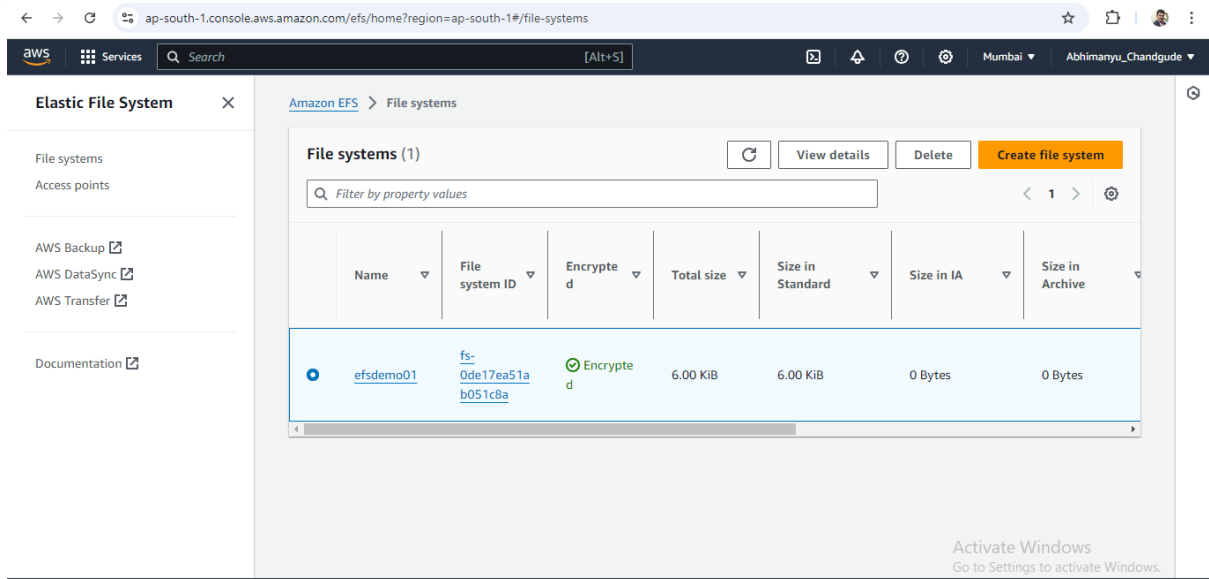
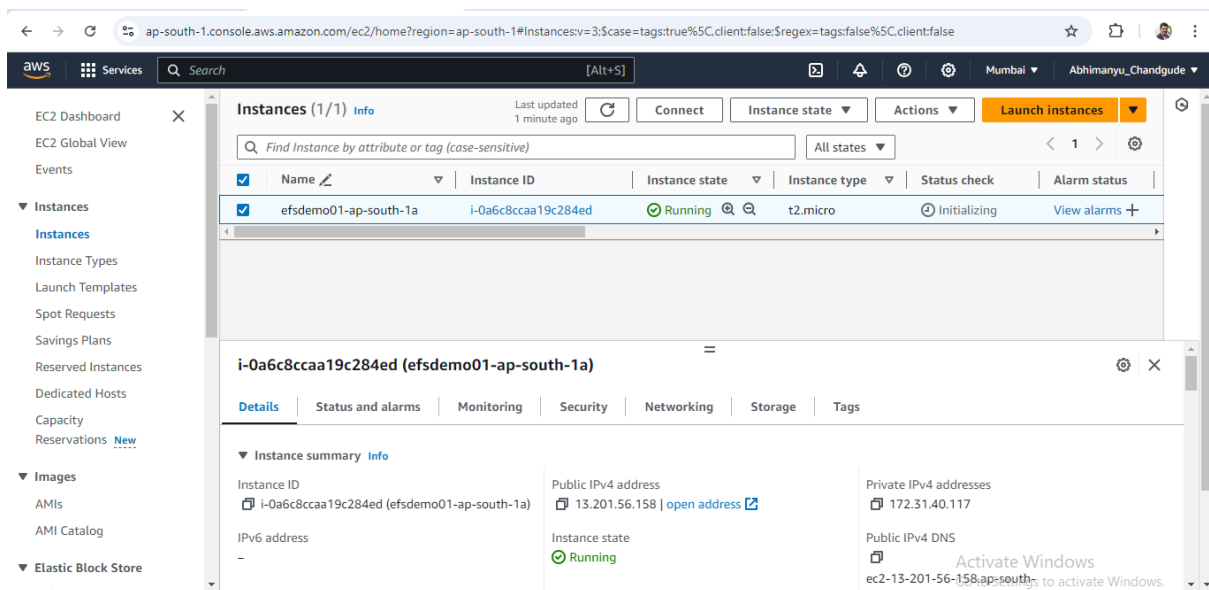


