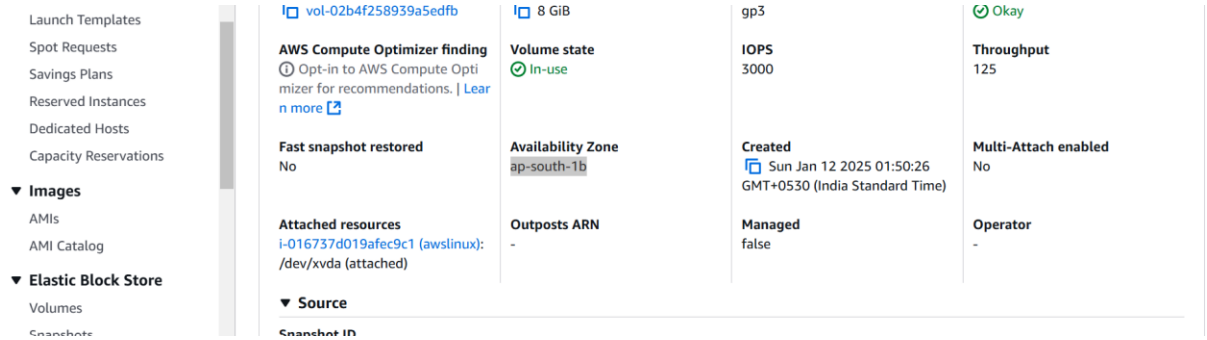
Lab EBS

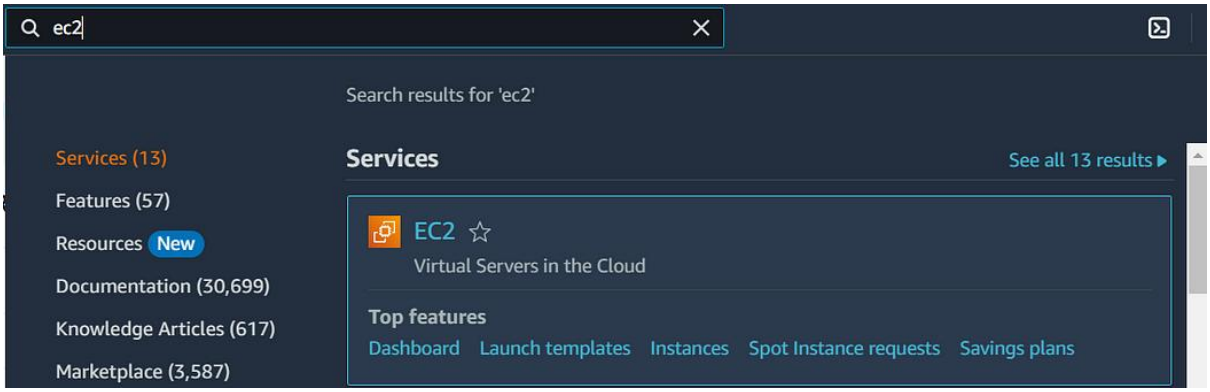
Creating and Attaching an EBS Volume

- Launch awslinux type resource
- Go to volume and check which availably zone volume has created
- EC2->Volume section

