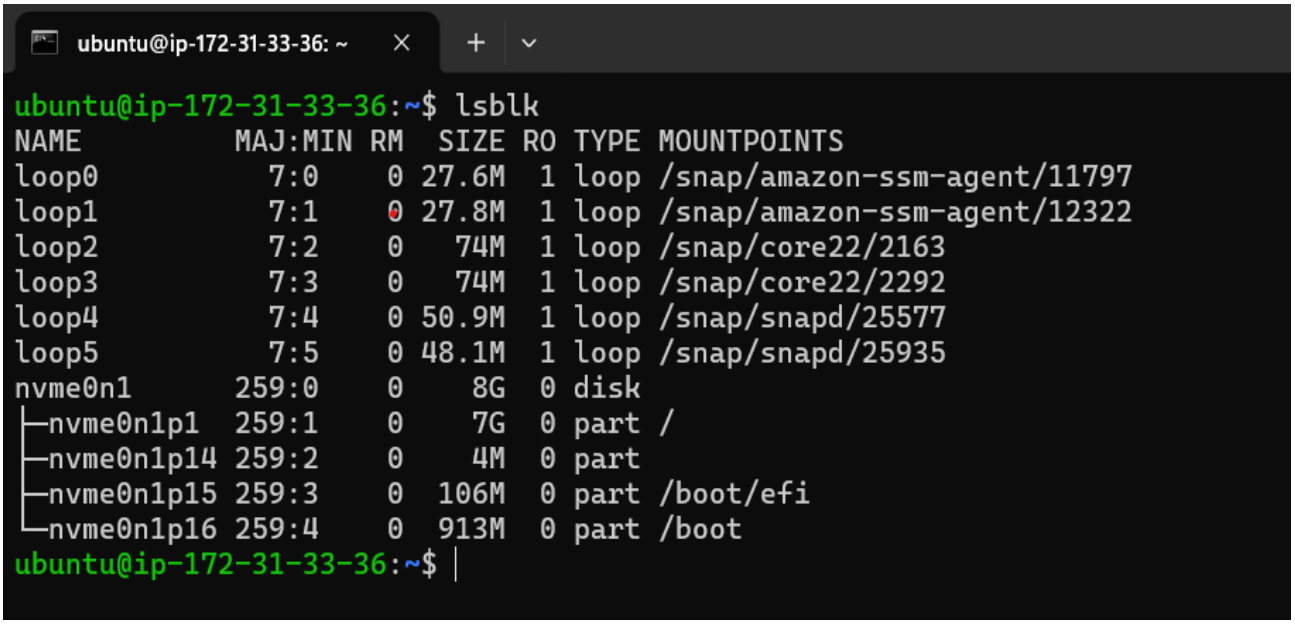
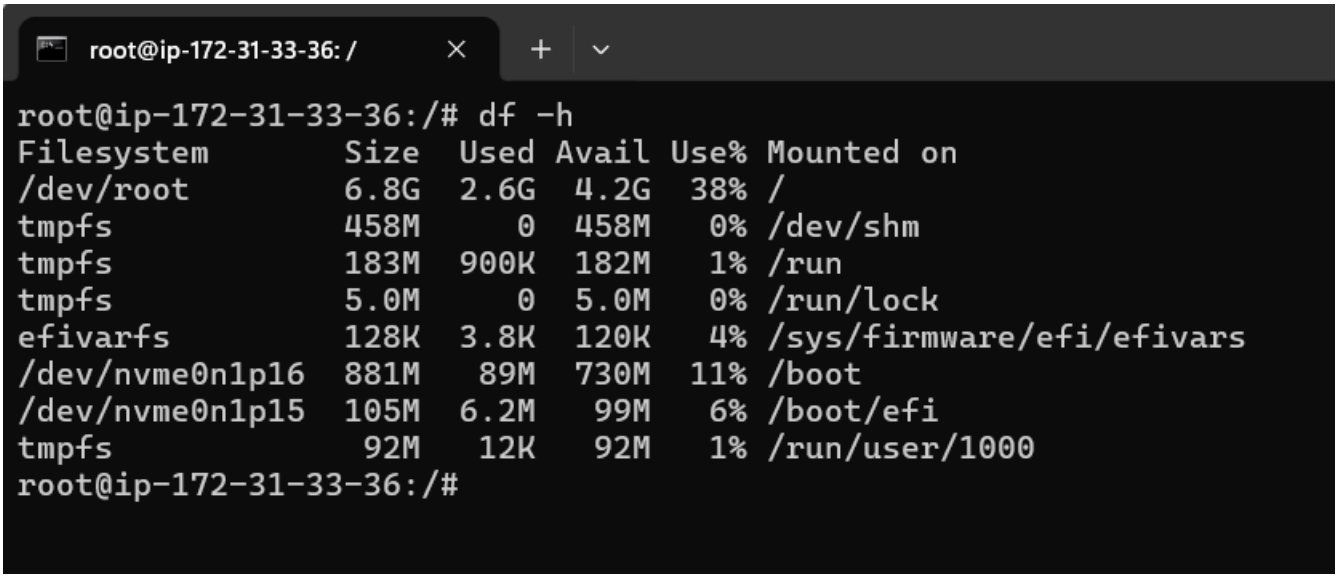
Linux Logical Volume Manager (LVM) Hands-On using AWS EC2 and EBS

