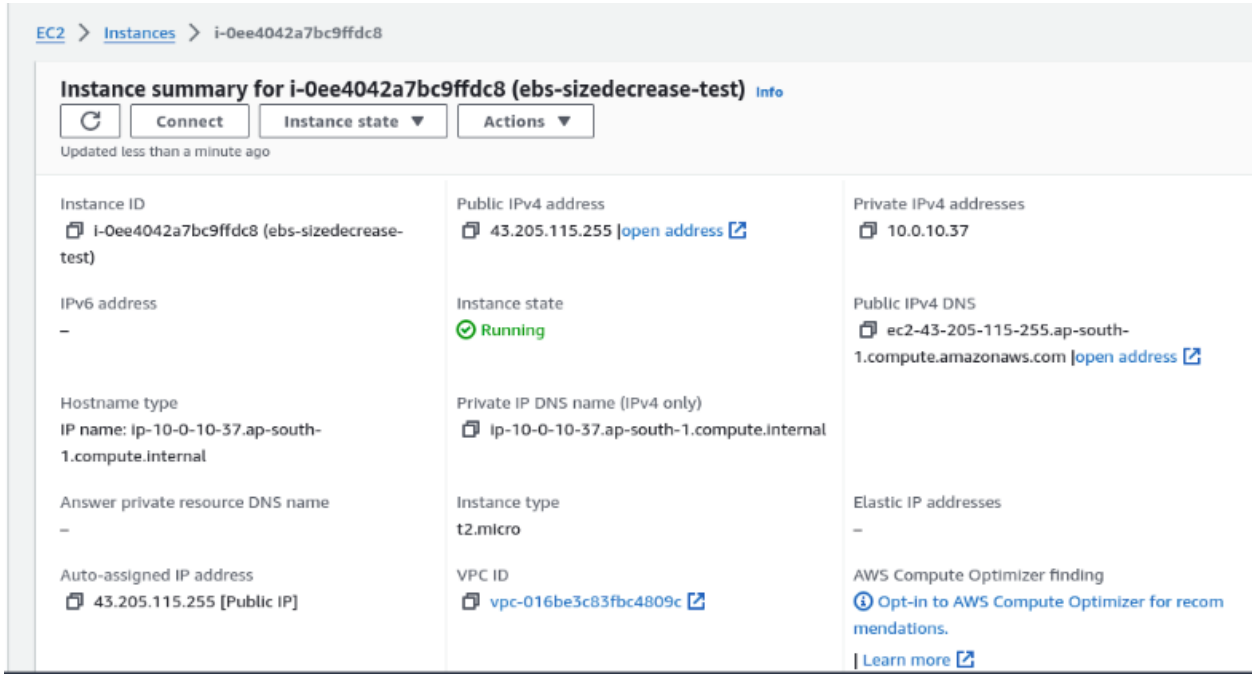
1.launch one instance(ubuntu),in public subnet with root volume and ssh allowed security group.