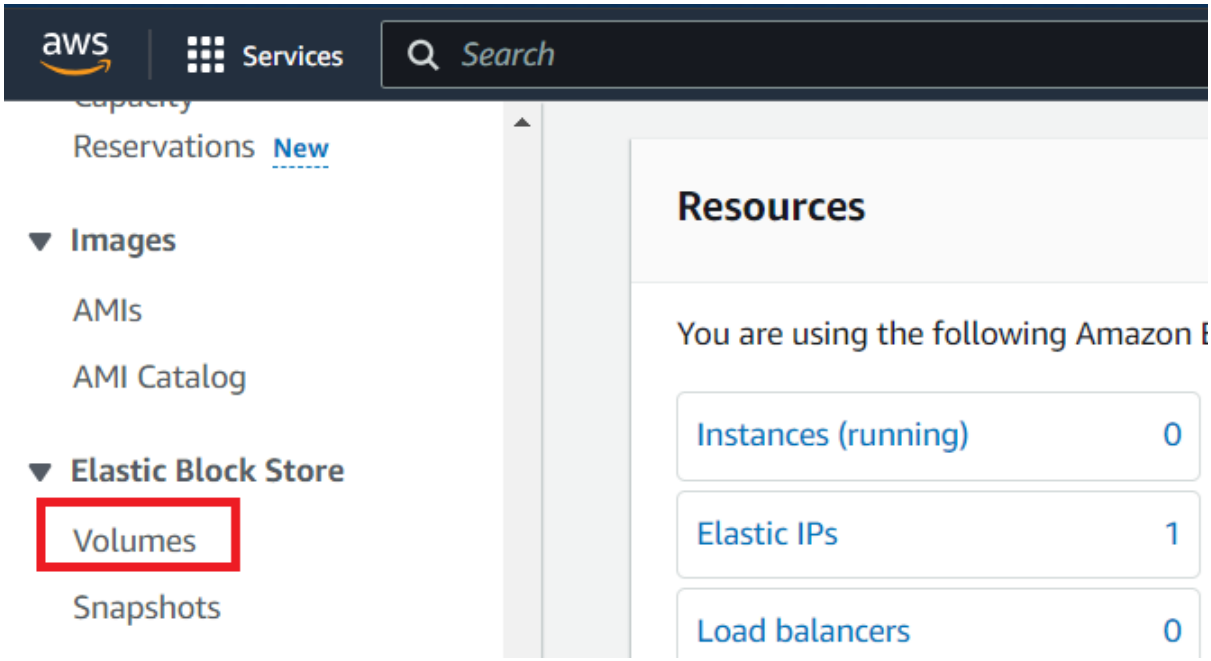


1. Create an EBS Volume:

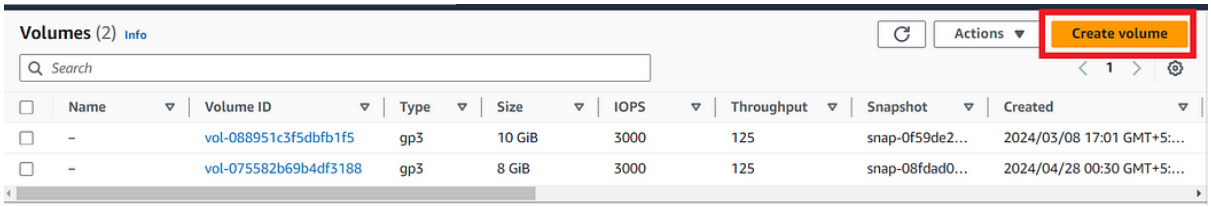
- Go to the AWS Management Console.
- Navigate to the EC2 Dashboard.



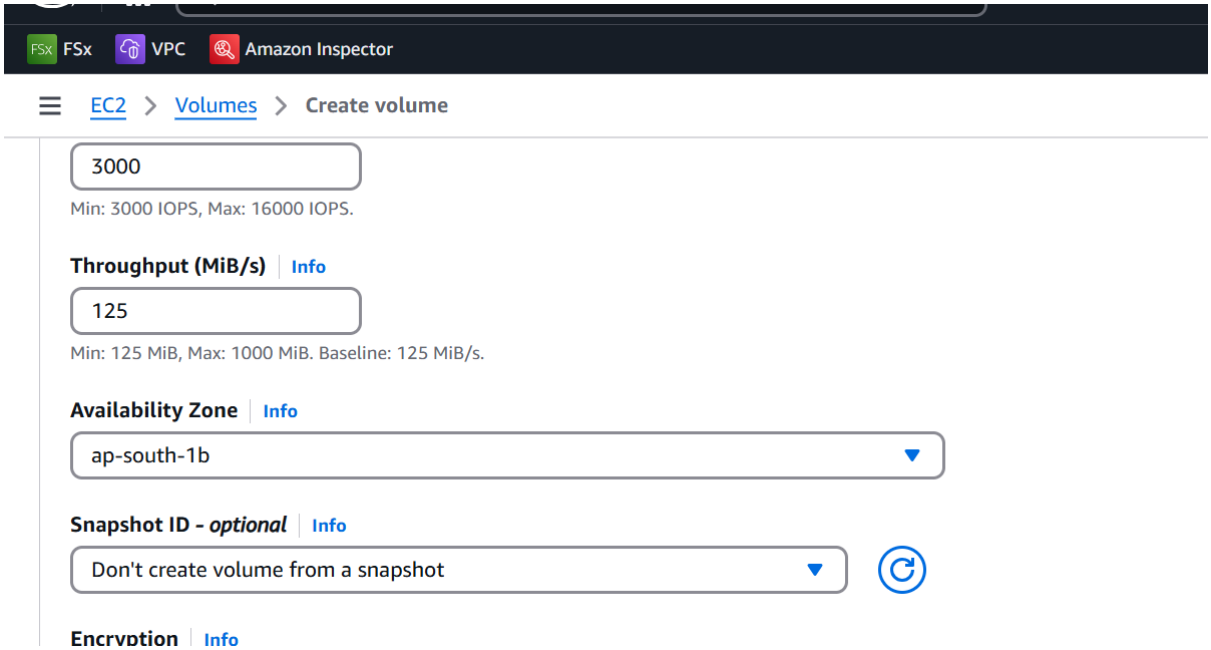
- Click on “Volumes” under “Elastic Block Store”.



