**Configure and manage disk space.**

sudo fdisk /dev/sdb

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): +300M

Created a new partition 1 of type 'Linux' and of size 300 MiB.

Command (m for help): n

Partition type

p primary (1 primary, 0 extended, 3 free)

e extended (container for logical partitions)

Select (default p):

Using default response p.

Partition number (2-4, default 2):

First sector (616448-41943039, default 616448):

Last sector, +/-sectors or +/-size{K,M,G,T,P} (616448-41943039, default 41943039): +300MB

Created a new partition 2 of type 'Linux' and of size 286 MiB.

Command (m for help): n

Partition type

p primary (2 primary, 0 extended, 2 free)

e extended (container for logical partitions)

Select (default p):

Using default response p.

Partition number (3,4, default 3):

First sector (1202176-41943039, default 1202176):

Last sector, +/-sectors or +/-size{K,M,G,T,P} (1202176-41943039, default 41943039): +300MB

Created a new partition 3 of type 'Linux' and of size 286 MiB.

Command (m for help): n

Partition type

p primary (3 primary, 0 extended, 1 free)

e extended (container for logical partitions)

Select (default e):

Using default response e.

Selected partition 4

First sector (1787904-41943039, default 1787904):

Last sector, +/-sectors or +/-size{K,M,G,T,P} (1787904-41943039, default 41943039): +300M

Created a new partition 4 of type 'Extended' and of size 300 MiB.

Command (m for help): t

Partition number (1-4, default 4):

Hex code or alias (type L to list all): 8e

Changed type of partition 'Extended' to 'Linux LVM'.

Command (m for help): t

Partition number (1-4, default 4): 3

Hex code or alias (type L to list all): 8e

Changed type of partition 'Linux' to 'Linux LVM'.

Command (m for help): t

Partition number (1-4, default 4): 2

Hex code or alias (type L to list all): 8e

Changed type of partition 'Linux' to 'Linux LVM'.

Command (m for help): t

Partition number (1-4, default 4): 1

Hex code or alias (type L to list all): 8e

Changed type of partition 'Linux' to 'Linux LVM'.

Command (m for help): w

The partition table has been altered.

Calling ioctl() to re-read partition table.

Syncing disks.

Created and displayed physical volumes.

sudo pvcreate /dev/sdb1 /dev/sdb2 /dev/sdb3 /dev/sdb4

Physical volume "/dev/sdb1" successfully created.

Physical volume "/dev/sdb2" successfully created.

Physical volume "/dev/sdb3" successfully created.

Physical volume "/dev/sdb4" successfully created.

pvs

PV VG Fmt Attr PSize PFree

/dev/sdb1 lvm2 a-- 296.00m 0

/dev/sdb2 lvm2 a-- 284.00m 176.00m

/dev/sdb3 lvm2 a-- 284.00m 284.00m

/dev/sdb4 lvm2 a-- 296.00m 0

Create volume group.

sudo vgcreate vgData /dev/sdb1 /dev/sdb2 /dev/sdb3 /dev/sdb4

Volume group "vgData" successfully created

Create Logical volume.

sudo lvcreate -n lvVol1 -L 700MB vgData

Logical volume "lvVol1" created.

Create file system.

sudo mkfs.ext4 /dev/vgData/lvVol1

mke2fs 1.46.6 (1-Feb-2023)

Creating filesystem with 179200 4k blocks and 44832 inodes

Filesystem UUID: 9a774414-d698-4f20-81eb-40955df2f847

Superblock backups stored on blocks:

32768, 98304, 163840

Allocating group tables: done

Writing inode tables: done

Creating journal (4096 blocks): done

Writing superblocks and filesystem accounting information: done

Check if was successfully mounted.

df -h

Filesystem Size Used Avail Use% Mounted on

udev 941M 0 941M 0% /dev

tmpfs 197M 1.2M 196M 1% /run

/dev/sda1 79G 15G 61G 20% /

tmpfs 983M 0 983M 0% /dev/shm

tmpfs 5.0M 0 5.0M 0% /run/lock

tmpfs 197M 80K 197M 1% /run/user/1000

/dev/mapper/vgData-lvVol1 672M 24K 623M 1% /NewDir

**User Administration**

Enter umask 002 in /.bashrc file.

**Detect open ports on computers on the network.**

netstat -a

netstat -a | grep 1521

nmap 192.168.1.\*

**Firewall Configuration Management**

iptables -A INPUT -p tcp --dport 3306 -s 192.168.1.0/24 -j DROP

iptables -D INPUT -p tcp --dport 3306 -s 192.168.1.0/24 -j DROP

iptables -A OUTPUT -d 156.240.9.35 -j DROP