Module 4: Amazon EC2

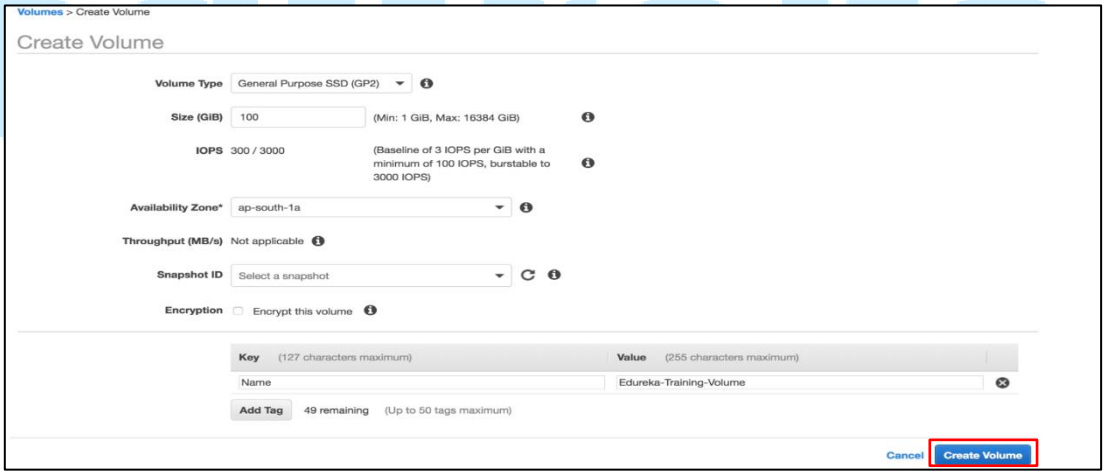
Demo Document 4

Attaching the EBS volume externally

Step 1: Create A Volume

- In the EC2 dashboard, Select Volumes and click on **create volumes**

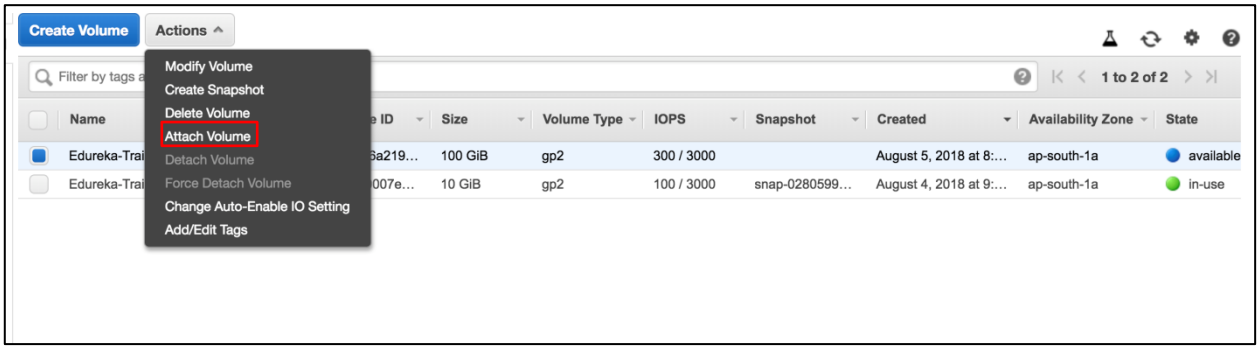
- Again, click on **Create Volume**



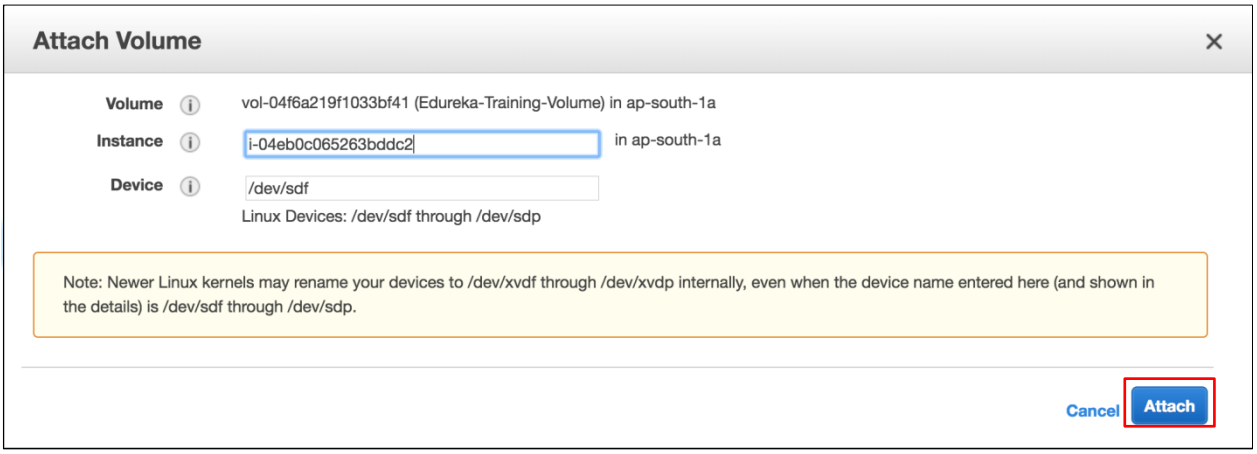
- Close the window once created

Step 2: Attach the volume to your EC2 instance

- In Actions, click on **Attach Volumes**



- In Instance, given the instance id



Step 3: Mount the volume to on a directory

- Login to EC2 instance
- In your terminal type the command to list all available disks

```
lsblk
```

```
[ec2-user@ip-172-31-13-110 ~]$ lsblk
NAME    MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
xvda    202:0    0    8G  0 disk
└─xvda1 202:1    0    8G  0 part /
xvdf    202:80   0  100G  0 disk
```

- Check if the volume has any data using the command

```
sudo file -s /dev/xvdf
```

- If the above command output shows "/dev/xvdf: data", it means your volume is empty

```
[ec2-user@ip-172-31-20-254 ~]$ sudo file -s /dev/xvdf
/dev/xvdf: data
[ec2-user@ip-172-31-20-254 ~]$
```

- Format the volume to ext4 file system using the following command

```
sudo mkfs -t ext4 /dev/xvdf
```

```
[ec2-user@ip-172-31-20-254 ~]$ sudo mkfs -t ext4 /dev/xvdf
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