## 27<sup>th</sup> August 2024 AWS EFS (Elastic File System)

### 1. Create EFS file system



### 2. Create EC2 instance for **ap-south-1a** availability zone (Mumbai)



### 3. Create EC2 instance for **ap-south-1b** availability zone (Mumbai)

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#instances:

Instances (1/2) Info

Last updated less than a minute ago

Find Instance by attribute or tag (case-sensitive)

All states

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
efsdemo-ap-south-1b	i-0de966079b0017f22	Running	t2.micro	Initializing	View alarms +
efsdemo01-ap-south-1a	i-0a6c8ccaa19c284ed	Running	t2.micro	2/2 checks passed	View alarms +

**i-0de966079b0017f22 (efsdemo-ap-south-1b)**

Details | Status and alarms | Monitoring | Security | Networking | Storage | Tags

**Instance summary Info**

Instance ID i-0de966079b0017f22 (efsdemo-ap-south-1b)	Public IPv4 address 43.204.228.104   <a href="#">open address</a>	Private IPv4 addresses 172.31.5.68
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-43-204-228-104.ap-south-1.compute.amazonaws.com

#### 4. Connect the server

root@ip-172-31-40-117:~

```
login as: ec2-user
Authenticating with public key "awsdata1"

Amazon Linux 2
AL2 End of Life is 2025-06-30.

A newer version of Amazon Linux is available!
Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-172-31-40-117 ~]$ sudo su -
[root@ip-172-31-40-117 ~]#
```

root@ip-172-31-5-68:~

```
login as: ec2-user
Authenticating with public key "awsdata1"

Amazon Linux 2
AL2 End of Life is 2025-06-30.

A newer version of Amazon Linux is available!
Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-172-31-5-68 ~]$ sudo su -
[root@ip-172-31-5-68 ~]#
```

#### 5. Mount Security Group on Created EFS files

ap-south-1.console.aws.amazon.com/efs/home?region=ap-south-1#/file-systems/fs-0de17ea51ab051c8a?tabId=mounts

Elastic File System

File systems

Access points

AWS Backup

AWS DataSync

AWS Transfer

Documentation

**Network**

Manage

Availability zone (AZ-ID)	Mount target ID	Subnet ID	Mount target state	IP address	Network interface ID	Security groups
ap-south-1a (aps1-az1)	fsmt-0dc31d638a3c9d043	subnet-00c35046390d8ad10	Available	172.31.39.56	eni-0e39260aafd8a8285	sg-00c110f8e04bd3eb9 (efs-demo)
ap-south-1b (aps1-az3)	fsmt-0b0897f834767c8c7	subnet-092b7c23bceb64ec	Available	172.31.6.110	eni-03169e79aff5181cb	sg-00c110f8e04bd3eb9 (efs-demo)
ap-south-1c (aps1-az2)	fsmt-0dada7ac4012bbac9	subnet-02f62ec3c4bd3f555	Available	172.31.21.150	eni-0a76652aa45114460	sg-00c110f8e04bd3eb9 (efs-demo)

## 6. Mount EFS file system for both the EC2 instances

```

root@ip-172-31-5-68:~
Last login: Wed Aug 28 10:46:32 2024 from 49.36.49.12
#
~\  #### Amazon Linux 2
~~\  #####\
~~\  #####\
~~\  #####| AL2 End of Life is 2025-06-30.
~~\  \#/
~~\  V~' '->
~~~
~~~.~.~ / A newer version of Amazon Linux is available!
~~~.~.~ /
~~~.~.~ / Amazon Linux 2023, GA and supported until 2028-03-15.
~~~.~.~ / https://aws.amazon.com/linux/amazon-linux-2023/
~~~.~.~ /
~~~.~.~ /

