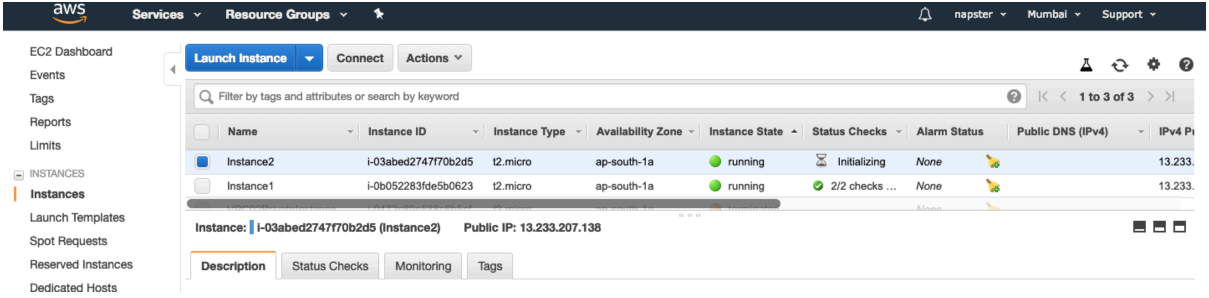
EBS Task : Attach volume to an EC2 Instance and write some data in EBS Volume, then detach and attach to another EBS volume and

Note: Remember, both EC2 and EBS volumes must be in the same Availability Zone.

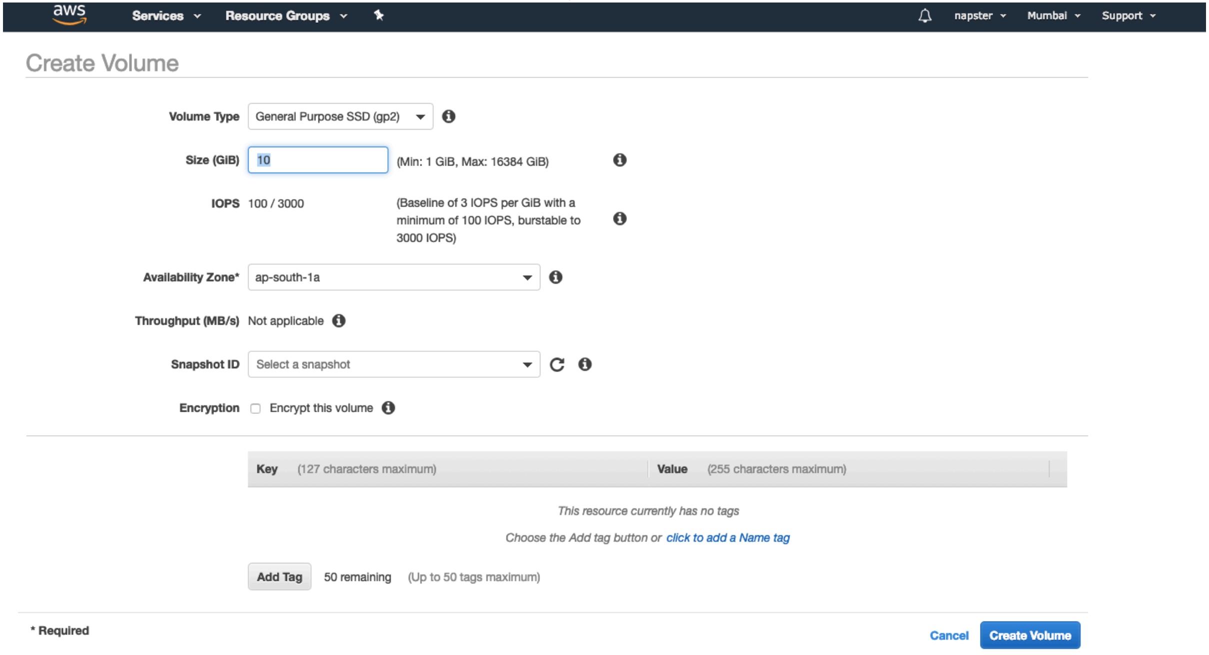
Step 1 : Launch Two EC2 Instance in same Availability Zone



	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Pu
☑	Instance2	i-03abed2747f70b2d5	t2.micro	ap-south-1a	running	Initializing	None		13.233.
□	Instance1	i-0b052283fde5b0623	t2.micro	ap-south-1a	running	2/2 checks …	None		13.233.

