

Virtual Machine Settings

Hardware Options

Device	Summary
Memory	4 GB
Processors	2
Hard Disk (NVMe)	40 GB
New Hard Disk (NVMe)	50 GB
CD/DVD (IDE)	Auto detect
Network Adapter	NAT
USB Controller	Present
Sound Card	Auto detect
Printer	Present
Display	Auto detect

Disk file

server-21.vmdk

Capacity

Current size: 6.3 MB  
System free: 285.8 GB  
Maximum size: 50 GB

Disk information

Disk space is not preallocated for this hard disk.  
Hard disk contents are stored in a single file.

Disk utilities

Defragment files and consolidate free space. ☐ Defragment

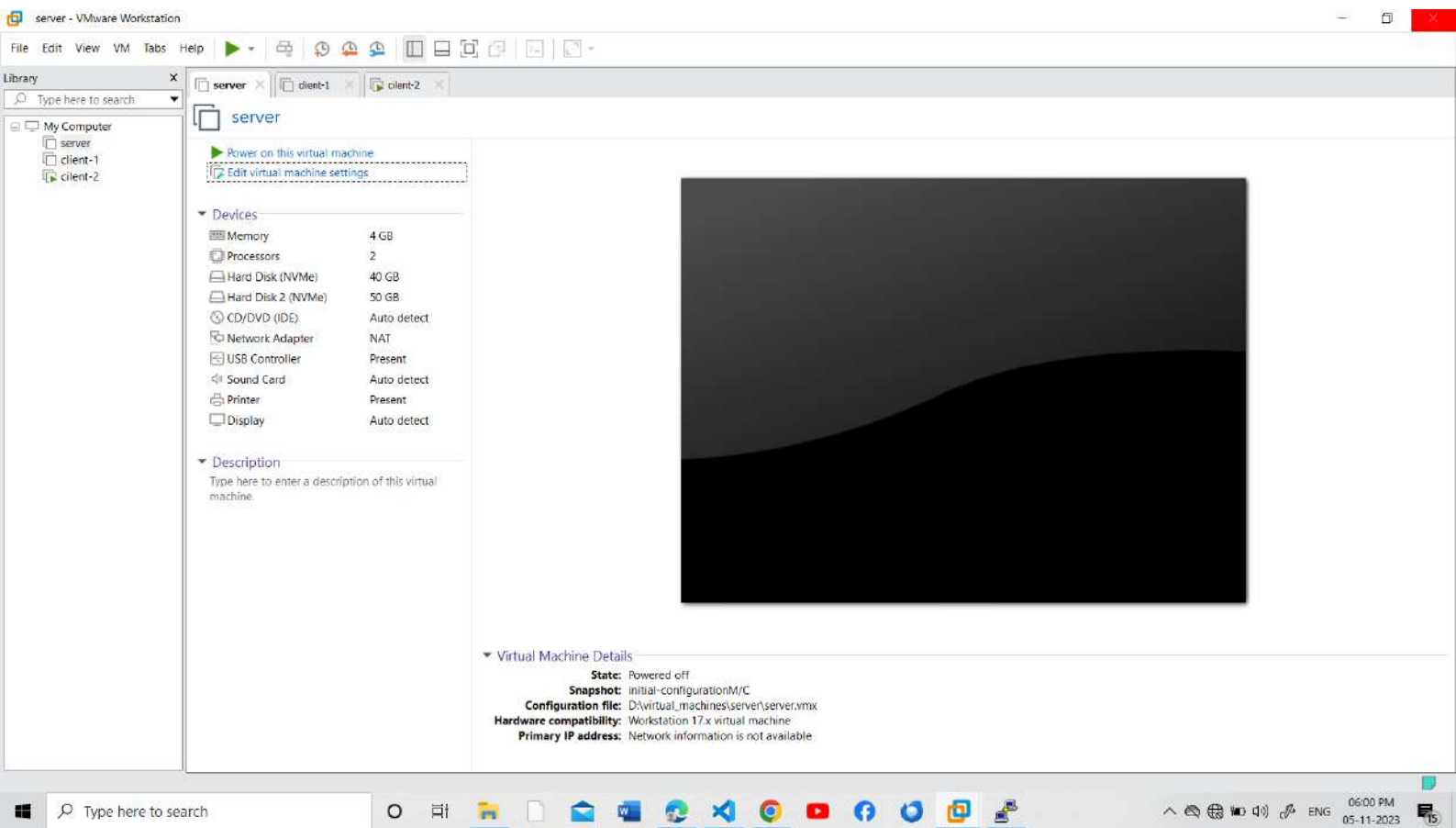
Expand disk capacity. ☐ Expand...

Compact disk to reclaim unused space. ☐ Compact

Advanced...