[ec2-user@ip-172-31-5-68 ~]$ sudo su -
Last login: Wed Aug 28 10:46:36 UTC 2024 on pts/0
[root@ip-172-31-5-68 ~]# mkdir abhimanyu03-efs
[root@ip-172-31-5-68 ~]# sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsiz=1
048576,hard,timeo=600,retrans=2,noresvport fs-0del17ea5lab051c8a.efs.ap-south-1.a
mazonaws.com:/ abhimanyu03-efs
[root@ip-172-31-5-68 ~]# df -h
Filesystem                                Size  Used Avail Use% Mount
ed on
devtmpfs                                 467M    0  467M   0% /dev
tmpfs                                     477M    0  477M   0% /dev/
shm
tmpfs                                     477M  496K  476M   1% /run
tmpfs                                     477M    0  477M   0% /sys/
fs/cgroup
/dev/xvda1                               8.0G  1.8G  6.3G  23% /
tmpfs                                     96M    0   96M   0% /run/
user/1000
fs-0del17ea5lab051c8a.efs.ap-south-1.amazonaws.com:/ 8.0E    0  8.0E   0% /root
/abhimanyu01-efs
tmpfs                                     96M    0   96M   0% /run/
user/0
[root@ip-172-31-5-68 ~]#

```

```
root@ip-172-31-40-117:~  
login as: ec2-user  
Authenticating with public key "awsdata1"  
Last login: Wed Aug 28 10:46:00 2024 from 49.36.49.12  
  
#  
~\#### Amazon Linux 2  
~~\#####  
~~\###| AL2 End of Life is 2025-06-30.  
~~\#/  
~~V~' '->  
~~~  
~~./.  
~~/ /  
_/m/'  
  
A newer version of Amazon Linux is available!  
  
Amazon Linux 2023, GA and supported until 2028-03-15.  
https://aws.amazon.com/linux/amazon-linux-2023/  
  
[ec2-user@ip-172-31-40-117 ~]$ sudo su -  
Last login: Wed Aug 28 10:46:05 UTC 2024 on pts/0  
[root@ip-172-31-40-117 ~]# mkdir abhimanyu03-efs  
[root@ip-172-31-40-117 ~]# sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsiz  
=1048576,hard,timeo=600,retrans=2,noresvport fs-0del7ea5lab051c8a.efs.ap-south-1  
.amazonaws.com:/ abhimanyu03-efs  
[root@ip-172-31-40-117 ~]# df -h  
Filesystem                                Size  Used Avail Use% Mount  
ed on  
devtmpfs                                  467M    0  467M   0% /dev  
tmpfs                                     477M    0  477M   0% /dev/  
shm  
tmpfs                                     477M  496K  476M   1% /run  
tmpfs                                     477M    0  477M   0% /sys/  
fs/cgroup  
/dev/xvda1                               8.0G   1.8G   6.3G  23% /  
tmpfs                                     96M    0   96M   0% /run/  
user/1000  
fs-0del7ea5lab051c8a.efs.ap-south-1.amaz  
onaws.com:/ 8.0E    0  8.0E   0% /root  
/abhimanyu01-efs  
tmpfs                                     96M    0   96M   0% /run/  
user/0  
[root@ip-172-31-40-117 ~]#
```

Activate Windows  
Go to Settings to activate Windows.

7. Check devops.txt which is created on ap-south-1a availability zone

```
[ec2-user@ip-172-31-40-117 ~]$ sudo su -
Last login: Wed Aug 28 11:06:34 UTC 2024 on pts/1
[root@ip-172-31-40-117 ~]# df -h
Filesystem                                Size  Used Avail Use% Mounted on
devtmpfs                                  467M   0    467M   0% /dev
tmpfs                                      477M   0    477M   0% /dev/
shm
tmpfs                                      477M 496K   476M   1% /run
tmpfs                                      477M   0    477M   0% /sys/
fs/cgroup
/dev/xvda1                               8.0G  1.8G   6.3G  23% /
tmpfs                                      96M   0     96M   0% /run/
user/1000
fs-0del7ea51ab051c8a.efs.ap-south-1.amazonaws.com:/ 8.0E   0    8.0E   0% /root
/abhimanyu01-efs
tmpfs                                      96M   0     96M   0% /run/
user/0
[root@ip-172-31-40-117 ~]# cd /root/abhimanyu01-efs
[root@ip-172-31-40-117 abhimanyu01-efs]# ls -ltr
total 4
-rw-r--r-- 1 root root 16 Aug 28 11:14 devops.txt
[root@ip-172-31-40-117 abhimanyu01-efs]# cat devops.txt
Hello Abhimanyu
[root@ip-172-31-40-117 abhimanyu01-efs]#
```

