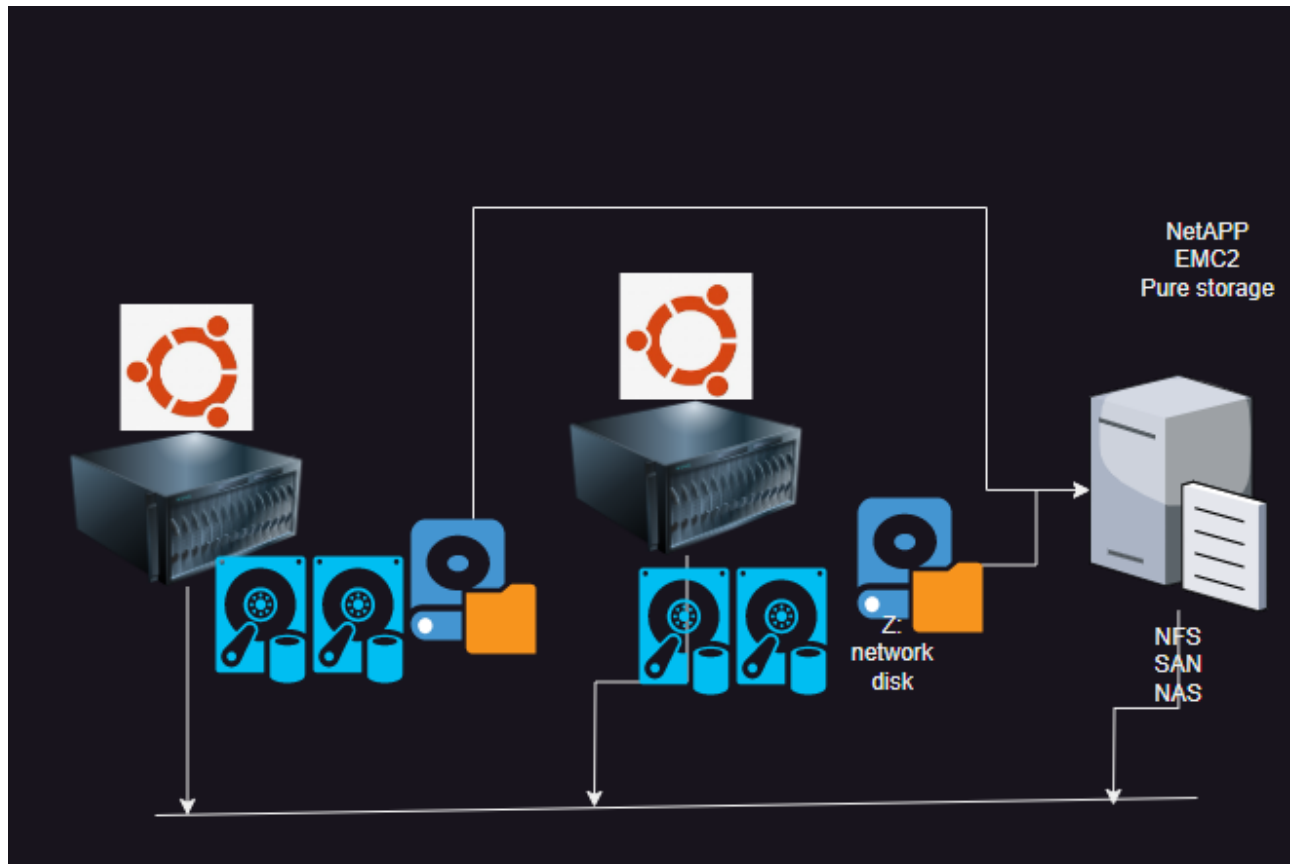


File share or Network File systems

- Overview



File Storage on AWS

- AWS Provides two solutions for this
 - EFS (Elastic File System)
 - Works in AWS Networks (VPC) only on linux systems
 - FSx:
 - AWS has launched this service for third party storage solutions
 - FSx for Windows Share
 - FSx for NetAPP
 - ...
- EFS Modes
 - Elastic
 - Provisioned Throughput
- Mounting efs on linux instances [Refer Here](#)

Create an EFS and mount it on two linux instances

- EFS is storage in AWS network (vpc)
- EFS requires a security group (open to every one in same network)
- Create 2 Amazon Linux instances
- SSH into instances and install efs mount helper

```
sudo yum install -y amazon-efs-utils
```