- Click “Create Volume”.

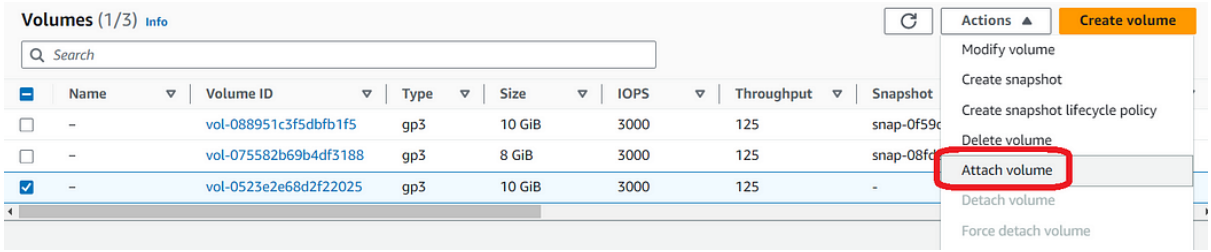


- Specify the volume type, size, and availability zone, then click “Create Volume”.

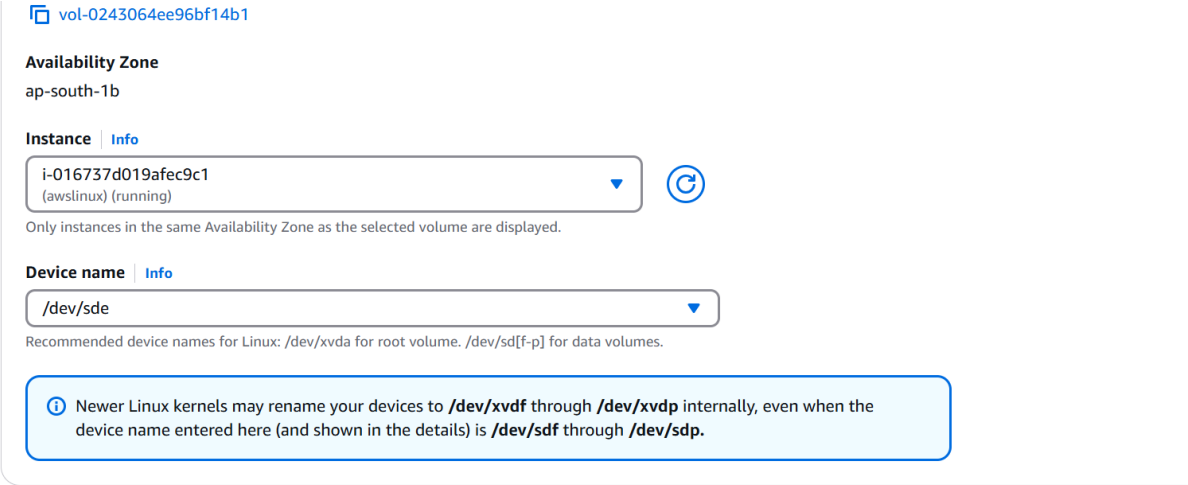


2. Attach the EBS Volume to an Instance:

- Select the newly created volume from the “Volumes” list.
- Click on “Actions” and select “Attach Volume”.