Instance: i-03abed2747f70b2d5 (Instance2) Public IP: 13.233.207.138

Step 2 : Go to Volumes from the left pane and create one volume of any size. We will create a Volume of size 10GB in the same Availability Zone



Create Volume

Volume Type: General Purpose SSD (gp2)

Size (GiB): 10 (Min: 1 GiB, Max: 16384 GiB)

IOPS: 100 / 3000 (Baseline of 3 IOPS per GiB with a minimum of 100 IOPS, burstable to 3000 IOPS)

Availability Zone*: ap-south-1a

Throughput (MB/s): Not applicable

Snapshot ID: Select a snapshot

Encryption: □ Encrypt this volume

Key (127 characters maximum) Value (255 characters maximum)

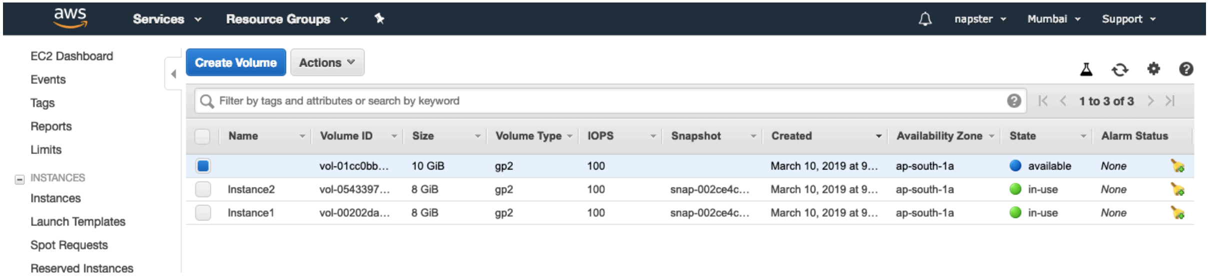
This resource currently has no tags

Choose the Add tag button or click to add a Name tag

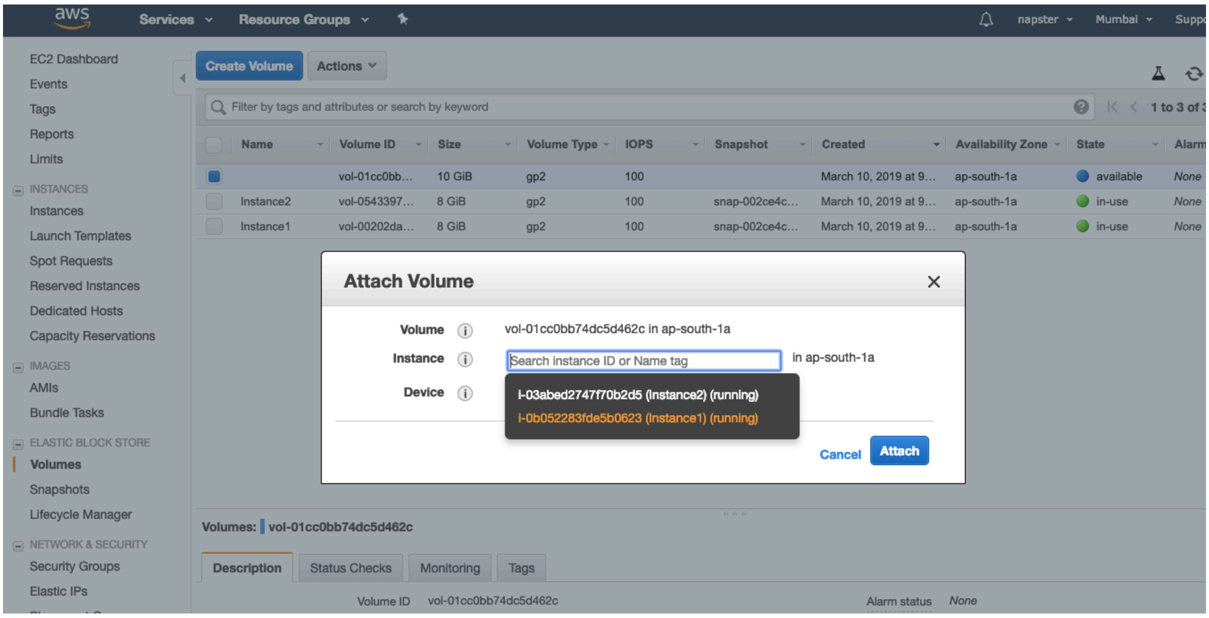
50 remaining (Up to 50 tags maximum)

* Required

Step 3 : Now to the newly create Volume, click on Action and attach to First Instance.



	Name	Volume ID	Size	Volume Type	IOPS	Snapshot	Created	Availability Zone	State	Alarm Status
☑		vol-01cc0bb…	10 GiB	gp2	100		March 10, 2019 at 9…	ap-south-1a	available	None
□	Instance2	vol-0543397…	8 GiB	gp2	100	snap-002ce4c…	March 10, 2019 at 9…	ap-south-1a	in-use	None
□	Instance1	vol-00202da…	8 GiB	gp2	100	snap-002ce4c…	March 10, 2019 at 9…	ap-south-1a	in-use	None



Name	Volume ID	Size	Volume Type	IOPS	Snapshot	Created	Availability Zone	State	Alarm
	vol-01cc0bb…	10 GiB	gp2	100		March 10, 2019 at 9…	ap-south-1a	available	None
Instance2	vol-0543397…	8 GiB	gp2	100	snap-002ce4c…	March 10, 2019 at 9…	ap-south-1a	in-use	None
Instance1	vol-00202da…	8 GiB	gp2	100	snap-002ce4c…	March 10, 2019 at 9…	ap-south-1a	in-use	None