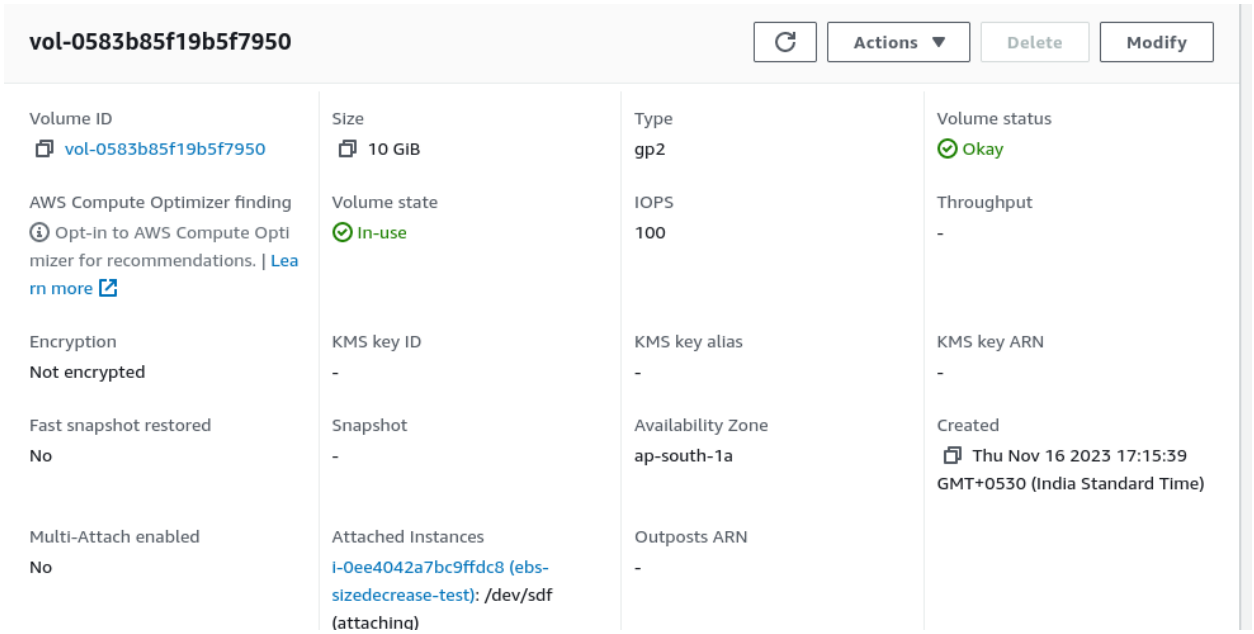


2.connect the instance and run the below commands one by one and observe .

$ lsblk (#list the blocks you attached)

```
ubuntu@ip-10-0-10-37:~$ lsblk
NAME     MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
loop0      7:0    0  24.6M  1 loop /snap/amazon-ssm-agent/7528
loop1      7:1    0  55.7M  1 loop /snap/core18/2790
loop2      7:2    0  63.5M  1 loop /snap/core20/2015
loop3      7:3    0 111.9M  1 loop /snap/lxd/24322
loop4      7:4    0  40.8M  1 loop /snap/snapd/20092
xvda     202:0    0     8G  0 disk
├─xvda1  202:1    0   7.9G  0 part /
├─xvda14 202:14   0     4M  0 part
└─xvda15 202:15   0   106M  0 part /boot/efi
ubuntu@ip-10-0-10-37:~$
```

3.now i am creating 10gb size of ebs volume,and attach it to running instance.



4. Again i run command like $lsblk,here we can see our attached volume of size 10 gb(xvdf).

```
ubuntu@ip-10-0-10-37:~$ lsblk
NAME     MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
loop0      7:0    0  24.6M  1 loop /snap/amazon-ssm-agent/7528
loop1      7:1    0  55.7M  1 loop /snap/core18/2790
loop2      7:2    0  63.5M  1 loop /snap/core20/2015
loop3      7:3    0 111.9M  1 loop /snap/lxd/24322
loop4      7:4    0  40.8M  1 loop /snap/snapd/20092
xvda     202:0    0     8G  0 disk
├─xvda1  202:1    0   7.9G  0 part /
├─xvda14 202:14   0     4M  0 part
└─xvda15 202:15   0   106M  0 part /boot/efi
xvdf     202:80   0    10G  0 disk
ubuntu@ip-10-0-10-37:~$
```

5.here we do first,that is formatting by command with super user we do.

$ sudo su

$ mkfs.ext4 /dev/xvdf

```
ubuntu@ip-10-0-10-37:~$ sudo su
root@ip-10-0-10-37:/home/ubuntu# mkfs.ext4 /dev/xvdf
mke2fs 1.46.5 (30-Dec-2021)
Creating filesystem with 2621440 4k blocks and 655360 inodes
Filesystem UUID: 644e9743-f3bb-4566-9433-80c05da4bf11
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632

Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done

root@ip-10-0-10-37:/home/ubuntu#
```