6553600 inodes, 26214400 blocks
1310720 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=2174746624
800 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208,
        4096000, 7962624, 11239424, 20480000, 23887872

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done
```

- Create a directory having name **newvolume** to mount our new ext4 volumelets

```
sudo mkdir /newvolume
```

- Mount the volume to **newvolume** directory by using the command

```
sudo mount /dev/xvdf /newvolume/
```

- To check the disk space for confirming the volume mount

```
cd /newvolume
```

```
df -h
```

```
[ec2-user@ip-172-31-13-110 ~]$ sudo mkdir /newvolume/
[ec2-user@ip-172-31-13-110 ~]$ sudo mount /dev/xvdf /newvolume/
[ec2-user@ip-172-31-13-110 ~]$ cd /newvolume
[ec2-user@ip-172-31-13-110 newvolume]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        477M     0  477M   0% /dev
tmpfs           494M     0  494M   0% /dev/shm
tmpfs           494M  292K  494M   1% /run
tmpfs           494M     0  494M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.1G  7.0G  14% /
tmpfs            99M     0   99M   0% /run/user/1000
/dev/xvdf        99G   61M   94G   1% /newvolume
[ec2-user@ip-172-31-13-110 newvolume]$ Connection reset by 18.212.24.53 port 22
```

- The above command shows the free space in the newvolume directory