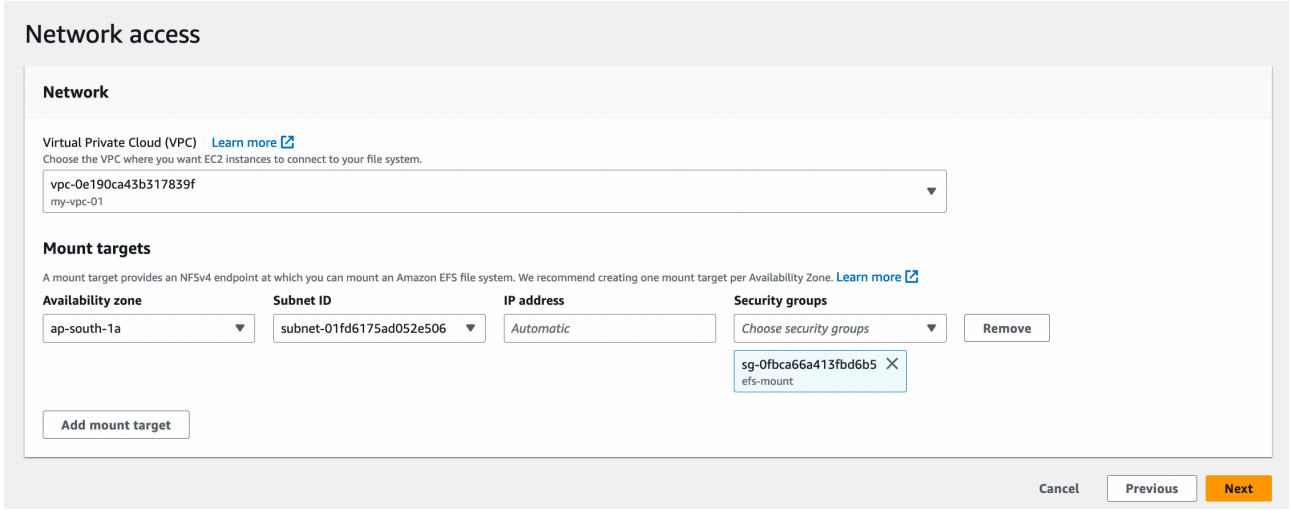


3: creating the inbount rules

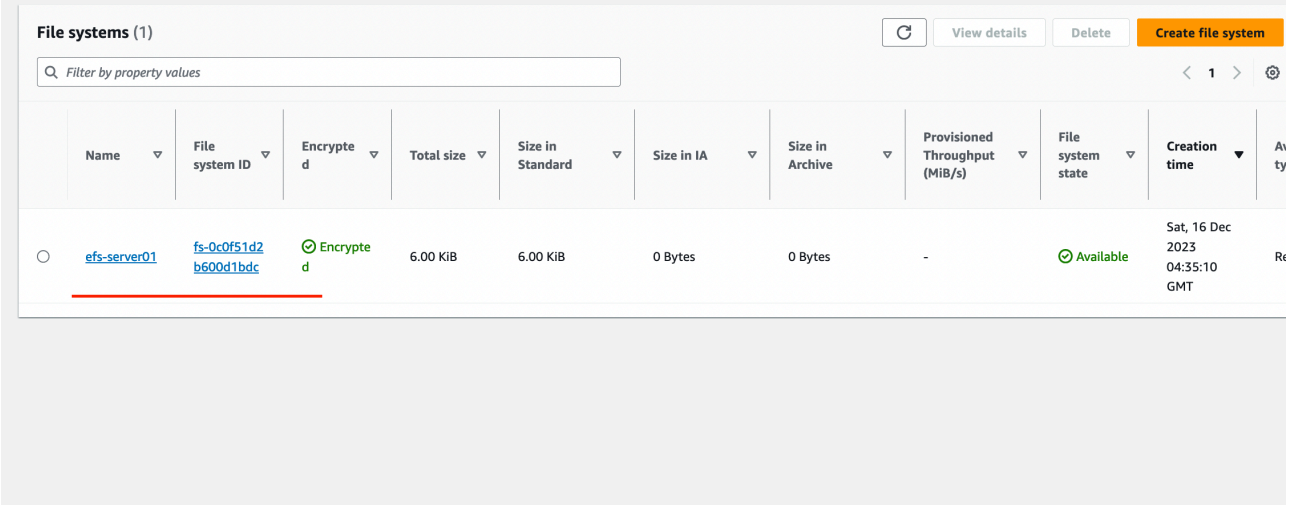




4: network access



5: creating the file system



6:login to your instance

```
ec2-user@ip-10-0-1-132.ap-south-1.compute.internal ~ (2.606s)
sudo yum install -y amazon-efs-utils
Last metadata expiration check: 0:13:59 ago on Sat Dec 16 04:22:15 2023.
Dependencies resolved.
================================================================================
 Package                 Architecture        Version                 Repository
================================================================================
Installing:
 amazon-efs-utils        noarch              1.35.0-1.amzn2023       amazonlinux
Installing dependencies:
 stunnel                 x86_64              5.58-1.amzn2023.0.2     amazonlinux

Transaction Summary
================================================================================