Attach Volume

Volume: vol-01cc0bb74dc5d462c in ap-south-1a

Instance: Search instance ID or Name tag in ap-south-1a

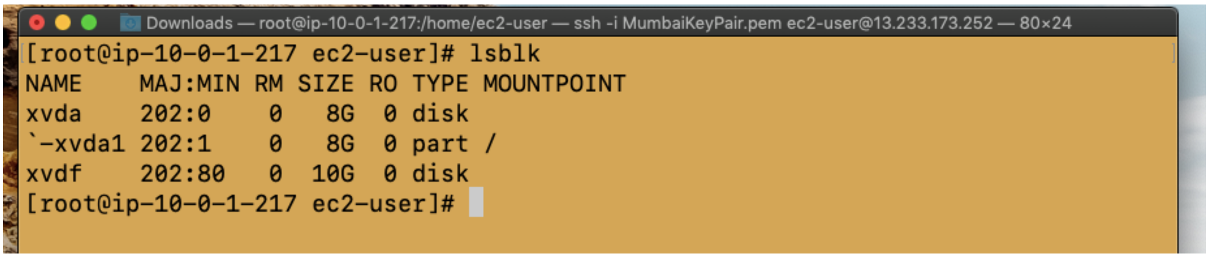
i-03abed2747f70b2d5 (Instance2) (running)
i-0b052283fde5b0623 (Instance1) (running)

Device:

Volume ID vol-01cc0bb74dc5d462c

Alarm status None

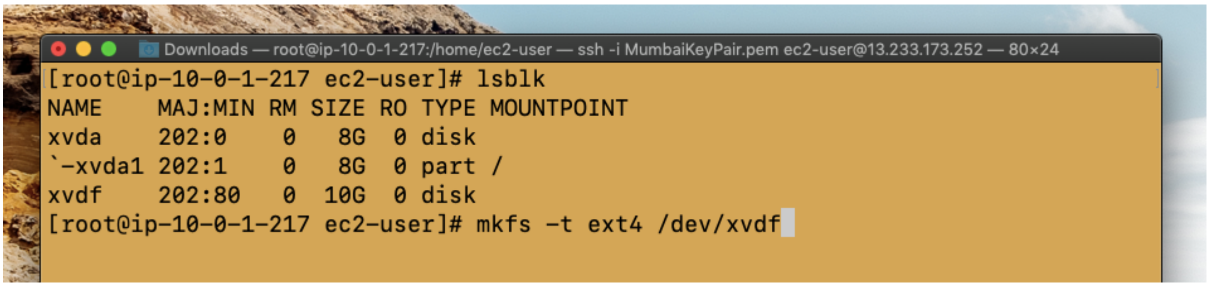
Step 3 : Once attached, now SSH to your first Instance and type "***lsblk***" to list all the block device.



```
Downloads — root@ip-10-0-1-217:/home/ec2-user — ssh -i MumbaiKeyPair.pem ec2-user@13.233.173.252 — 80×24
[root@ip-10-0-1-217 ec2-user]# 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  10G  0 disk
[root@ip-10-0-1-217 ec2-user]#
```

And here you can see, the newly created and attached 10GB volume is successfully attached. Remember, we have just created and attached volume, yet we need to mount that filesystem.