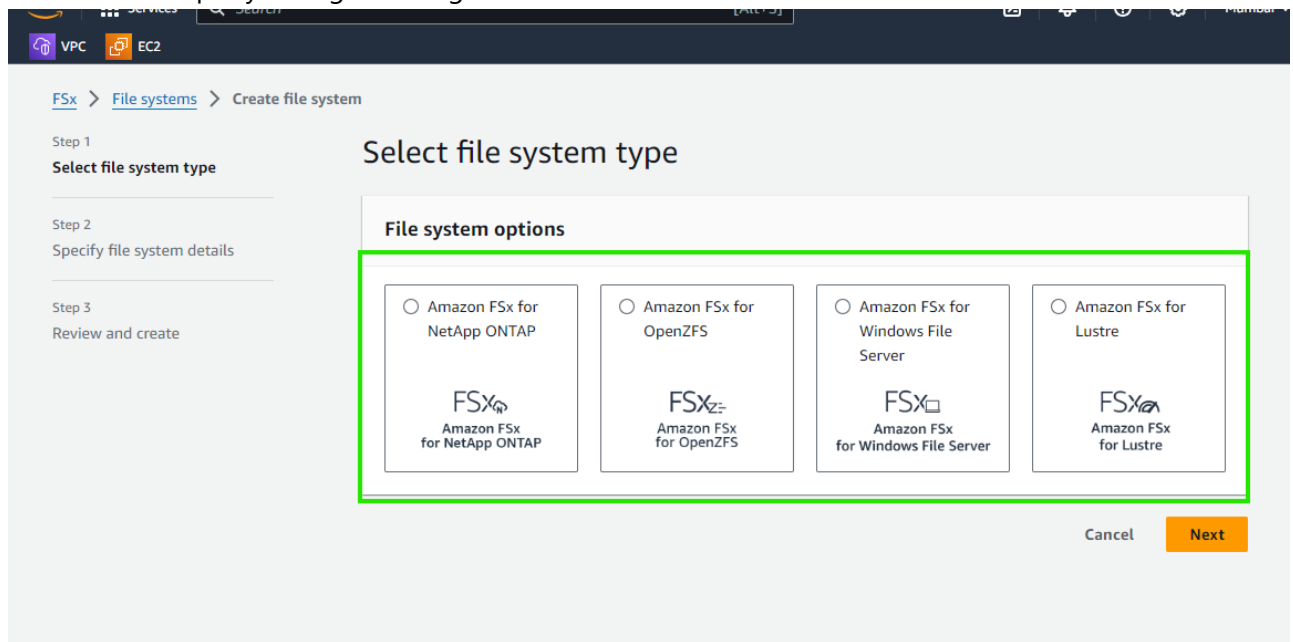
- Instructions for mounting

The screenshot shows the Amazon EFS console interface. On the left is a sidebar with 'Elastic File System' and various links. The main panel displays the details for file system 'tools (fs-01e841a29310eb4b7)'. In the top right corner, there are 'Delete' and 'Attach' buttons, with the 'Attach' button highlighted by a green rectangular box. Below the title, there is a 'General' tab with various configuration details like Performance mode (General Purpose), Throughput mode (Elastic), and File system state (Available).

- Create a folder called efs and execute below instructions

The screenshot shows the 'Attach' dialog box in the Amazon EFS console. The 'Mount via DNS' radio button is selected and highlighted with a green box. Below this, there is a 'Mount helper' section with a 'copied' status and a terminal command: `sudo mount -t efs -o tls fs-01e841a29310eb4b7:/ efs`. The 'Mount via IP' option is also visible but not selected. At the bottom, there is a section for 'Using the NFS client' with another terminal command: `sudo mount -t nfs4 -o nfsvers=4.1,rsize=1048576,wsize=1048576,hard,timeo=600,retrans=2,noresvport fs-01e841a29310eb4b7.efs.ap-south-1.amazonaws.com:/ efs`. The dialog has a 'Close' button at the bottom left.

- FSX is for third party storage offerings



File storage on Azure

- Azure has Azure File shares which is part of Storage Account.
- Azure Storage Accounts is one account to handle all storage types by Azure. Storage account provides
 - Blob storage
 - File Shares
 - Disk storage
 - table storage
 - queue storage
- Azure Storage account support file shares
- Azure supports two types of File share sku
 - Standard (General Purpose storage account)
 - Premium (Premium Azure file share)
- Quick start [Refer Here](#)

- Mount fileshare on linux and windows as discussed in the classroom

```

Dell@lin-server1:~$ vi mounthelper.sh
Dell@lin-server1:~$ vi mounthelper.sh
Dell@lin-server1:~$ chmod +x mounthelper.sh
Dell@lin-server1:~$ ./mounthelper.sh
Dell@lin-server1:~$ sudo df -h
Filesystem                                Size  Used Avail Use% Mounted on
/dev/root                                29G   1.6G   28G   6% /
tmpfs                                     417M    0   417M   0% /dev/shm
tmpfs                                     167M  969K   166M   1% /run
tmpfs                                     5.0M    0    5.0M   0% /run/lock
efivarfs                                 128K   37K   87K  30% /sys/firmware/efi/efivars
/dev/sda15                               105M   6.1M   99M   6% /boot/efi
/dev/sdb1                                 3.9G   32K   3.7G   1% /mnt
tmpfs                                     84M    0   84M   1% /run/user/1000
//ltfilesharedemojune24.file.core.windows.net/tools 100T    0  100T   0% /mnt/tools
Dell@lin-server1:~$ sudo touch /mnt/tools/{1..100}.txt
Dell@lin-server1:~$ ls /mnt/tools/
1.txt  14.txt  2.txt  25.txt  30.txt  36.txt  41.txt  47.txt  52.txt  58.txt  63.txt  69.txt  74.txt  8.txt  85.txt  90.txt  96.txt
10.txt 15.txt 20.txt 26.txt 31.txt 37.txt 42.txt 48.txt 53.txt 59.txt 64.txt 7.txt 75.txt 80.txt 86.txt 91.txt 97.txt
100.txt 16.txt 21.txt 27.txt 32.txt 38.txt 43.txt 49.txt 54.txt 6.txt 65.txt 70.txt 76.txt 81.txt 87.txt 92.txt 98.txt
11.txt 17.txt 22.txt 28.txt 33.txt 39.txt 44.txt 5.txt 55.txt 60.txt 66.txt 71.txt 77.txt 82.txt 88.txt 93.txt 99.txt
12.txt 18.txt 23.txt 29.txt 34.txt 4.txt 45.txt 50.txt 56.txt 61.txt 67.txt 72.txt 78.txt 83.txt 89.txt 94.txt
13.txt 19.txt 24.txt 3.txt 35.txt 40.txt 46.txt 51.txt 57.txt 62.txt 68.txt 73.txt 79.txt 84.txt 9.txt 95.txt
Dell@lin-server1:~$

```

- Azure Third party storage solutions
 - Azure NetApp
 - Azure Lustre