Add... Remove

OK Cancel Help



```
sunbeam@server~$ login as: sunbeam
sunbeam@192.168.59.147's password:
Activate the web console with: systemctl enable --now cockpit.socket
```

```
Last login: Sun Nov  5 10:43:05 2023 from 192.168.59.1
```

```
[sunbeam@server ~]$
[sunbeam@server ~]$ lsblk
NAME                                MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
sr0                                11:0    1 1024M  0 rcm
zram0                              252:0    0   3.8G  0 disk [SWAP]
nvme0n1                             259:0    0   40G  0 disk
├─nvme0n1p1                         259:1    0    1M  0 part
├─nvme0n1p2                         259:2    0    1G  0 part /boot
├─nvme0n1p3                         259:3    0   39G  0 part
└─fedora-root 253:0    0   15G  0 lvm  /
```

```
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo init 0
```

```
[sudo] password for sunbeam:
```

```
[sunbeam@server ~]$
```

```
login as: sunbeam
```

```
sunbeam@192.168.59.147's password:
```

```
Web console: https://server:9090/ or https://192.168.59.147:9090/
```

```
Last login: Sun Nov  5 17:40:15 2023 from 192.168.59.1
```

```
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ lsblk
NAME                                MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
sr0                                11:0    1 1024M  0 rcm
zram0                              252:0    0   3.8G  0 disk [SWAP]
nvme0n1                             259:0    0   40G  0 disk
├─nvme0n1p1                         259:1    0    1M  0 part
├─nvme0n1p2                         259:2    0    1G  0 part /boot
├─nvme0n1p3                         259:3    0   39G  0 part
└─fedora-root 253:0    0   15G  0 lvm  /
nvme0n2                             259:4    0   50G  0 disk
```

```
[sunbeam@server ~]$
```

```
[sunbeam@server ~]$ sudo fdisk /dev/nvme0n2
```

```
[sudo] password for sunbeam:
```

```
Welcome to fdisk (util-linux 2.38.1).
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 disklabel with disk identifier 0xcd3bd338.
```

```
Command (m for help): n
```

```
Partition type
```

```
  p   primary (0 primary, 0 extended, 4 free)
```

sunbeam@server~

Command (m for help): g

Created a new GPT disklabel (GUID: 59DF2FAD-CFFC-5240-B552-9EB6C9E31B96).

Command (m for help): n

Partition number (1-128, default 1): 1

First sector (2048-104857566, default 2048):

Last sector, +/-sectors or +/-size(K,M,G,T,P) (2048-104857566, default 104855551):

Created a new partition 1 of type 'Linux filesystem' and of size 50 GiB.

Command (m for help): d

Selected partition 1

Partition 1 has been deleted.

Command (m for help): n

Partition number (1-128, default 1):

First sector (2048-104857566, default 2048):

Last sector, +/-sectors or +/-size(K,M,G,T,P) (2048-104857566, default 104855551): +10G

Created a new partition 1 of type 'Linux filesystem' and of size 10 GiB.

Command (m for help): n

Partition number (2-128, default 2):

First sector (20973568-104857566, default 20973568):

Last sector, +/-sectors or +/-size(K,M,G,T,P) (20973568-104857566, default 104855551): +10G

Created a new partition 2 of type 'Linux filesystem' and of size 10 GiB.

Command (m for help): n

Partition number (3-128, default 3):

First sector (41945088-104857566, default 41945088):

Last sector, +/-sectors or +/-size(K,M,G,T,P) (41945088-104857566, default 104855551): +10G

Created a new partition 3 of type 'Linux filesystem' and of size 10 GiB.

Command (m for help): n

Partition number (4-128, default 4):

First sector (62916608-104857566, default 62916608):

Last sector, +/-sectors or +/-size(K,M,G,T,P) (62916608-104857566, default 104855551): +10G

Created a new partition 4 of type 'Linux filesystem' and of size 10 GiB.