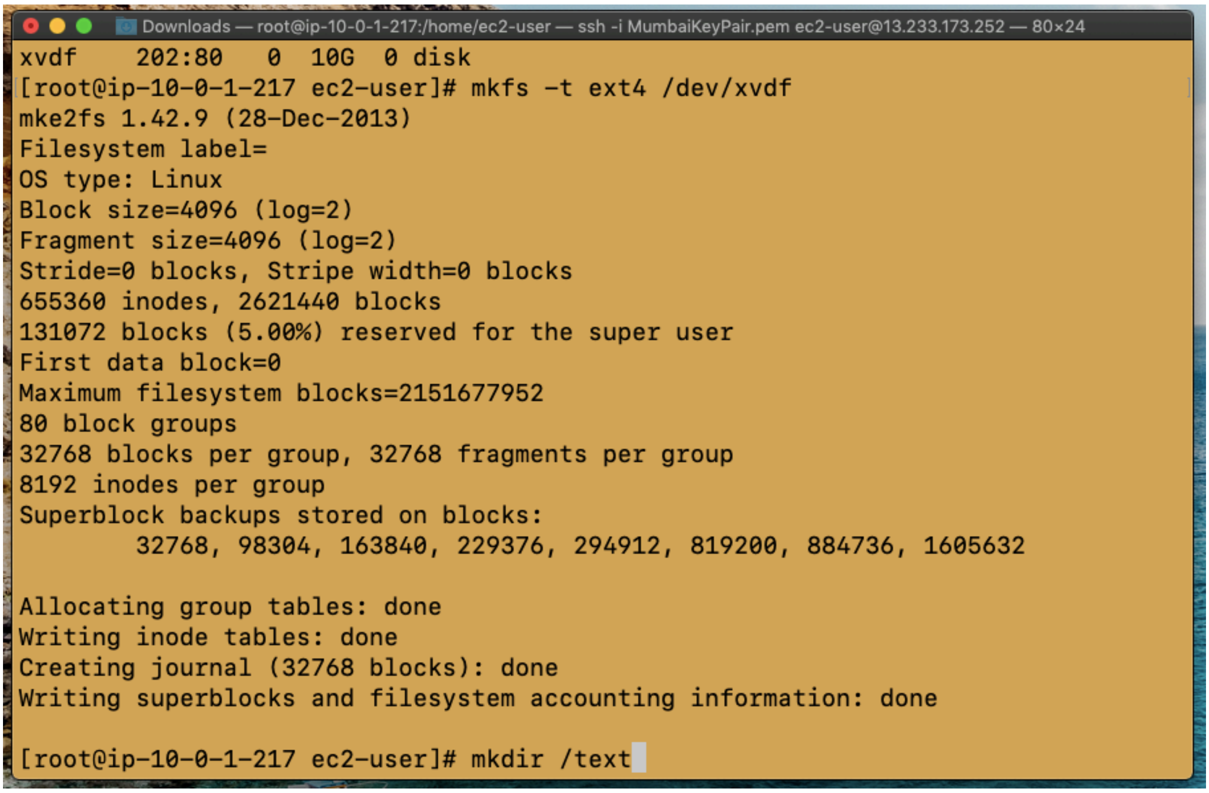
Step 4 : Create a File system
Type command "***mkfs -t ext4 /dev/your_block_Device_name***"
In my case, its /dev/xvdf



```
Downloads — root@ip-10-0-1-217:/home/ec2-user — ssh -i MumbaiKeyPair.pem ec2-user@13.233.173.252 — 80×24
[root@ip-10-0-1-217 ec2-user]# 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  10G  0 disk
[root@ip-10-0-1-217 ec2-user]# mkfs -t ext4 /dev/xvdf
```

And it will create a EXT4 based file system in that volume device.

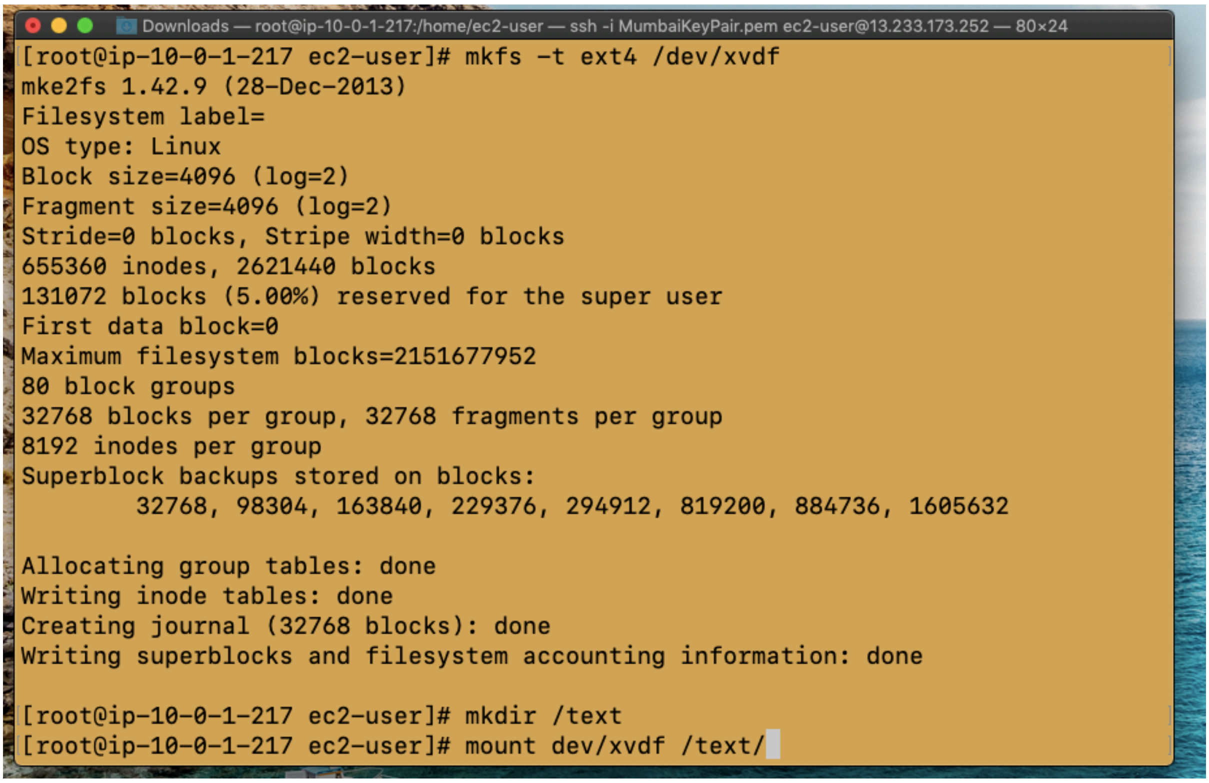
Step 5 : Make folder/directory to mount then to Volume
Command : “***mkdir /foldername/dirrectoryname***”