- Choose the instance to attach the volume to and specify the device name (e.g., /dev/sdf), then click “Attach Volume”.



- Since the Volume is created in us-west-1a Availability zone, it will automatically detect all the instances in same availability zone. (EBS is AZ service).

3. Formatting and Using the EBS Volume

1. Connect to the EC2 Instance:

- Use SSH to connect to your EC2 instance.

2. Format the EBS Volume:

```
[ec2-user@ip-172-31-2-152 ~]$ sudo fdisk -l
Disk /dev/xvda: 8 GiB, 8589934592 bytes, 16777216 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: gpt
Disk identifier: 174813BE-7DC8-40F8-A11F-AC3DAA194142

Device       Start      End  Sectors Size Type
/dev/xvda1   24576 16777182 16752607   8G Linux filesystem
/dev/xvda127 22528    24575     2048   1M BIOS boot
/dev/xvda128  2048    22527    20480  10M EFI System

Partition table entries are not in disk order.


Disk /dev/xvdb: 10 GiB, 10737418240 bytes, 20971520 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
[ec2-user@ip-172-31-2-152 ~]$
```

sudo mkfs.ext4 /dev/xvdb

```
[ec2-user@ip-172-31-2-152 ~]$ sudo mkfs.ext4 /dev/xvdb
mke2fs 1.46.5 (30-Dec-2021)
Creating filesystem with 2621440 4k blocks and 655360 inodes
Filesystem UUID: 87499014-3421-440a-888a-7b38817af800
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

[ec2-user@ip-172-31-2-152 ~]$
```

3. Mount the Volume:

sudo mkdir /data
sudo mount /dev/xvdb /data

```
[ec2-user@ip-172-31-2-152 ~]$ sudo mkdir /data
[ec2-user@ip-172-31-2-152 ~]$ sudo mount /dev/xvdb /data
[ec2-user@ip-172-31-2-152 ~]$
[ec2-user@ip-172-31-2-152 ~]$ sudo df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        4.0M     0  4.0M   0% /dev
tmpfs           475M     0  475M   0% /dev/shm
tmpfs           190M  2.9M  188M   2% /run
/dev/xvda1      8.0G  1.6G  6.4G  20% /
tmpfs           475M     0  475M   0% /tmp
/dev/xvda128     10M  1.3M  8.7M  13% /boot/efi
tmpfs            95M     0   95M   0% /run/user/1000
/dev/xvdb       9.8G   24K  9.3G   1% /data
[ec2-user@ip-172-31-2-152 ~]$
```

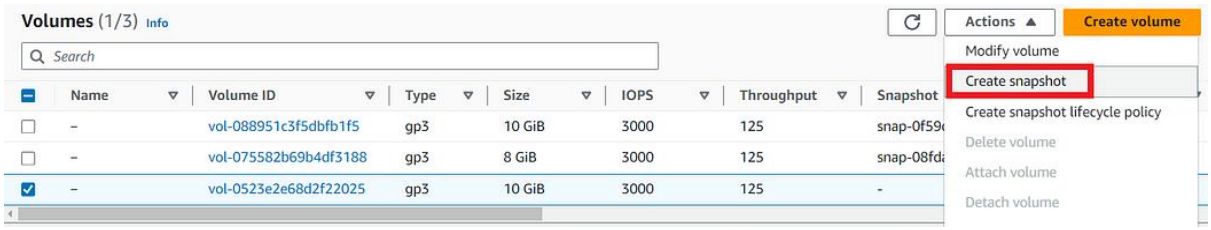
4. Store Data:

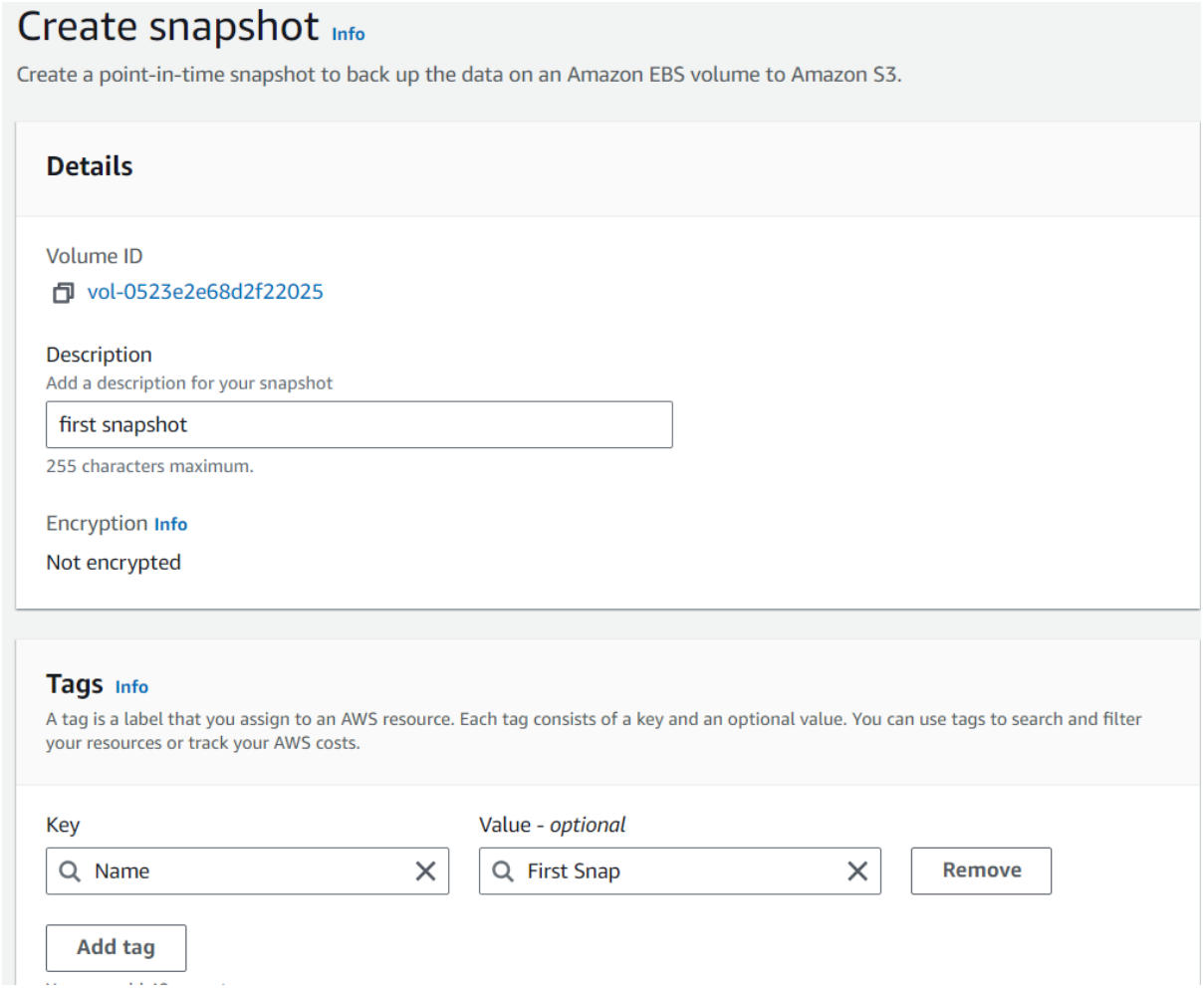
- You can now store data in the /data directory.

sudo cd /data touch a touch b

4. Create a Snapshot:

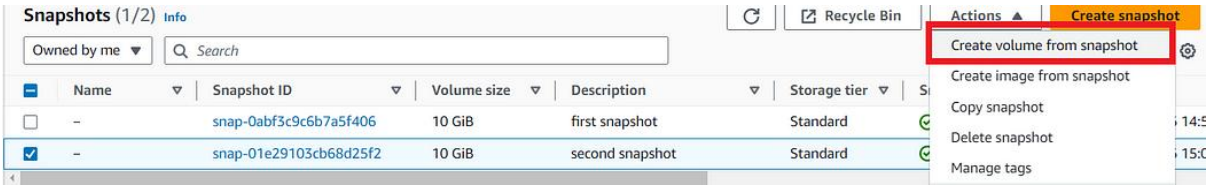
- Go to the “Volumes” section in the EC2 Dashboard.
- Select the volume, click “Actions”, and then “Create Snapshot”.
- Provide a description and click “Create Snapshot”.