Type here to search



06:26 PM  
05-11-2023

ENG

```
sunbeam@server:~$  
Command (m for help):  
  
Command (m for help): n  
Partition number (5-128, default 5):  
First sector (83888128-104857566, default 83888128):  
Last sector, +/-sectors or +/-size(K,M,G,T,P) (83888128-104857566, default 104857566): +10G  
Value out of range.  
Last sector, +/-sectors or +/-size(K,M,G,T,P) (83888128-104857566, default 104857566):  
Created a new partition 5 of type 'Linux filesystem' and of size 10 GiB.  
  
Command (m for help): p  
Disk /dev/nvme0n2: 50 GiB, 53687091200 bytes, 104857600 sectors  
Disk model: VMware Virtual NVME Disk  
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: 59DF2FAD-CFFC-5240-B552-9EB6C9E31B96  
  
Device            Start      End      Sectors  Size Type  
/dev/nvme0n2p1    2048      20973567 20971520 10G Linux filesystem  
/dev/nvme0n2p2    20973568 41945087 20971520 10G Linux filesystem  
/dev/nvme0n2p3    41945088 62916607 20971520 10G Linux filesystem  
/dev/nvme0n2p4    62916608 83888127 20971520 10G Linux filesystem  
/dev/nvme0n2p5    83888128 104855551 20967424 10G Linux filesystem  
  
Command (m for help): w  
The partition table has been altered.  
Calling ioctl() to re-read partition table.  
Syncing disks.  
  
[sunbeam@server ~]$  
[sunbeam@server ~]$  
[sunbeam@server ~]$ lsblk  
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS  
sr0          11:0    1 1024M  0 rom  
zram0        252:0    0   3.8G  0 disk [SWAP]  
nvme0n1      259:0    0   40G   0 disk  
├─nvme0n1p1   259:1    0    1M   0 part  
├─nvme0n1p2   259:2    0    1G   0 part /boot  
├─nvme0n1p3   259:3    0   39G   0 part  
└─fedora-root 253:0    0    15G   0 lvm /  
nvme0n2      259:4    0   50G   0 disk  
├─nvme0n2p1   259:5    0    10G   0 part  
├─nvme0n2p2   259:6    0    10G   0 part  
└─nvme0n2p3   259:7    0    10G   0 part
```

```

sunbeam@server:~$ sudo pvcreate /dev/nvme0n2p1
Physical volume "/dev/nvme0n2p1" successfully created.
sunbeam@server:~$ sudo pvcreate /dev/nvme0n2p2
Physical volume "/dev/nvme0n2p2" successfully created.
sunbeam@server:~$ sudo pvcreate /dev/nvme0n2p3
Physical volume "/dev/nvme0n2p3" successfully created.
sunbeam@server:~$ sudo pvcreate /dev/nvme0n2p4
Physical volume "/dev/nvme0n2p4" successfully created.
sunbeam@server:~$ sudo pvcreate /dev/nvme0n2p5
Physical volume "/dev/nvme0n2p5" successfully created.
sunbeam@server:~$ sudo pvs
  PV          VG      Fmt  Attr  PSize    PFree
  /dev/nvme0n1p3 fedora lvm2 a--  <39.00g <24.00g
sunbeam@server:~$ sudo vgs
  VG      #PV #LV #SN Attr   VSize    VFree
  fedora   1   1   0 wz--n- <39.00g <24.00g
sunbeam@server:~$ sudo vgcreate /dev/nvme0n2p1 /dev/nvme0n2p2 /dev/nvme0n2p3 /dev/nvme0n2p4 /dev/nvme0n2p5
/dev/nvme0n2p1: already exists in filesystem
Run 'vgcreate --help' for more information.
sunbeam@server:~$ sudo vgcreate myvg /dev/nvme0n2p1 /dev/nvme0n2p2 /dev/nvme0n2p3 /dev/nvme0n2p4 /dev/nvme0n2p5
Volume group "myvg" successfully created
sunbeam@server:~$ sudo vgs
  VG      #PV #LV #SN Attr   VSize    VFree
  fedora   1   1   0 wz--n- <39.00g <24.00g
  myvg     5   0   0 wz--n- 49.98g 49.98g
sunbeam@server:~$ sudo lvs