Downloads — root@ip-10-0-1-217:/home/ec2-user — ssh -i MumbaiKeyPair.pem ec2-user@13.233.173.252 — 80×24

```
xvdf    202:80   0  10G  0 disk
[root@ip-10-0-1-217 ec2-user]# 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
655360 inodes, 2621440 blocks
131072 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=2151677952
80 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

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

[root@ip-10-0-1-217 ec2-user]# mkdir /text
```

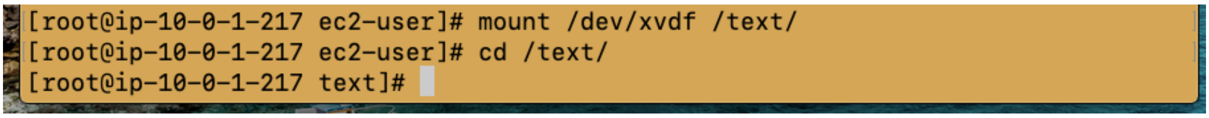
Step 6 : Now mount this directory to volume.
Command : “***mount /dev/xvdf /foldername/***”



Downloads — root@ip-10-0-1-217:/home/ec2-user — ssh -i MumbaiKeyPair.pem ec2-user@13.233.173.252 — 80×24

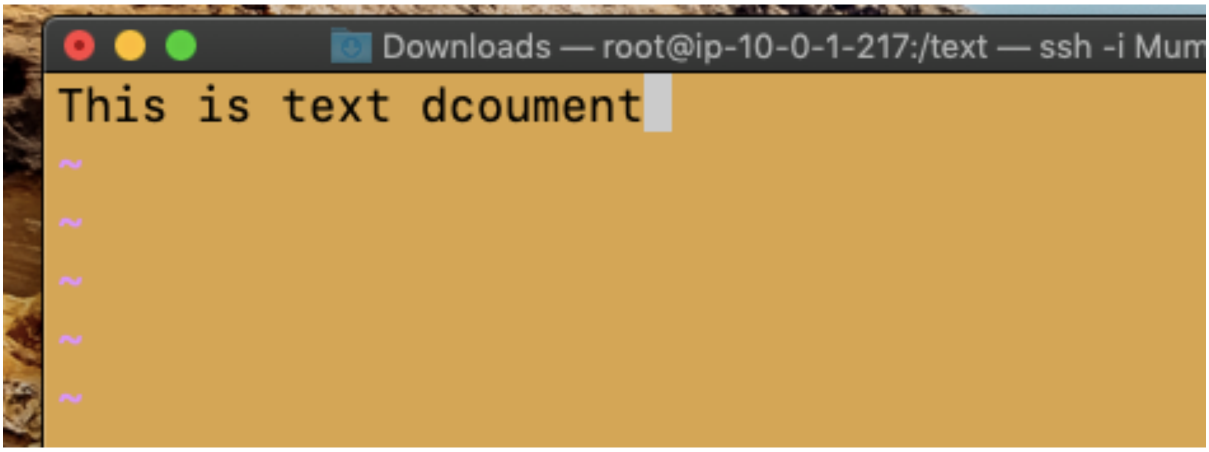
```
[root@ip-10-0-1-217 ec2-user]# mkfs -t ext4 /dev/xvdf
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
655360 inodes, 2621440 blocks
131072 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=2151677952
80 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

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

[root@ip-10-0-1-217 ec2-user]# mkdir /text
[root@ip-10-0-1-217 ec2-user]# mount dev/xvdf /text/
```

Now change the directory and move to newly created directrory
Command : ***cd /foldername***"



```
[root@ip-10-0-1-217 ec2-user]# mount /dev/xvdf /text/
[root@ip-10-0-1-217 ec2-user]# cd /text/
[root@ip-10-0-1-217 text]#
```

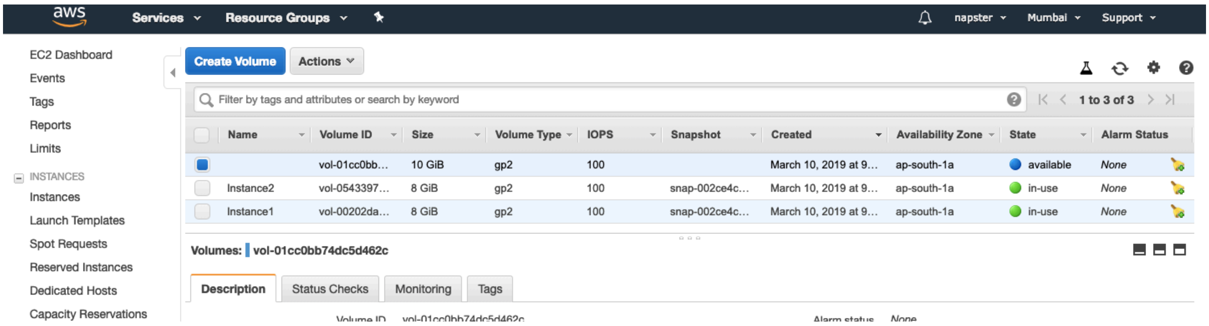
Step 7 : Now here will make a text.txt file to check whether file exits when we detach and attach to another EC2 Instance.



```
This is text dcoument
~
~
~
~
~
```