6. Now we check by command $ df -h ,here we didn't see the volume we formatted.

```
root@ip-10-0-10-37:/home/ubuntu# lsblk
NAME     MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
loop0      7:0    0  24.6M  1 loop /snap/amazon-ssm-agent/7528
loop1      7:1    0  55.7M  1 loop /snap/core18/2790
loop2      7:2    0  63.5M  1 loop /snap/core20/2015
loop3      7:3    0 111.9M  1 loop /snap/lxd/24322
loop4      7:4    0  40.8M  1 loop /snap/snapd/20092
xvda     202:0    0     8G  0 disk
├─xvda1  202:1    0   7.9G  0 part /
├─xvda14 202:14   0     4M  0 part
└─xvda15 202:15   0   106M  0 part /boot/efi
xvdf     202:80   0    10G  0 disk
root@ip-10-0-10-37:/home/ubuntu# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root       7.6G  1.6G  6.0G  21% /
tmpfs           475M     0  475M   0% /dev/shm
tmpfs           190M  836K  190M   1% /run
tmpfs           5.0M     0  5.0M   0% /run/lock
/dev/xvda15     105M  6.1M   99M   6% /boot/efi
tmpfs            95M  4.0K   95M   1% /run/user/1000
root@ip-10-0-10-37:/home/ubuntu#
```

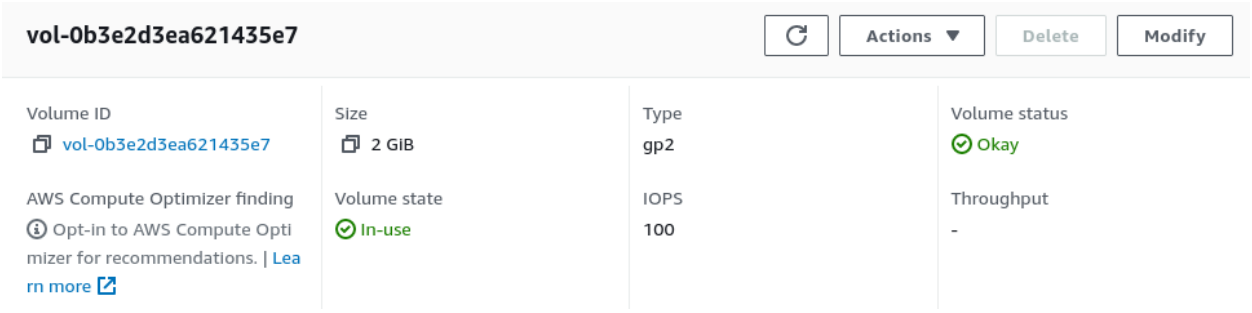
7. Because we didn't mount it yet,so we mount it to a folder for that make directory and check With above command we will see our formatted volume here.

```
root@ip-10-0-10-37:/home/ubuntu# mkdir test
root@ip-10-0-10-37:/home/ubuntu# ls
test
root@ip-10-0-10-37:/home/ubuntu# mount /dev/xvdf /test/
mount: /test/: mount point does not exist.
root@ip-10-0-10-37:/home/ubuntu# cd /
root@ip-10-0-10-37:/# mount /dev/xvdf /test/
mount: /test/: mount point does not exist.
root@ip-10-0-10-37:/# mkdir test
root@ip-10-0-10-37:/# mount /dev/xvdf /test/
root@ip-10-0-10-37:/# mountpoint /test/
/test/ is a mountpoint
root@ip-10-0-10-37:/# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root       7.6G  1.6G  6.0G  21% /
tmpfs           475M     0  475M   0% /dev/shm
tmpfs           190M  836K  190M   1% /run
tmpfs           5.0M     0  5.0M   0% /run/lock
/dev/xvda15     105M  6.1M   99M   6% /boot/efi
tmpfs            95M  4.0K   95M   1% /run/user/1000
/dev/xvdf       9.8G   24K  9.3G   1% /test
root@ip-10-0-10-37:/#
```

8. Yes we can see our volume that is 10gb.now we create some files inside test folder.

```
root@ip-10-0-10-37:/# cd test
root@ip-10-0-10-37:/test# ls
lost+found
root@ip-10-0-10-37:/test# touch file1.txt file2.txt file3.txt
root@ip-10-0-10-37:/test# touch a b c d
root@ip-10-0-10-37:/test# ls
a  b  c  d  file1.txt  file2.txt  file3.txt  lost+found
root@ip-10-0-10-37:/test#
```