```

```
sunbeam@server:~$  
LV VG Attr LSize Pool Origin Data% Meta% Move Log Cpy%Sync Conv  
ert  
root fedora -wi-ao---- 15.00g  
[sunbeam@server ~]$  
[sunbeam@server ~]$  
[sunbeam@server ~]$  
[sunbeam@server ~]$ sudo lvcreate -n lv1 -L 25G myvg  
No command with matching syntax recognised. Run 'lvcreate --help' for more in  
formation.  
[sunbeam@server ~]$ sudo lvcreate -n lv1 -L 25G myvg  
Logical volume "lv1" created.  
[sunbeam@server ~]$  
[sunbeam@server ~]$ sudo lvcreate -n lv1 -L 15G myvg  
Logical Volume "lv1" already exists in volume group "myvg"  
[sunbeam@server ~]$ sudo lvcreate -n lv2 -L 15G myvg  
Logical volume "lv2" created.  
[sunbeam@server ~]$  
[sunbeam@server ~]$ sudo lvcreate -n lv3 -L 5G myvg  
Logical volume "lv3" created.  
[sunbeam@server ~]$  
[sunbeam@server ~]$ sudo lvs  
LV VG Attr LSize Pool Origin Data% Meta% Move Log Cpy%Sync Conv  
ert  
root fedora -wi-ao---- 15.00g  
lv1 myvg -wi-a----- 25.00g  
lv2 myvg -wi-a----- 15.00g  
lv3 myvg -wi-a----- 5.00g  
[sunbeam@server ~]$  
[sunbeam@server ~]$  
[sunbeam@server ~]$ sudo mkdir /mnt/disk1  
[sudo] password for sunbeam:  
[sunbeam@server ~]$ sudo mkdir /mnt/disk2  
[sunbeam@server ~]$ sudo mkdir /mnt/disk3  
[sunbeam@server ~]$ ls /mnt  
disk1 disk2 disk3 hqfs  
[sunbeam@server ~]$  
[sunbeam@server ~]$  
[sunbeam@server ~]$ sudo mkfs -t xfs /dev/myvg/lv1  
meta-data=/dev/myvg/lv1 isize=512 agcount=4, agsize=1638400 blks  
= sectsz=512 attr=2, projid32bit=1  
= crc=1 finobt=1, sparse=1, rmapbt=0  
= reflink=1 bigtime=1 inobtcount=1  
data = bsize=4096 blocks=6553600, imaxpct=25  
= sunit=0 swidth=0 blks  
naming =version 2 bsize=4096 ascii-ci=0, ftype=1
```

```
sunbeam@server:~$ sudo mkfs -t xfs /dev/myvg/lv2
log                =internal log                bsize=4096      blocks=16384, version=2
                  =                             sectsz=512      sunit=0 blks, lazy-count=1
realtime=none      extsz=4096                    blocks=0, rtextents=0
[Sunbeam@server ~]$ sudo mkfs -t xfs /dev/myvg/lv3
log                =internal log                bsize=4096      blocks=16384, version=2
                  =                             sectsz=512      sunit=0 blks, lazy-count=1
realtime=none      extsz=4096                    blocks=0, rtextents=0
[Sunbeam@server ~]$ sudo mkfs -t xfs /dev/myvg/lv1
log                =internal log                bsize=4096      blocks=16384, version=2
                  =                             sectsz=512      sunit=0 blks, lazy-count=1
realtime=none      extsz=4096                    blocks=0, rtextents=0
[Sunbeam@server ~]$ sudo mount -t xfs /dev/myvg/lv1 /mnt/disk1
[Sunbeam@server ~]$ sudo mount -t xfs /dev/myvg/lv1 /mnt/disk2
[Sunbeam@server ~]$ sudo mount -t xfs /dev/myvg/lv1 /mnt/disk3
[Sunbeam@server ~]$ sudo cat /etc/fstab
sudo: cat: command not found
[Sunbeam@server ~]$ sudo vim /etc/fstab
[Sunbeam@server ~]$ sudo findmnt | grep "disk"
|-/mnt/disk1      /dev/mapper/myvg-lv1  xfs      rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
|-/mnt/disk2      /dev/mapper/myvg-lv1  xfs      rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
|-/mnt/disk3      /dev/mapper/myvg-lv1  xfs      rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
[Sunbeam@server ~]$ sudo init 6
[Sunbeam@server ~]$
login as: sunbeam
sunbeam@192.168.59.147's password:
Web console: https://server:9090/ or https://192.168.59.147:9090/

Last login: Sun Nov  5 18:01:51 2023 from 192.168.59.1
[Sunbeam@server ~]$ lsblk
```



```
sunbeam@server:~$ sudo mount -t xfs /dev/mypvg/lv1 /mnt/disk1
[sunbeam@server ~]$ sudo mount -t xfs /dev/mypvg/lv1 /mnt/disk2
[sunbeam@server ~]$ sudo mount -t xfs /dev/mypvg/lv1 /mnt/disk3
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo etc /etc/fstab
sudo: etc: command not found
[sunbeam@server ~]$ sudo vim /etc/fstab
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo findmnt | grep "disk"
- /mnt/disk1 /dev/mapper/mypvg-lv1 xfs rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
- /mnt/disk2 /dev/mapper/mypvg-lv1 xfs rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
- /mnt/disk3 /dev/mapper/mypvg-lv1 xfs rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo init 6
[sunbeam@server ~]$
login as: sunbeam
sunbeam@192.168.59.147's password:
Web console: https://server:9090/ or https://192.168.59.147:9090/

Last login: Sun Nov 5 18:01:51 2023 from 192.168.59.1
[sunbeam@server ~]$
[sunbeam@server ~]$ lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
sr0          11:0    1 1024M  0 rom
zram0        252:0    0   3.8G  0 disk [SWAP]
nvme0n1      259:0    0   40G  0 disk
├─nvme0n1p1  259:1    0    1M  0 part
├─nvme0n1p2  259:2    0    1G  0 part /boot
├─nvme0n1p3  259:3    0   39G  0 part
└─┬-fedora-root 253:0    0   15G  0 lvm /
   └─nvme0n2
       ├─nvme0n2p1 259:5    0   10G  0 part
       └─┬-mypvg-lv1 253:1    0   25G  0 lvm /mnt/disk1
          ├─nvme0n2p2 259:6    0   10G  0 part
          └─┬-mypvg-lv1 253:1    0   25G  0 lvm /mnt/disk1
             ├─nvme0n2p3 259:7    0   10G  0 part
             └─┬-mypvg-lv1 253:1    0   25G  0 lvm /mnt/disk1
                ├─mypvg-lv3 253:3    0    5G  0 lvm /mnt/disk3
                └─nvme0n2p4 259:8    0   10G  0 part
                    └─mypvg-lv2 253:2    0   15G  0 lvm /mnt/disk2
                        └─nvme0n2p5 259:9    0   10G  0 part
                            └─mypvg-lv2 253:2    0   15G  0 lvm /mnt/disk2
                                └─mypvg-lv3 253:3    0    5G  0 lvm /mnt/disk3
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo findmnt | grep "disk"
[sudo] password for sunbeam:
- /mnt/disk3 /dev/mapper/mypvg-lv3 xfs rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
- /mnt/disk2 /dev/mapper/mypvg-lv2 xfs rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
- /mnt/disk1 /dev/mapper/mypvg-lv1 xfs rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
[sunbeam@server ~]$
```

```
sunbeam@server~$  
login as: sunbeam  
sunbeam@192.168.59.147's password:  
Activate the web console with: systemctl enable --now cockpit.socket
```

```
Last login: Sun Nov  5 10:43:05 2023 from 192.168.59.1
```

```
[sunbeam@server ~]$  
[sunbeam@server ~]$ lsblk  
NAME                                MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS  
srl0                                11:0      1 1024M  0 rcm  
zram0                               252:0      0   3.8G  0 disk [SWAP]  
nvme0n1                             259:0      0    40G  0 disk  
├─nvme0n1p1                         259:1      0     1M  0 part  
├─nvme0n1p2                         259:2      0     1G  0 part /boot  
└─nvme0n1p3                         259:3      0    39G  0 part  
└─fedora-root 253:0      0    15G  0 lvm /
```

```
[sunbeam@server ~]$  
[sunbeam@server ~]$ sudo init 0
```

```
[sudo] password for sunbeam:
```

```
[sunbeam@server ~]$
```

```
login as: sunbeam
```

```
sunbeam@192.168.59.147's password:
```

```
Web console: https://server:9090/ or https://192.168.59.147:9090/
```

```
Last login: Sun Nov  5 17:40:15 2023 from 192.168.59.1
```

```
[sunbeam@server ~]$  
[sunbeam@server ~]$  
[sunbeam@server ~]$ lsblk  
NAME                                MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS  
srl0                                11:0      1 1024M  0 rcm  
zram0                               252:0      0   3.8G  0 disk [SWAP]  
nvme0n1                             259:0      0    40G  0 disk  
├─nvme0n1p1                         259:1      0     1M  0 part  
├─nvme0n1p2                         259:2      0     1G  0 part /boot  
└─nvme0n1p3                         259:3      0    39G  0 part  
└─fedora-root 253:0      0    15G  0 lvm /  
nvme0n2                             259:4      0    50G  0 disk
```

```
[sunbeam@server ~]$
```

```
[sunbeam@server ~]$ sudo fdisk /dev/nvme0n2
```

```
[sudo] password for sunbeam:
```

```
Welcome to fdisk (util-linux 2.38.1).  
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 disklabel with disk identifier 0xcd3bd338.
```

```
Command (m for help): n
```

```
Partition type
```

```
p primary (0 primary, 0 extended, 4 free)
```