Step 8 : Now let's unmount this volume from this EC2 Instance
Command : "***cd ..***
umount -d /dev/xvdf"

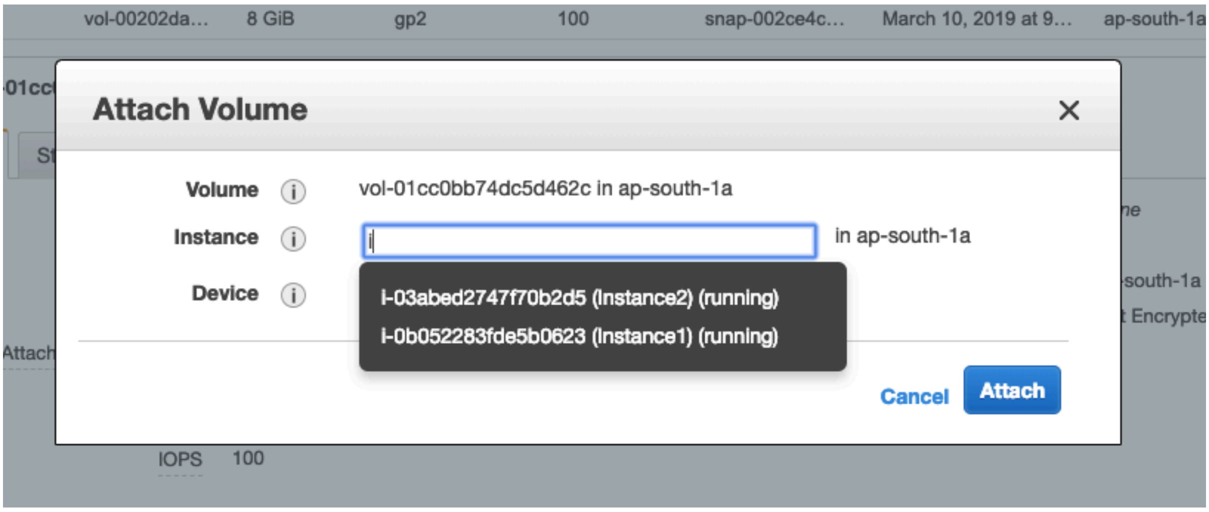
Step 9 : Now go to AWS Console and from the volume section, detach this volume from Instance1 and attach it to Instance2.



	Name	Volume ID	Size	Volume Type	IOPS	Snapshot	Created	Availability Zone	State	Alarm Status
■		vol-01cc0bb…	10 GiB	gp2	100		March 10, 2019 at 9…	ap-south-1a	● available	*None*
□	Instance2	vol-0543397…	8 GiB	gp2	100	snap-002ce4c…	March 10, 2019 at 9…	ap-south-1a	● in-use	*None*
□	Instance1	vol-00202da…	8 GiB	gp2	100	snap-002ce4c…	March 10, 2019 at 9…	ap-south-1a	● in-use	*None*

Volumes: vol-01cc0bb74dc5d462c

Volume ID vol-01cc0bb74dc5d462c Alarm status *None*


vol-00202da... 8 GiB gp2 100 snap-002ce4c... March 10, 2019 at 9... ap-south-1a
IOPS 100