Install  2 Packages

Total download size: 212 k
Installed size: 556 k
Downloading Packages:
(1/2): amazon-efs-utils-1.35.0-1.amzn2023.noarch.rpm      591 kB/s |  56
(2/2): stunnel-5.58-1.amzn2023.0.2.x86_64.rpm             1.1 MB/s | 156
--------------------------------------------------------------------------------
Total                                                     1.0 MB/s | 212
Running transaction check
Transaction check succeeded.
Running transaction test
```

7:creating the mount point directory

```
ec2-user@ip-10-0-1-132.ap-south-1.compute.internal ~ (0.15s)
sudo mkdir /efs
```

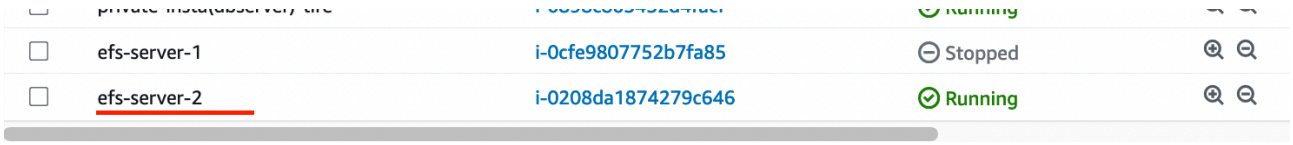
8: mount using if file-system id

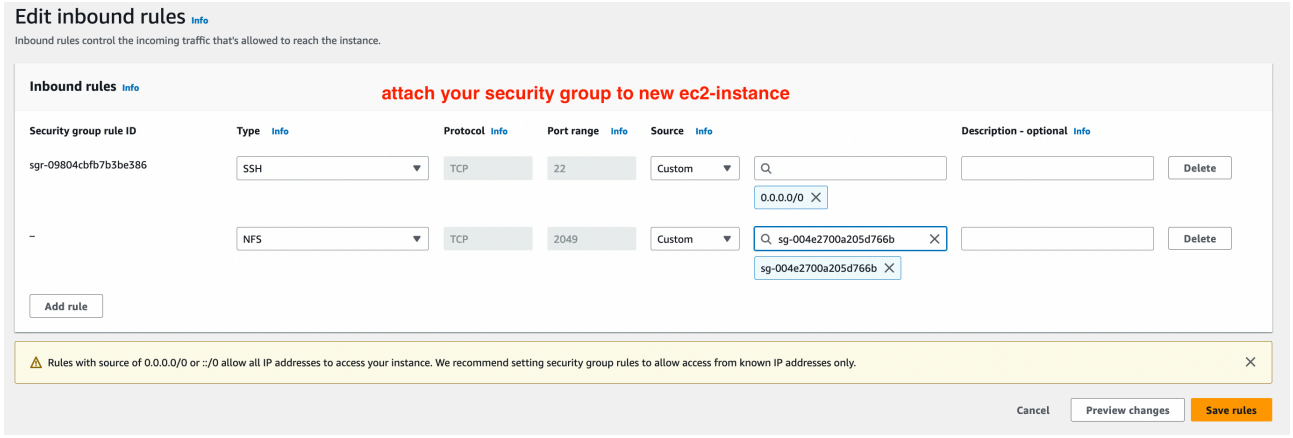
```
ec2-user@ip-10-0-1-132.ap-south-1.compute.internal ~ (1.512s)
sudo mount -t efs -o tls fs-0c0f51d2b600d1bdc:/ /efs

ec2-user@ip-10-0-1-132.ap-south-1.compute.internal ~
```