Type here to search



```
sunbeam@server:~$  
Be careful before using the write command.  
  
Device does not contain a recognized partition table.  
Created a new DOS disklabel with disk identifier 0xcd3bd338.  
  
Command (m for help): n  
Partition type  
   p   primary (0 primary, 0 extended, 4 free)  
   e   extended (container for logical partitions)  
Select (default p):  
  
Using default response p.  
Partition number (1-4, default 1):  
First sector (2048-104857599, default 2048):  
Last sector, +/-sectors or +/-size(K,M,G,T,P) (2048-104857599, default 104857599):  
Created a new partition 1 of type 'Linux' and of size 50 GiB.  
  
Command (m for help): d  
Selected partition 1  
Partition 1 has been deleted.  
  
Command (m for help): p  
Disk /dev/nvme0n2: 50 GiB, 53687091200 bytes, 104857600 sectors  
Disk model: VMware Virtual NVMe Disk  
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: dos  
Disk identifier: 0xcd3bd338  
  
Command (m for help):  
  
Command (m for help): g  
  
Created a new GPT disklabel (GUID: 59DF2FAD-CFFC-5240-B552-9EB6C9E31B96).  
  
Command (m for help): n  
Partition number (1-128, default 1): 1  
First sector (2048-104857566, default 2048):  
Last sector, +/-sectors or +/-size(K,M,G,T,P) (2048-104857566, default 104855551):  
Created a new partition 1 of type 'Linux filesystem' and of size 50 GiB.  
  
Command (m for help): d  
Selected partition 1  
Partition 1 has been deleted.
```

```
sunbeam@server:~$  
Command (m for help): d  
Selected partition 1  
Partition 1 has been deleted.  
  
Command (m for help): n  
Partition number (1-128, default 1):  
First sector (2048-104857566, default 2048):  
Last sector, +/-sectors or +/-size(K,M,G,T,P) (2048-104857566, default 10485551): +10G  
  
Created a new partition 1 of type 'Linux filesystem' and of size 10 GiB.  
  
Command (m for help): n  
Partition number (2-128, default 2):  
First sector (20973568-104857566, default 20973568):  
Last sector, +/-sectors or +/-size(K,M,G,T,P) (20973568-104857566, default 10485551): +10G  
  
Created a new partition 2 of type 'Linux filesystem' and of size 10 GiB.  
  
Command (m for help): n  
Partition number (3-128, default 3):  
First sector (41945088-104857566, default 41945088):  
Last sector, +/-sectors or +/-size(K,M,G,T,P) (41945088-104857566, default 10485551): +10G  
  
Created a new partition 3 of type 'Linux filesystem' and of size 10 GiB.  
  
Command (m for help): n  
Partition number (4-128, default 4):  
First sector (62916608-104857566, default 62916608):  
Last sector, +/-sectors or +/-size(K,M,G,T,P) (62916608-104857566, default 10485551): +10G  
  
Created a new partition 4 of type 'Linux filesystem' and of size 10 GiB.  
  
Command (m for help):  
  
Command (m for help): n  
Partition number (5-128, default 5):  
First sector (83888128-104857566, default 83888128):  
Last sector, +/-sectors or +/-size(K,M,G,T,P) (83888128-104857566, default 10485551): +10G  
Value out of range.  
Last sector, +/-sectors or +/-size(K,M,G,T,P) (83888128-104857566, default 10485551):  
  
Created a new partition 5 of type 'Linux filesystem' and of size 10 GiB.
```

```
sunbeam@server:~$ sudo fdisk /dev/nvme0n2
Last sector, +/-sectors or +/-size(K,M,G,T,P) (83888128-104857566, default 10485551):
```

```
Created a new partition 5 of type 'Linux filesystem' and of size 10 GiB.
```

```
Command (m for help): p
Disk /dev/nvme0n2: 50 GiB, 53687091200 bytes, 104857600 sectors
Disk model: VMware Virtual NVMe Disk
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: 59DF2FAD-CFFC-5240-B552-9EB6C9E31B96
```

```
Device            Start      End  Sectors  Size Type
/dev/nvme0n2p1     2048    20973567 20971520  10G Linux filesystem
/dev/nvme0n2p2  20973568  41945087 20971520  10G Linux filesystem
/dev/nvme0n2p3  41945088  62916607 20971520  10G Linux filesystem
/dev/nvme0n2p4  62916608  83888127 20971520  10G Linux filesystem
/dev/nvme0n2p5  83888128 104855551 20967424  10G Linux filesystem
```

```
Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.
```

```
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ lsblk
NAME                                MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
sr0                                  11:0    1 1024M  0 rom
zram0                               252:0    0   3.0G  0 disk [SWAP]
nvme0n1                             259:0    0   40G  0 disk
├─nvme0n1p1                         259:1    0    1M  0 part
├─nvme0n1p2                         259:2    0    1G  0 part /boot
├─nvme0n1p3                         259:3    0   39G  0 part
└─fedora-root                       253:0    0   15G  0 lvm /
nvme0n2                             259:4    0   50G  0 disk
├─nvme0n2p1                         259:5    0   10G  0 part
├─nvme0n2p2                         259:6    0   10G  0 part
├─nvme0n2p3                         259:7    0   10G  0 part
├─nvme0n2p4                         259:8    0   10G  0 part
└─nvme0n2p5                         259:9    0   10G  0 part
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo pvs
  PV          VG      Fmt Attr PSize  PFree
  /dev/nvme0n1p3 fedora lvm2 a--  <39.00g <24.00g
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo pvcreate /dev/nvme0n2p1
```

```

sunbeam@server~$
/dev/nvme0n1p3 fedora lvm2 a-- <39.00g <24.00g
/dev/nvme0n2p1 lvm2 --- 10.00g 10.00g
/dev/nvme0n2p2 lvm2 --- 10.00g 10.00g
/dev/nvme0n2p3 lvm2 --- 10.00g 10.00g
/dev/nvme0n2p4 lvm2 --- 10.00g 10.00g
/dev/nvme0n2p5 lvm2 --- <10.00g <10.00g
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo vgs
VG      #PV #LV #SN Attr   VSize   VFree
fedora  1  1  0 wz--n- <39.00g <24.00g
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo vgcreate /dev/nvme0n2p1 /dev/nvme0n2p2 /dev/nvme0n2p3 /
/dev/nvme0n2p4 /dev/nvme0n2p5
/dev/nvme0n2p1: already exists in filesystem
Run 'vgcreate --help' for more information.
[sunbeam@server ~]$ sudo vgcreate myvg /dev/nvme0n2p1 /dev/nvme0n2p2 /dev/nvme0n
2p3 /dev/nvme0n2p4 /dev/nvme0n2p5
Volume group "myvg" successfully created
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo vgs
VG      #PV #LV #SN Attr   VSize   VFree
fedora  1  1  0 wz--n- <39.00g <24.00g
myvg    5  0  0 wz--n- 49.98g 49.98g
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo lvs
LV      VG      Attr   LSize   Pool Origin Data%  Meta%   Move Log Cpy%Sync Conv
ert     root fedora -wi-ao---- 15.00g
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo lvcreate -n lv1 -L 25G myvg
No command with matching syntax recognised. Run 'lvcreate --help' for more in
formation.
[sunbeam@server ~]$ sudo lvcreate -n lv1 -L 25G myvg
Logical volume "lv1" created.
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo lvcreate -n lv1 -L 15G myvg
Logical Volume "lv1" already exists in volume group "myvg"
[sunbeam@server ~]$ sudo lvcreate -n lv2 -L 15G myvg
Logical volume "lv2" created.
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo lvcreate -n lv3 -L 5G myvg
Logical volume "lv3" created.
[sunbeam@server ~]$