Attach Volume

Volume: vol-01cc0bb74dc5d462c in ap-south-1a

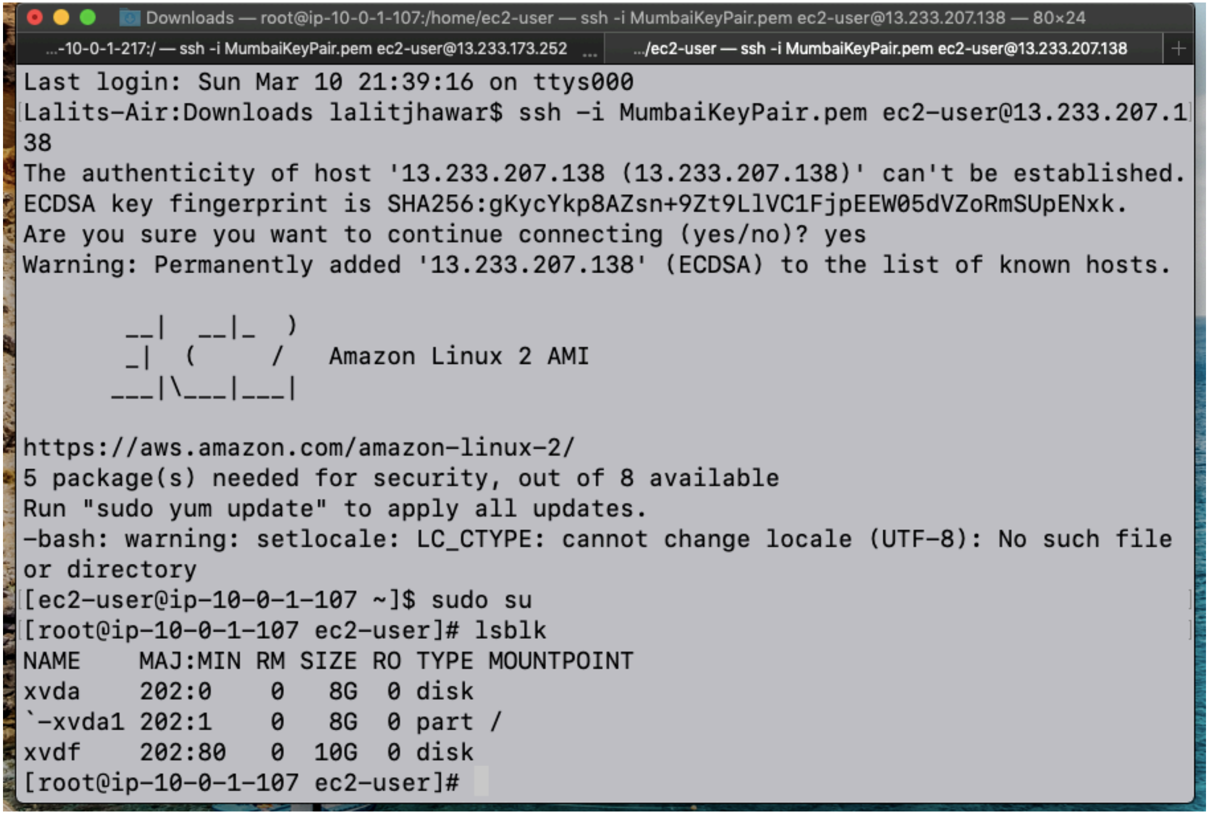
Instance: i in ap-south-1a

i-03abed2747f70b2d5 (Instance2) (running)
i-0b052283fde5b0623 (Instance1) (running)

Device

Cancel Attach

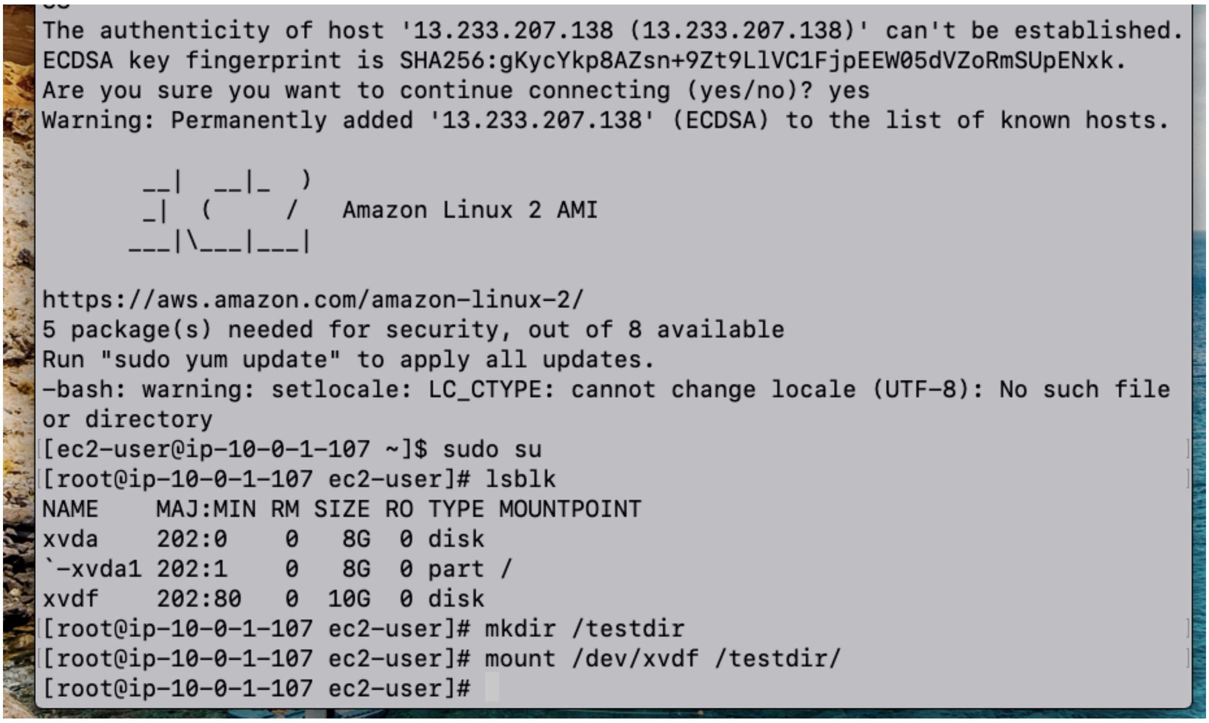
Step 10 : Now SSH to Instance2 and check the volume by command “***lsblk***”


