Disk Partitioning

Create partition on newly attached disk as per below instructions –

a) Create 2 primary partitions of 3 GB each

b) Create 2 logical partitions of 6 GB each

lsblk

sudo fdisk /dev/xvdb

lsblk

```
ubuntu@ip-172-31-4-158:~$ lsblk
NAME     MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0      7:0    0 55.7M  1 loop /snap/core18/2829
loop1      7:1    0 38.8M  1 loop /snap/snapd/21759
loop2      7:2    0 25.2M  1 loop /snap/amazon-ssm-agent/7993
xvda     202:0    0    8G  0 disk
├─xvda1  202:1    0    7G  0 part /
├─xvda14 202:14   0    4M  0 part
├─xvda15 202:15   0  106M  0 part /boot/efi
└─xvda16 259:0    0  913M  0 part /boot
xvdb     202:16   0   20G  0 disk
ubuntu@ip-172-31-4-158:~$ sudo fdisk /dev/xvdb

Welcome to fdisk (util-linux 2.39.3).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table.
Created a new DOS (MBR) disklabel with disk identifier 0x4ca90e08.

Command (m for help): n
Partition type
   p   primary (0 primary, 0 extended, 4 free)
   e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
First sector (2048-41943039, default 2048):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-41943039, default 41943039): +3G

Created a new partition 1 of type 'Linux' and of size 3 GiB.

Command (m for help): n
Partition type
   p   primary (1 primary, 0 extended, 3 free)
   e   extended (container for logical partitions)
Select (default p): p
Partition number (2-4, default 2):
First sector (6293504-41943039, default 6293504):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (6293504-41943039, default 41943039): +3G

Created a new partition 2 of type 'Linux' and of size 3 GiB.

Command (m for help): n
Partition type
   p   primary (2 primary, 0 extended, 2 free)
   e   extended (container for logical partitions)
Select (default p): e
Partition number (3,4, default 3):
First sector (12584960-41943039, default 12584960):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (12584960-41943039, default 41943039): +12G

Created a new partition 3 of type 'Extended' and of size 12 GiB.

Command (m for help):
```

sudo mkfs.ext4 /dev/xvdb1

sudo mkfs.ext4 /dev/xvdb2

sudo mkfs.ext4 /dev/xvdb5

sudo mkfs.ext4 /dev/xvdb6

sudo mkdir /Data1 /Data2 /Data3 /Data4

```
└─xvdb6  202:22   0    6G  0 part
ubuntu@ip-172-31-4-158:~$ sudo mkfs.ext4 /dev/xvdb1
mke2fs 1.47.0 (5-Feb-2023)
Creating filesystem with 786432 4k blocks and 196608 inodes
Filesystem UUID: 40dae4b4-c64e-4e54-ab36-2b4ad9b1d818
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

ubuntu@ip-172-31-4-158:~$ sudo mkfs.ext4 /dev/xvdb6
mke2fs 1.47.0 (5-Feb-2023)
Creating filesystem with 1572352 4k blocks and 393216 inodes
Filesystem UUID: 80036d41-b021-470f-9770-cfca1062ceba
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912, 819200, 884736

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

sudo mount /dev/xvdb1 /Data1

sudo mount /dev/xvdb2 /Data2

sudo mount /dev/xvdb5 /Data3

sudo mount /dev/xvdb6 /Data4

```
ubuntu@ip-172-31-4-158:~$ lsblk
NAME     MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0      7:0    0 25.2M  1 loop /snap/amazon-ssm-agent/7993
loop1      7:1    0 38.8M  1 loop /snap/snapd/21759
loop2      7:2    0 55.7M  1 loop /snap/core18/2829
xvda     202:0    0    8G  0 disk
├─xvda1  202:1    0    7G  0 part /
├─xvda14 202:14   0    4M  0 part
├─xvda15 202:15   0  106M  0 part /boot/efi
└─xvda16 259:0    0  913M  0 part /boot
xvdb     202:16   0   20G  0 disk
├─xvdb1  202:17   0    3G  0 part /Data1
├─xvdb2  202:18   0    3G  0 part /Data2
├─xvdb3  202:19   0    1K  0 part
├─xvdb5  202:21   0    6G  0 part /Data3
└─xvdb6  202:22   0    6G  0 part /Data4
ubuntu@ip-172-31-4-158:~$
```

df -h

```
ubuntu@ip-172-31-4-158:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root       6.8G  1.6G  5.2G  24% /
tmpfs           479M     0  479M   0% /dev/shm
tmpfs           192M  892K  191M   1% /run
tmpfs           5.0M     0  5.0M   0% /run/lock
/dev/xvda16     881M   76M  744M  10% /boot
/dev/xvda15     105M  6.1M   99M   6% /boot/efi
tmpfs            96M   12K   96M   1% /run/user/1000
/dev/xvdb1      2.9G   24K  2.8G   1% /Data1
/dev/xvdb2      2.9G   24K  2.8G   1% /Data2
/dev/xvdb5      5.9G   24K  5.6G   1% /Data3
/dev/xvdb6      5.9G   24K  5.6G   1% /Data4
ubuntu@ip-172-31-4-158:~$ sudo umount /Data1
```

After umount:

sudo umount /Data1

sudo umount /Data2

sudo umount /Data3

sudo umount /Data4

```
ubuntu@ip-172-31-4-158:~$ lsblk
NAME     MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0      7:0    0 25.2M  1 loop /snap/amazon-ssm-agent/7993
loop1      7:1    0 38.8M  1 loop /snap/snapd/21759
loop2      7:2    0 55.7M  1 loop /snap/core18/2829
xvda     202:0    0    8G  0 disk
├─xvda1  202:1    0    7G  0 part /
├─xvda14 202:14   0    4M  0 part
├─xvda15 202:15   0  106M  0 part /boot/efi
└─xvda16 259:0    0  913M  0 part /boot
xvdb     202:16   0   20G  0 disk
├─xvdb1  202:17   0    3G  0 part
├─xvdb2  202:18   0    3G  0 part
├─xvdb3  202:19   0    1K  0 part
├─xvdb5  202:21   0    6G  0 part
└─xvdb6  202:22   0    6G  0 part
ubuntu@ip-172-31-4-158:~$
```