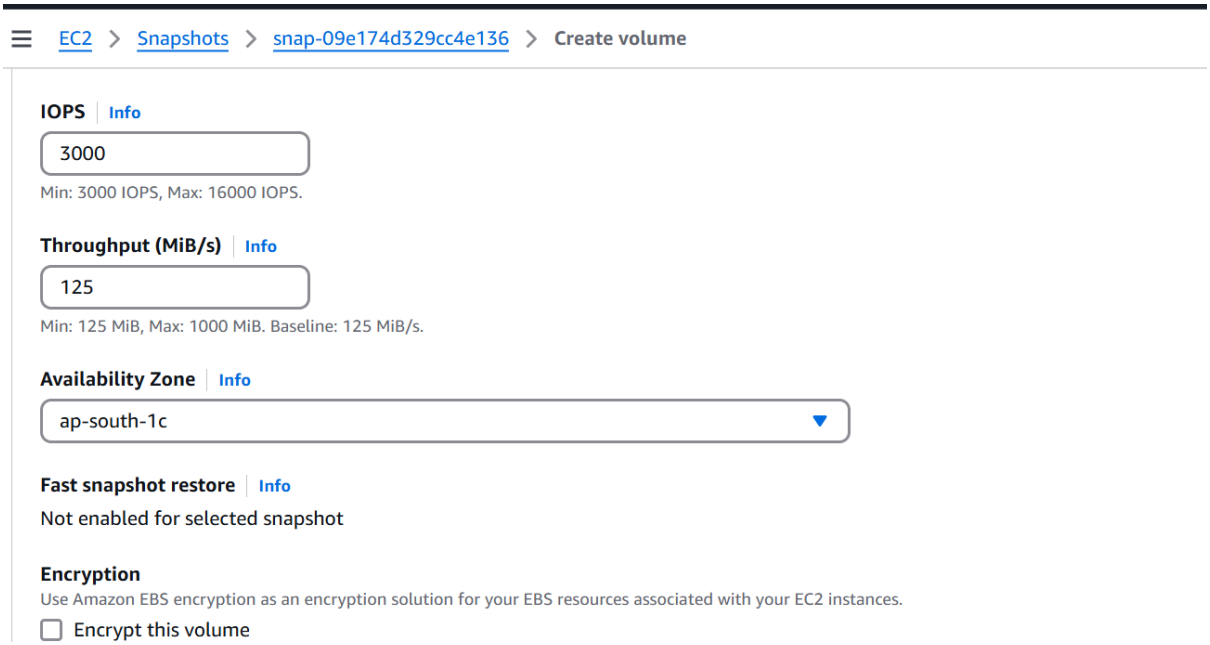




5. Create a Volume from a Snapshot:

- Go to the “Snapshots” section.
- Select the snapshot, click “Actions”, and then “Create Volume”.
- Specify the new volume details, including the availability zone, and click “Create Volume”.

