

# **CREATE AN EFS AND ATTACH IT TO MULTIPLE EC2 INSTANCES**

BY

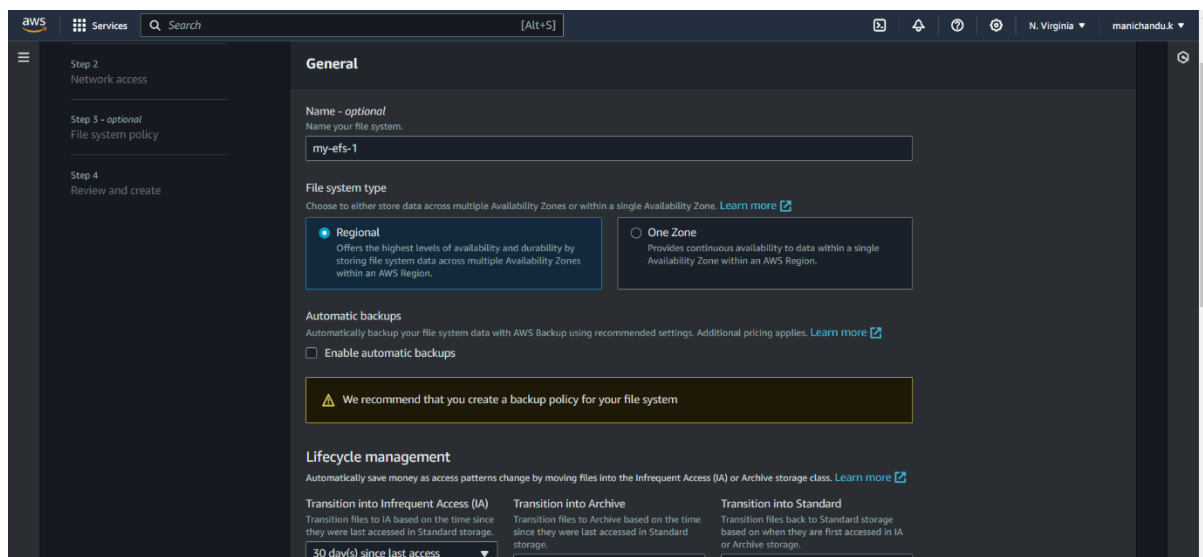
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# Elastic File System (EFS) :

- Amazon Elastic File System (Amazon EFS) provides serverless, fully elastic file storage so that you can share file data without provisioning or managing storage capacity and performance.
- Amazon EFS is built to scale on demand to petabytes without disrupting applications, growing and shrinking automatically as you add and remove files. Because Amazon EFS has a simple web services interface, you can create and configure file systems quickly and easily.
- The service manages all the file storage infrastructure for you, meaning that you can avoid the complexity of deploying, patching, and maintaining complex file system configurations.

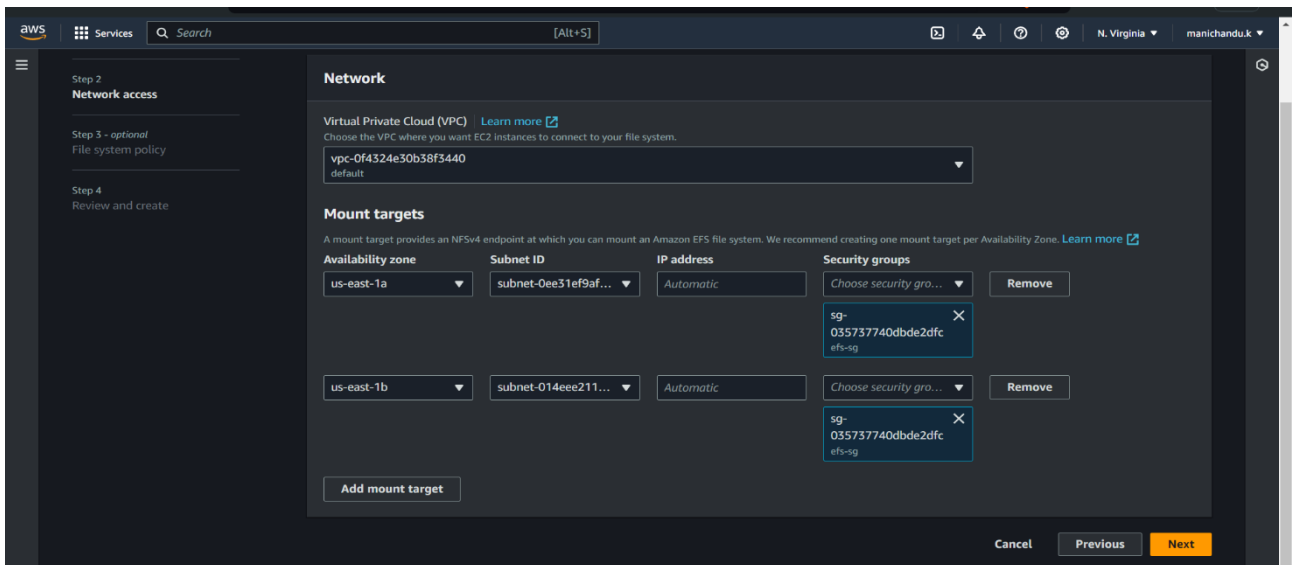
## Creating an EFS :

- To create an EFS first we should create a Security group with our protocols.
- After creating the security group go to EFS and select on customise when creating the EFS.