9: verify and enjoy the EFS

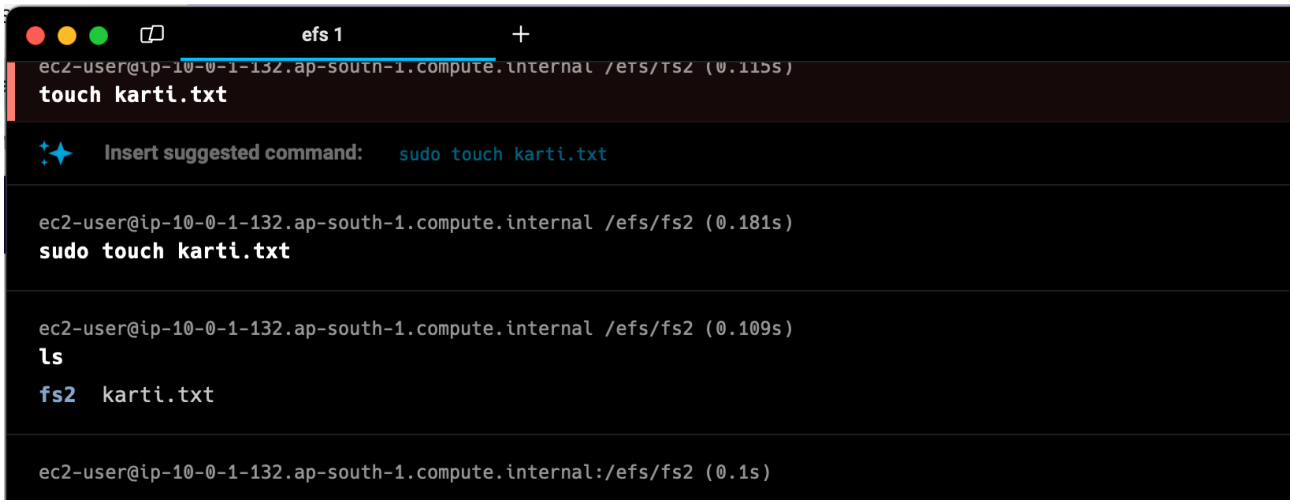
```
ec2-user@ip-10-0-1-132.ap-south-1.compute.internal ~ (0.163s)
df -h

Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        4.0M     0  4.0M   0% /dev
tmpfs           475M     0  475M   0% /dev/shm
tmpfs           190M  2.9M  188M   2% /run
/dev/xvda1      8.0G  1.6G  6.4G  20% /
tmpfs           475M     0  475M   0% /tmp
/dev/xvda128     10M  1.3M  8.7M  13% /boot/efi
tmpfs            95M     0   95M   0% /run/user/1000
127.0.0.1:/     8.0E     0  8.0E   0% /efs
```