Downloads — root@ip-10-0-1-107:/home/ec2-user — ssh -i MumbaiKeyPair.pem ec2-user@13.233.207.138 — 80×24
...-10-0-1-217:/ — ssh -i MumbaiKeyPair.pem ec2-user@13.233.173.252
.../ec2-user — ssh -i MumbaiKeyPair.pem ec2-user@13.233.207.138

```
Last login: Sun Mar 10 21:39:16 on ttys000
Lalits-Air:Downloads lalitjhawar$ ssh -i MumbaiKeyPair.pem ec2-user@13.233.207.1
38
The authenticity of host '13.233.207.138 (13.233.207.138)' can't be established.
ECDSA key fingerprint is SHA256:gKycYkp8AZsn+9Zt9L1VC1FjpEEW05dVZoRmSUpENxk.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '13.233.207.138' (ECDSA) to the list of known hosts.

       __|  __|_  )
       _|  (     /   Amazon Linux 2 AMI
      ___|\___|___|

https://aws.amazon.com/amazon-linux-2/
5 package(s) needed for security, out of 8 available
Run "sudo yum update" to apply all updates.
-bash: warning: setlocale: LC_CTYPE: cannot change locale (UTF-8): No such file
or directory
[ec2-user@ip-10-0-1-107 ~]$ sudo su
[root@ip-10-0-1-107 ec2-user]# 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  10G  0 disk
[root@ip-10-0-1-107 ec2-user]#
```

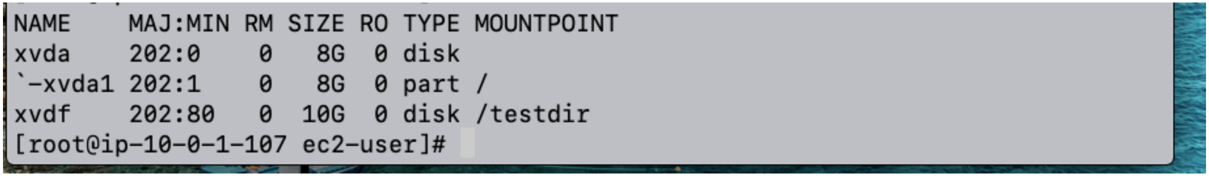
Here you can see, it shows successful attachment of volume.

Step 11 : Now we need to again create a directory and mount to our volume.
Command : “***mkdir /testdir***
Mount /dev/xvdf /testdir”



```
The authenticity of host '13.233.207.138 (13.233.207.138)' can't be established.
ECDSA key fingerprint is SHA256:gKycYkp8AZsn+9Zt9LlVC1FjpEEW05dVZoRmSUpENxk.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '13.233.207.138' (ECDSA) to the list of known hosts.

       __|  __|_  )
       _|  (     /   Amazon Linux 2 AMI
      ___|\___|___|

https://aws.amazon.com/amazon-linux-2/
5 package(s) needed for security, out of 8 available
Run "sudo yum update" to apply all updates.
-bash: warning: setlocale: LC_CTYPE: cannot change locale (UTF-8): No such file
or directory
[ec2-user@ip-10-0-1-107 ~]$ sudo su
[root@ip-10-0-1-107 ec2-user]# 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  10G  0 disk
[root@ip-10-0-1-107 ec2-user]# mkdir /testdir
[root@ip-10-0-1-107 ec2-user]# mount /dev/xvdf /testdir/
[root@ip-10-0-1-107 ec2-user]#
```

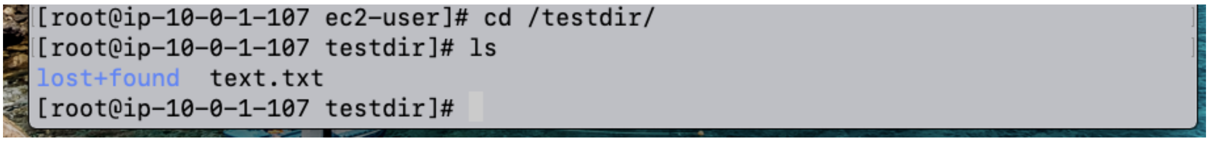
Step 13 : Now to check the mount, type “***lsblk***” and test the mount point.



```
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  10G  0 disk /testdir
[root@ip-10-0-1-107 ec2-user]#
```

Shows successful mount to new volume.

Step 14 : Now move to directory and list the files.
Command : “***cd /testdir***
ls”



```
[root@ip-10-0-1-107 ec2-user]# cd /testdir/
[root@ip-10-0-1-107 testdir]# ls
lost+found  text.txt
[root@ip-10-0-1-107 testdir]#
```

And here you can see file “text.txt” which we had create in Instance1