```

```

sunbeam@server:~$
2p3 /dev/nvme0n2p4 /dev/nvme0n2p5
Volume group "myvg" successfully created
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo vgs
VG      #PV #LV #SN Attr   VSize   VFree
fedora   1   1   0 wz--n- <39.00g <24.00g
myvg     5   0   0 wz--n-  49.98g  49.98g
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo lvs
LV      VG      Attr       LSize   Pool Origin Data%  Meta%   Move Log Cpy%Sync Conv
ert
root fedora -wi-ao---- 15.00g
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo lvcreate -n lv1 -L 25G myvg
No command with matching syntax recognised. Run 'lvcreate --help' for more in
formation.
[sunbeam@server ~]$ sudo lvcreate -n lv1 -L 25G myvg
Logical volume "lv1" created.
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo lvcreate -n lv1 -L 15G myvg
Logical volume "lv1" already exists in volume group "myvg"
[sunbeam@server ~]$ sudo lvcreate -n lv2 -L 15G myvg
Logical volume "lv2" created.
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo lvcreate -n lv3 -L 5G myvg
Logical volume "lv3" created.
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo lvs
LV      VG      Attr       LSize   Pool Origin Data%  Meta%   Move Log Cpy%Sync Conv
ert
root fedora -wi-ao---- 15.00g
lv1 myvg   -wi-a----- 25.00g
lv2 myvg   -wi-a----- 15.00g
lv3 myvg   -wi-a-----  5.00g
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo mkdir /mnt/disk1
[sudo] password for sunbeam:
[sunbeam@server ~]$ sudo mkdir /mnt/disk2
[sunbeam@server ~]$ sudo mkdir /mnt/disk3
[sunbeam@server ~]$ ls /mnt