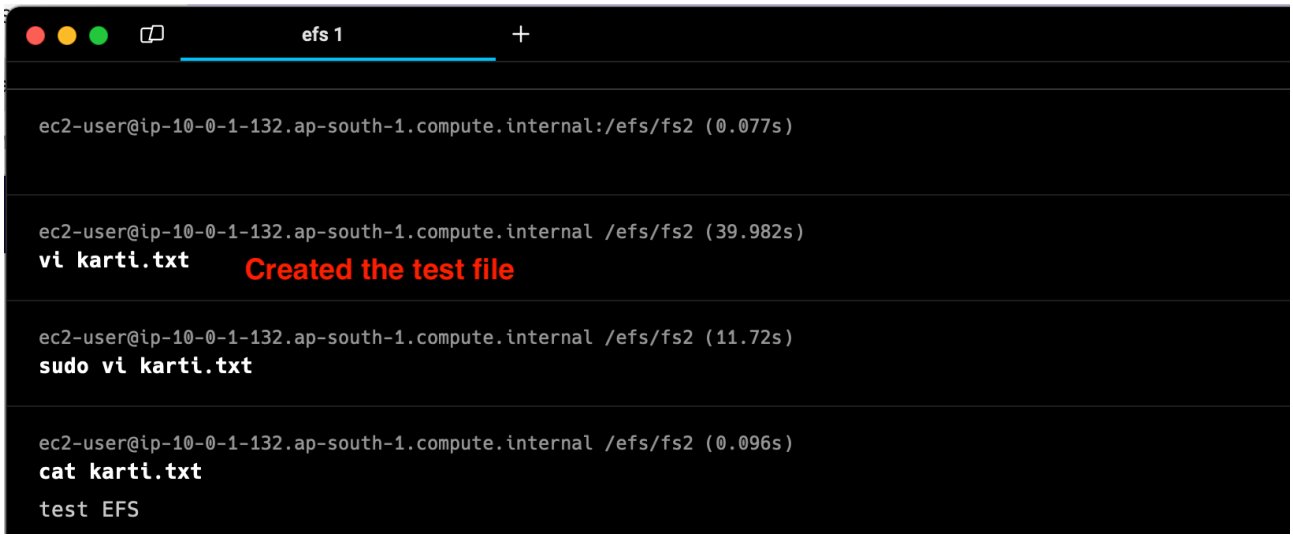
10. Similarly you can access another instance and mount the efs using the same command (create file directory structure /mnt/efs/fs2 before running)
(you need to add the EFS Target group to this EC2 instance)
sudo mount -t efs -o tls fs-Oc77a4451ef72ee: / /mnt/efs/fs2
(Note: you need to copy the highlighted command from your efs mount)
11. Run the command in your instance and successful mount will return no error
12. Verify you have successfully mounted using the command df-h
13. Now create any file say in any one of the instance in the path /mnt/efs/fs2, it should be reflected in the other instance as well



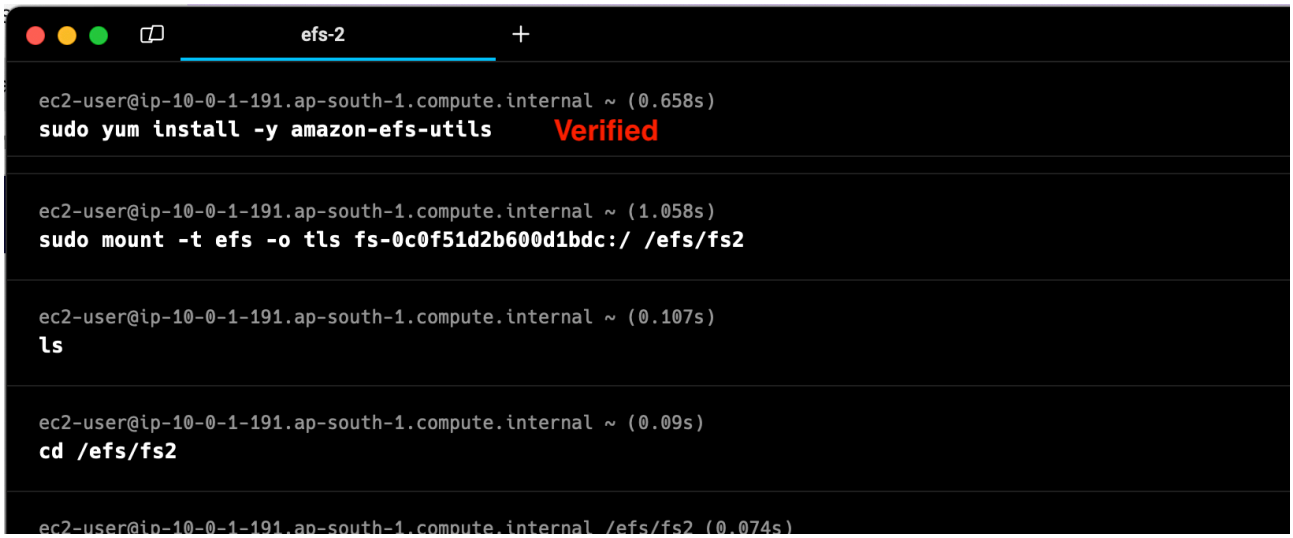


In-first image I have created a file(to check weather It is reflecting or not)





In second machine



Yes it is reflecting