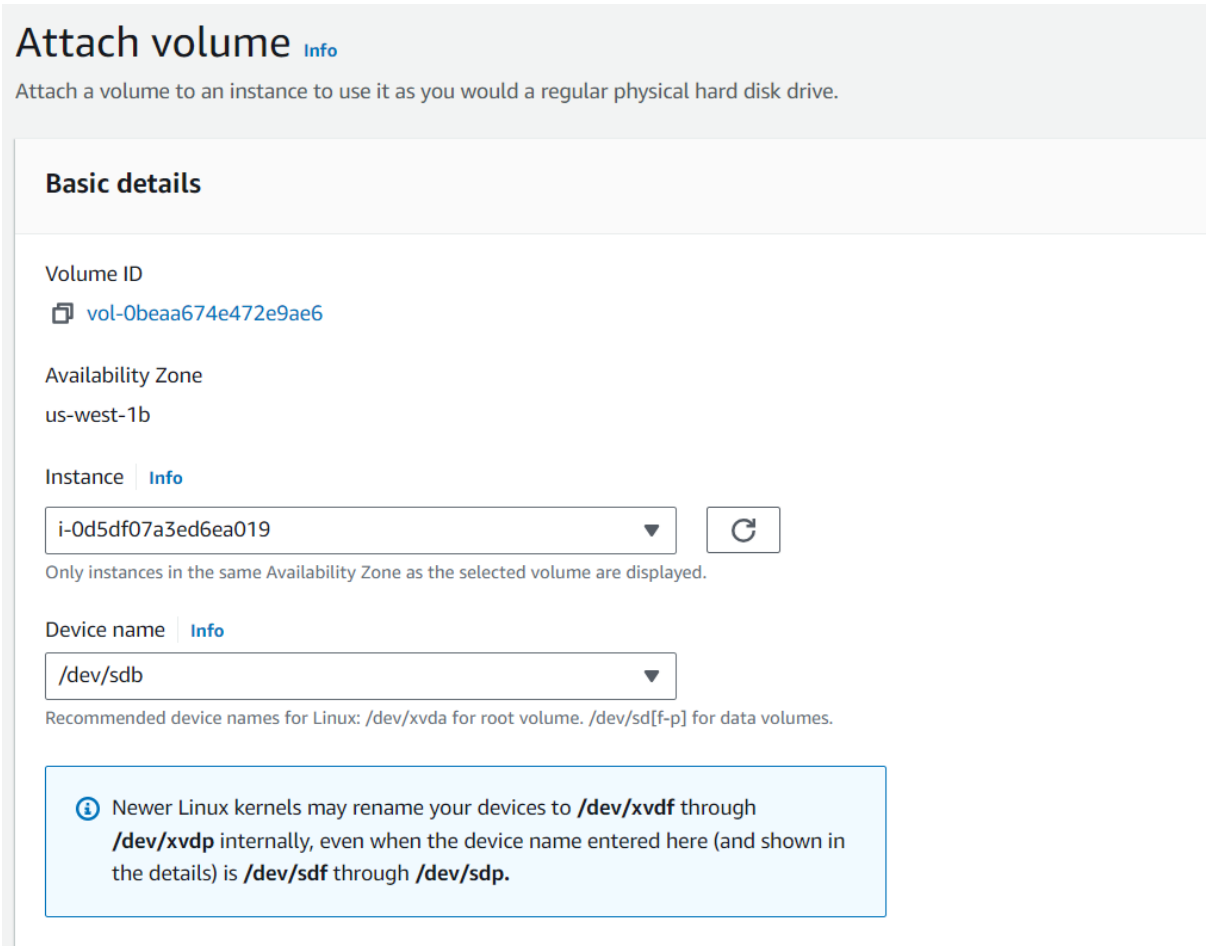




- Choose the Availability zone where you want to create that volume.
- We have choose ap-south-c

6. Verification:

- After this Attach this volume to other instance in us-south-c



- Connect to that instance and mount the volume to /mydata folder.

```
[ec2-user@ip-172-31-24-67 ~]$
[ec2-user@ip-172-31-24-67 ~]$ sudo mkdir /mydata
[ec2-user@ip-172-31-24-67 ~]$ sudo mount /dev/xvdb /mydata
[ec2-user@ip-172-31-24-67 ~]$
[ec2-user@ip-172-31-24-67 ~]$ sudo df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        4.0M     0  4.0M   0% /dev
tmpfs           475M     0  475M   0% /dev/shm
tmpfs           190M  2.9M  188M   2% /run
/dev/xvda1      8.0G  1.6G  6.5G  20% /
tmpfs           475M     0  475M   0% /tmp
/dev/xvda128     10M  1.3M  8.7M  13% /boot/efi
tmpfs            95M     0   95M   0% /run/user/1000
/dev/xvdb       9.8G   40K  9.3G   1% /mydata
[ec2-user@ip-172-31-24-67 ~]$
```

- And see whether the same data is present or not.

- Hence the verification is successful.