```

```
sunbeam@server:~$  
[sunbeam@server ~]$  
[sunbeam@server ~]$ sudo mkdir /mnt/disk1  
[sudo] password for sunbeam:  
[sunbeam@server ~]$ sudo mkdir /mnt/disk2  
[sunbeam@server ~]$ sudo mkdir /mnt/disk3  
[sunbeam@server ~]$ ls /mnt  
disk1 disk2 disk3 hdfs  
[sunbeam@server ~]$  
[sunbeam@server ~]$  
[sunbeam@server ~]$ sudo mkfs -t xfs /dev/myvg/lv1  
meta-data=/dev/myvg/lv1      isize=512    agcount=4, agsize=1638400 blks  
=                               sectsz=512    attr=2, projid32bit=1  
=                               crc=1        finobt=1, sparse=1, rmapbt=0  
=                               reflink=1     bigtime=1 inobtcount=1  
data      =                       bsize=4096   blocks=6553600, imaxpct=25  
=                               sunit=0       swidth=0 blks  
naming    =version 2           bsize=4096   ascii-ci=0, ftype=1  
log       =internal log       bsize=4096   blocks=16384, version=2  
=                               sectsz=512    sunit=0 blks, lazy-count=1  
realtime  =none               extsz=4096   blocks=0, rtextents=0  
[sunbeam@server ~]$ sudo mkfs -t xfs /dev/myvg/lv2  
meta-data=/dev/myvg/lv2      isize=512    agcount=4, agsize=993040 blks  
=                               sectsz=512    attr=2, projid32bit=1  
=                               crc=1        finobt=1, sparse=1, rmapbt=0  
=                               reflink=1     bigtime=1 inobtcount=1  
data      =                       bsize=4096   blocks=3932160, imaxpct=25  
=                               sunit=0       swidth=0 blks  
naming    =version 2           bsize=4096   ascii-ci=0, ftype=1  
log       =internal log       bsize=4096   blocks=16384, version=2  
=                               sectsz=512    sunit=0 blks, lazy-count=1  
realtime  =none               extsz=4096   blocks=0, rtextents=0  
[sunbeam@server ~]$ sudo mkfs -t xfs /dev/myvg/lv3  
meta-data=/dev/myvg/lv3      isize=512    agcount=4, agsize=327680 blks  
=                               sectsz=512    attr=2, projid32bit=1  
=                               crc=1        finobt=1, sparse=1, rmapbt=0  
=                               reflink=1     bigtime=1 inobtcount=1  
data      =                       bsize=4096   blocks=1310720, imaxpct=25  
=                               sunit=0       swidth=0 blks  
naming    =version 2           bsize=4096   ascii-ci=0, ftype=1  
log       =internal log       bsize=4096   blocks=16384, version=2  
=                               sectsz=512    sunit=0 blks, lazy-count=1  
realtime  =none               extsz=4096   blocks=0, rtextents=0  
[sunbeam@server ~]$  
[sunbeam@server ~]$  
[sunbeam@server ~]$  
[sunbeam@server ~]$ sudo mount -t xfs /dev/myvg/lv1 /mnt/disk1  
[sunbeam@server ~]$ sudo mount -t xfs /dev/myvg/lv1 /mnt/disk2  
[sunbeam@server ~]$ sudo mount -t xfs /dev/myvg/lv1 /mnt/disk3
```



```

sunbeam@server:~$ sudo mkfs -t xfs /dev/myvg/lv2
log                =internal log                bsize=4096      blocks=16384, version=2
                  =                            sectsz=512      sunit=0 blks, lazy-count=1
realtime=none      extsz=4096                    blocks=0, rtextents=0
[Sunbeam@server ~]$ sudo mkfs -t xfs /dev/myvg/lv3
log                =internal log                bsize=4096      blocks=16384, version=2
                  =                            sectsz=512      sunit=0 blks, lazy-count=1
realtime=none      extsz=4096                    blocks=0, rtextents=0
[Sunbeam@server ~]$ sudo mkfs -t xfs /dev/myvg/lv1
log                =internal log                bsize=4096      blocks=16384, version=2
                  =                            sectsz=512      sunit=0 blks, lazy-count=1
realtime=none      extsz=4096                    blocks=0, rtextents=0
[Sunbeam@server ~]$ sudo mount -t xfs /dev/myvg/lv1 /mnt/disk1
[Sunbeam@server ~]$ sudo mount -t xfs /dev/myvg/lv1 /mnt/disk2
[Sunbeam@server ~]$ sudo mount -t xfs /dev/myvg/lv1 /mnt/disk3
[Sunbeam@server ~]$ sudo cat /etc/fstab
sudo: cat: command not found
[Sunbeam@server ~]$ sudo vim /etc/fstab
[Sunbeam@server ~]$ sudo findmnt | grep "disk"
|-/mnt/disk1      /dev/mapper/myvg-lv1  xfs      rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
|-/mnt/disk2      /dev/mapper/myvg-lv1  xfs      rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
|-/mnt/disk3      /dev/mapper/myvg-lv1  xfs      rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
[Sunbeam@server ~]$ sudo init 6
[Sunbeam@server ~]$
login as: sunbeam
sunbeam@192.168.59.147's password:
Web console: https://server:9090/ or https://192.168.59.147:9090/

Last login: Sun Nov  5 18:01:51 2023 from 192.168.59.1
[Sunbeam@server ~]$ lsblk