8. Check devops.txt file on different availability zone (ap-south-1b)

```
root@ip-172-31-5-68:~/abhimanyu01-efs
shm
tmpfs                                  477M 496K   476M   1% /run
tmpfs                                  477M   0    477M   0% /sys/
fs/cgroup
/dev/xvda1                               8.0G  1.8G   6.3G  23% /
tmpfs                                      96M   0     96M   0% /run/
user/1000
fs-0del7ea51ab051c8a.efs.ap-south-1.amazonaws.com:/ 8.0E   0    8.0E   0% /root
/abhimanyu01-efs
tmpfs                                      96M   0     96M   0% /run/
user/0
[root@ip-172-31-5-68 ~]#
[root@ip-172-31-5-68 ~]#
[root@ip-172-31-5-68 ~]# cat devops.txt
cat: devops.txt: No such file or directory
[root@ip-172-31-5-68 ~]# 43.204.228.104
-bash: 43.204.228.104: command not found
[root@ip-172-31-5-68 ~]# cd /root/abhimanyu01-efs
[root@ip-172-31-5-68 abhimanyu01-efs]# ls -ltr
total 4
-rw-r--r-- 1 root root 16 Aug 28 11:14 devops.txt
[root@ip-172-31-5-68 abhimanyu01-efs]# cat devops.txt
Hello Abhimanyu
[root@ip-172-31-5-68 abhimanyu01-efs]#
```

9. Create another file aws.txt on ap-south-1b zone and check which is available on ap-south-1a zone.

root@ip-172-31-5-68:~/abhimanyu01-efs

```
tmpfs          477M 496K 476M 1% /run
tmpfs          477M    0 477M 0% /sys/
fs/cgroup
/dev/xvda1     8.0G 1.8G 6.3G 23% /
tmpfs          96M    0  96M 0% /run/
user/1000
fs-0del7ea5lab051c8a.efs.ap-south-1.amazonaws.com:/ 8.0E    0 8.0E 0% /root
/abhimanyu01-efs
tmpfs          96M    0  96M 0% /run/
user/0
[root@ip-172-31-5-68 ~]#
[root@ip-172-31-5-68 ~]#
[root@ip-172-31-5-68 ~]# cat devops.txt
cat: devops.txt: No such file or directory
[root@ip-172-31-5-68 ~]# 43.204.228.104
-bash: 43.204.228.104: command not found
[root@ip-172-31-5-68 ~]# cd /root/abhimanyu01-efs
[root@ip-172-31-5-68 abhimanyu01-efs]# ls -ltr
total 4
-rw-r--r-- 1 root root 16 Aug 28 11:14 devops.txt
[root@ip-172-31-5-68 abhimanyu01-efs]# cat devops.txt
Hello Abhimanyu
[root@ip-172-31-5-68 abhimanyu01-efs]# cat > aws.txt
Hello AWS
[root@ip-172-31-5-68 abhimanyu01-efs]# ls -ltr
total 8
-rw-r--r-- 1 root root 16 Aug 28 11:14 devops.txt
-rw-r--r-- 1 root root 10 Aug 28 11:31 aws.txt
[root@ip-172-31-5-68 abhimanyu01-efs]#
```

root@ip-172-31-40-117:~/abhimanyu01-efs

```
[ec2-user@ip-172-31-40-117 ~]$ sudo su -
Last login: Wed Aug 28 11:06:34 UTC 2024 on pts/1
[root@ip-172-31-40-117 ~]# df -h
Filesystem                Size      Used Avail Use% Mount
ed on
devtmpfs                  467M         0 467M   0% /dev
tmpfs                     477M         0 477M   0% /dev/
shm
tmpfs                     477M  496K 476M   1% /run
tmpfs                     477M         0 477M   0% /sys/
fs/cgroup
/dev/xvda1                8.0G  1.8G 6.3G  23% /
tmpfs                     96M         0  96M   0% /run/
user/1000
fs-0del7ea5lab051c8a.efs.ap-south-1.amazonaws.com:/ 8.0E         0 8.0E   0% /root
/abhimanyu01-efs
tmpfs                     96M         0  96M   0% /run/
user/0
[root@ip-172-31-40-117 ~]# cd /root/abhimanyu01-efs
[root@ip-172-31-40-117 abhimanyu01-efs]# ls -ltr
total 4
-rw-r--r-- 1 root root 16 Aug 28 11:14 devops.txt
[root@ip-172-31-40-117 abhimanyu01-efs]# cat devops.txt
Hello Abhimanyu
[root@ip-172-31-40-117 abhimanyu01-efs]# ls -ltr
total 8
-rw-r--r-- 1 root root 16 Aug 28 11:14 devops.txt
-rw-r--r-- 1 root root 10 Aug 28 11:31 aws.txt
[root@ip-172-31-40-117 abhimanyu01-efs]#
```