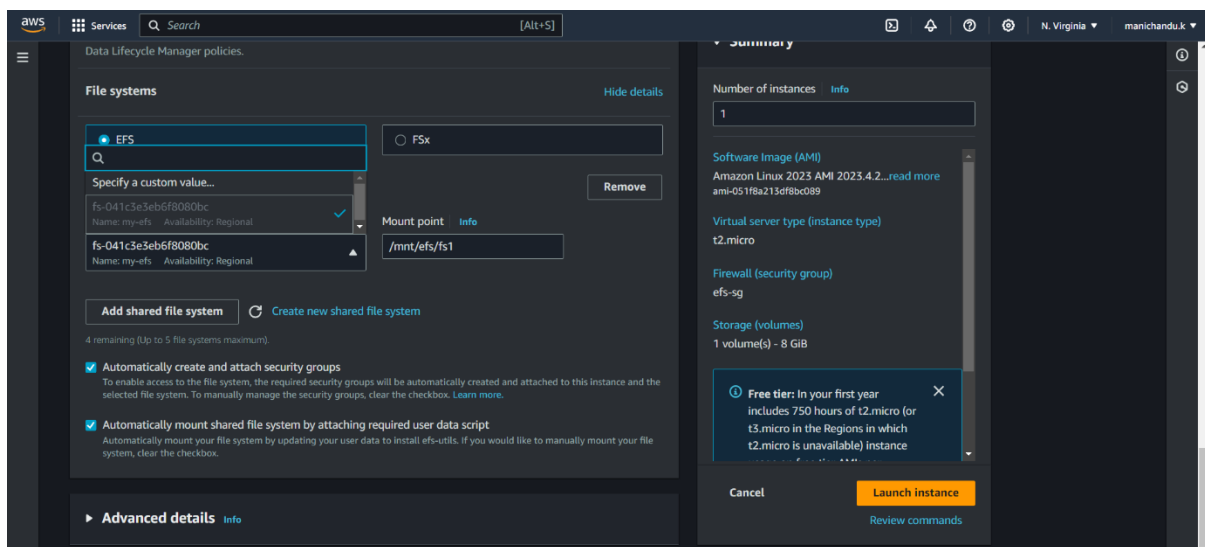


- Select regional option to connect to instances in other regions also.
- You can configure the life cycle management to reduce the cost of EFS.
- Now upon clicking next you will go to step 2 – Network access where you can select in which VPC you would create the EFS and in which region will it be available

- Select the security group for these zones which we created before.



- Click on next and go to review and create the EFS.
- After creating the EFS go to EC2 instances and launch an instance in a zone where we have given EFS.



- While launching the EC2 instance give the security group which we created first and click on configure storage.
- Now click on file systems and click on add shared file system and select our file system. Now launch the instance.
- Now repeat the process with another instance in another zone which we gave access to EFS.
- Now connect to both instances and give the disk command  
df -h

- You will see an filesystem named 127.0.0.0/.... mounted on /mnt.efs/fs1 which we gave earlier in instance configuration.

```

[root@ip-172-31-80-209 ~]# df
Filesystem            1K-blocks    Used    Available Use% Mounted on
devtmpfs               4096         0         4096      0% /dev
tmpfs                  486172        0         486172     0% /dev/shm
tmpfs                  194472       2928         191544     2% /run
/dev/xvda1             8310764    1572280         6738484    19% /
tmpfs                  486172        0         486172     0% /tmp
/dev/xvda128           10202       1310          8892    13% /boot/efi
127.0.0.1:/           9007199254739968 0 9007199254739968 0% /mnt/efs/fs1
tmpfs                  97232         0          97232     0% /run/user/1000

[root@ip-172-31-80-209 ~]# cd /mnt/efs/mnt1
-bash: cd: /mnt/efs/mnt1: No such file or directory
[root@ip-172-31-80-209 ~]# cd /mnt/efs/fs1
[root@ip-172-31-80-209 fs1]# ls
f1 f2 f3 m1 m2 m3
[root@ip-172-31-80-209 fs1]# cat f1
this is efs-2

[root@ip-172-31-80-209 fs1]#

```

i-040fbac668a111b1a (efs-1)  
PublicIPs: 54.86.74.14 PrivateIPs: 172.31.80.209

- Now cd to the mount path of EFS and create files and directories in that directory.
- Now connect to another instance and cd to the same path and list the files and directories.
- You can access the files and even the data in files in the other instance from here.

```

[root@ip-172-31-16-32 ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        4.0M  0  4.0M   0% /dev
devtmpfs        475M  0  475M   0% /dev/shm
tmpfs           190M  2.9M  188M   2% /run
/dev/xvda1       8.0G  1.5G   6.5G  19% /
tmpfs           475M  0  475M   0% /tmp
/dev/xvda128     10M  1.3M   8.7M  13% /boot/efi
127.0.0.1:/      8.0E  0  8.0E   0% /mnt/efs/fs1
tmpfs           95M  0  95M   0% /run/user/1000

[root@ip-172-31-16-32 ~]# cd /mnt/efs/fs1
[root@ip-172-31-16-32 fs1]# touch f1 f2 f3
[root@ip-172-31-16-32 fs1]# mkdir m1 m2 m3
[root@ip-172-31-16-32 fs1]# ls
f1 f2 f3 m1 m2 m3
[root@ip-172-31-16-32 fs1]# vi f1
[root@ip-172-31-16-32 fs1]# cat f1
this is efs-2

[root@ip-172-31-16-32 fs1]#

```

i-0d664d127317dedc1 (efs-2)  
PublicIPs: 54.196.151.70 PrivateIPs: 172.31.16.32

- Your EFS is successfully created and attached to two different instances in two different zones.