```

```
sunbeam@server:~$ sudo vim /etc/fstab
sunbeam@server:~$
sunbeam@server:~$ sudo findmnt | grep "disk"
|-/mnt/disk1      /dev/mapper/myvg-lv1  xfs      rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
|-/mnt/disk2      /dev/mapper/myvg-lv1  xfs      rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
|-/mnt/disk3      /dev/mapper/myvg-lv1  xfs      rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
sunbeam@server:~$
sunbeam@server:~$ sudo init 6
sunbeam@server:~$
login as: sunbeam
sunbeam@192.168.59.147's password:
Web console: https://server:9090/ or https://192.168.59.147:9090/

Last login: Sun Nov  5 18:01:51 2023 from 192.168.59.1
sunbeam@server:~$
sunbeam@server:~$ lsblk
NAME                                MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
sr0                                  11:0    1 1024M  0  rom
zram0                                252:0    0   3.8G  0  disk [SWAP]
nvme0n1                              259:0    0    40G  0  disk
|-nvme0n1p1                          259:1    0    1M  0  part
|-nvme0n1p2                          259:2    0    1G  0  part /boot
|-nvme0n1p3                          259:3    0   39G  0  part
|-L fedora-root                      253:0    0   15G  0  lvm /
nvme0n2                              259:4    0   50G  0  disk
|-nvme0n2p1                          259:5    0   10G  0  part
|-L myvg-lv1                         253:1    0   25G  0  lvm /mnt/disk1
|-nvme0n2p2                          259:6    0   10G  0  part
|-L myvg-lv1                         253:1    0   25G  0  lvm /mnt/disk1
|-nvme0n2p3                          259:7    0   10G  0  part
|-L myvg-lv1                         253:1    0   25G  0  lvm /mnt/disk1
|-myvg-lv3                          253:3    0    5G  0  lvm /mnt/disk3
|-nvme0n2p4                          259:8    0   10G  0  part
|-L myvg-lv2                         253:2    0   15G  0  lvm /mnt/disk2
|-nvme0n2p5                          259:9    0   10G  0  part
|-L myvg-lv2                         253:2    0   15G  0  lvm /mnt/disk2
|-L myvg-lv3                         253:3    0    5G  0  lvm /mnt/disk3
sunbeam@server:~$
sunbeam@server:~$ sudo findmnt | grep "disk"
[sudo] password for sunbeam:
|-/mnt/disk3      /dev/mapper/myvg-lv3  xfs      rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
|-/mnt/disk2      /dev/mapper/myvg-lv2  xfs      rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
|-/mnt/disk1      /dev/mapper/myvg-lv1  xfs      rw,relatime,seclabel,attr2,inode64,logbufs=8,logbsize=32k,noquota
sunbeam@server:~$ sudo vim /etc/fstab
sunbeam@server:~$ sudo init 0
sunbeam@server:~$
login as: sunbeam
sunbeam@192.168.59.147's password:
Web console: https://server:9090/ or https://192.168.59.147:9090/
```



```

sunbeam@server~$
└─myvg-lv2 253:2 0 15G 0 lvm
└─nvme0n2p5 259:9 0 10G 0 part
└─myvg-lv2 253:2 0 15G 0 lvm
└─myvg-lv3 253:3 0 5G 0 lvm
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo findmnt | grep "disk"
[sudo] password for sunbeam:
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo findmnt | grep "disk"
[sunbeam@server ~]$
[sunbeam@server ~]$
Broadcast message from root@server (Sun 2023-11-05 18:29:55 IST):

The system is going down for poweroff NOW!
login as: sunbeam
sunbeam@192.168.59.147's password:
Web console: https://server:9090/ or https://192.168.59.147:9090/
Last login: Sun Nov 5 18:29:26 2023 from 192.168.59.1

```

```

[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ lsblk
NAME                                MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
zram0                               252:0    0   3.8G  0 disk [SWAP]
nvme0n1                             259:0    0   40G  0 disk
└─nvme0n1p1                         259:1    0    1M  0 part
└─nvme0n1p2                         259:2    0    1G  0 part /boot
└─nvme0n1p3                         259:3    0   39G  0 part
    └─fedora-root                    253:0    0   15G  0 lvm /
nvme0n2                             259:4    0   10G  0 disk
nvme0n3                             259:5    0   10G  0 disk
nvme0n4                             259:6    0   10G  0 disk
nvme0n5                             259:7    0   10G  0 disk
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo pvs
[sudo] password for sunbeam:
PV                                VG      Fmt Attr PSize  PFree
/dew/nvme0n1p3 fedora lvm2 a--  <39.00g <24.00g
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$
[sunbeam@server ~]$ sudo pvcreate /dev/nvme0n2
Physical volume "/dev/nvme0n2" successfully created.
[sunbeam@server ~]$ sudo pvcreate /dev/nvme0n3
Physical volume "/dev/nvme0n3" successfully created.
[sunbeam@server ~]$ sudo pvcreate /dev/nvme0n4
Physical volume "/dev/nvme0n4" successfully created.

```