9. Now we create another EBS volume of size 2gb and attach to same instance .



10.we do similar like formatting,mounting to new directory.but we can't create any files here
We just sync from source directory to destination.

```
root@ip-10-0-10-37:/# lsblk
NAME     MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
loop0      7:0    0  24.6M  1 loop /snap/amazon-ssm-agent/7528
loop1      7:1    0  55.7M  1 loop /snap/core18/2790
loop2      7:2    0  63.5M  1 loop /snap/core20/2015
loop3      7:3    0 111.9M  1 loop /snap/lxd/24322
loop4      7:4    0  40.8M  1 loop /snap/snapd/20092
xvda     202:0    0     8G  0 disk
├─xvda1  202:1    0   7.9G  0 part /
├─xvda14 202:14   0     4M  0 part
└─xvda15 202:15   0   106M  0 part /boot/efi
xvdf     202:80   0    10G  0 disk /test
xvdg     202:96   0     2G  0 disk
root@ip-10-0-10-37:/# mkfs.ext4 /dev/xvdg
mke2fs 1.46.5 (30-Dec-2021)
Creating filesystem with 524288 4k blocks and 131072 inodes
Filesystem UUID: a9122360-d890-471c-8bc9-24f61d0b9e70
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912

Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done

root@ip-10-0-10-37:/# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root       7.6G  1.6G  6.0G  21% /
tmpfs           475M     0  475M   0% /dev/shm
tmpfs           190M  840K  190M   1% /run
tmpfs           5.0M     0  5.0M   0% /run/lock
/dev/xvda15     105M  6.1M   99M   6% /boot/efi
tmpfs            95M  4.0K   95M   1% /run/user/1000
/dev/xvdf       9.8G   24K  9.3G   1% /test
root@ip-10-0-10-37:/# mkdir /test2
root@ip-10-0-10-37:/# mount /dev/xvdg /test2/
root@ip-10-0-10-37:/#
```

11.$ rsync -aHAXxSP /test1/ /test2/
From above command we transfer data from 10 gb to data from 2 gb of volume.after that we can delete the 10gb ebs volume.

```
root@ip-10-0-10-37:/# $ rsync -aHAXxSP /test1/ /test2/
$: command not found
root@ip-10-0-10-37:/# cd test2
root@ip-10-0-10-37:/test2# ls
lost+found
root@ip-10-0-10-37:/test2# rsync -aHAXxSP /test1/ /test2/
sending incremental file list
rsync: [sender] change_dir "/test1" failed: No such file or directory (2)
rsync error: some files/attrs were not transferred (see previous errors) (code 23) at main.c(1338) [sender=3.2.7]
root@ip-10-0-10-37:/test2# cd ..
root@ip-10-0-10-37:/# rsync -aHAXxSP /test1/ /test2/
sending incremental file list
rsync: [sender] change_dir "/test1" failed: No such file or directory (2)
rsync error: some files/attrs were not transferred (see previous errors) (code 23) at main.c(1338) [sender=3.2.7]
root@ip-10-0-10-37:/# ls
bin   dev  home  lib32  libx32      media  opt   root  sbin  srv  test   tmp  var
boot  etc  lib   lib64  lost+found  mnt    proc  run   snap  sys  test2  usr
root@ip-10-0-10-37:/# rsync -aHAXxSP /test/ /test2/
sending incremental file list
./
a
              0 100%    0.00kB/s    0:00:00 (xfr#1, to-chk=7/9)
b
              0 100%    0.00kB/s    0:00:00 (xfr#2, to-chk=6/9)
c
              0 100%    0.00kB/s    0:00:00 (xfr#3, to-chk=5/9)
d
              0 100%    0.00kB/s    0:00:00 (xfr#4, to-chk=4/9)
file1.txt
              0 100%    0.00kB/s    0:00:00 (xfr#5, to-chk=3/9)
file2.txt
              0 100%    0.00kB/s    0:00:00 (xfr#6, to-chk=2/9)
file3.txt
              0 100%    0.00kB/s    0:00:00 (xfr#7, to-chk=1/9)
lost+found/
root@ip-10-0-10-37:/#
```