Task 01: Check Current Storage

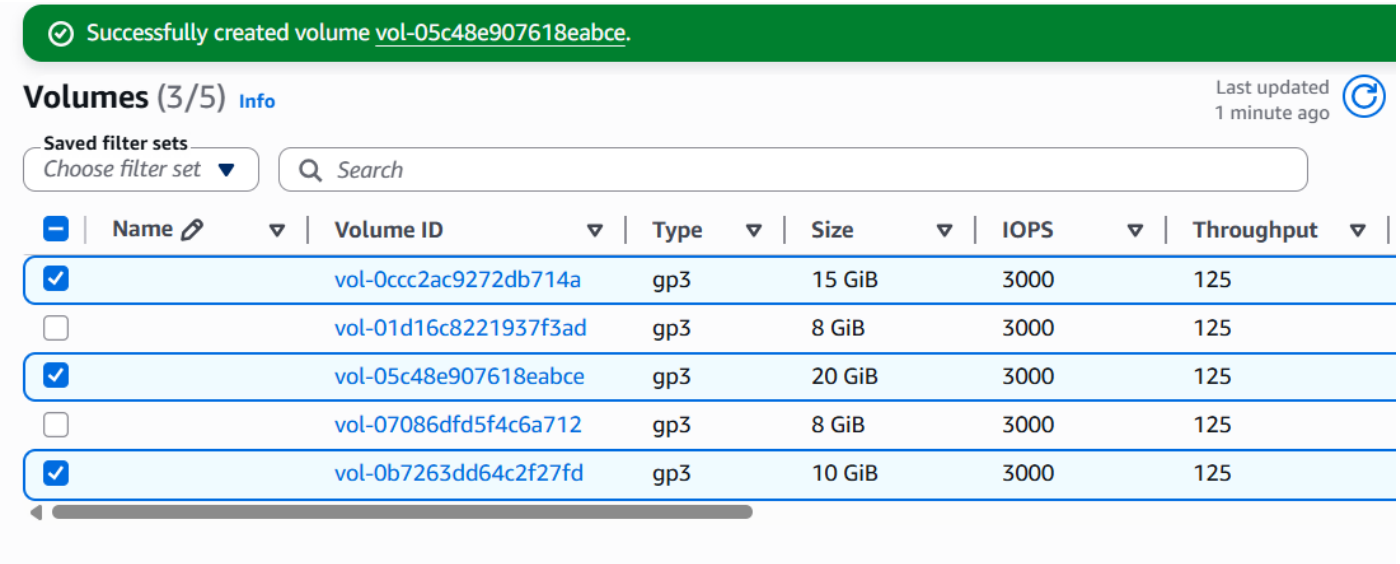
1. lsblk: list block devices in Linux system.

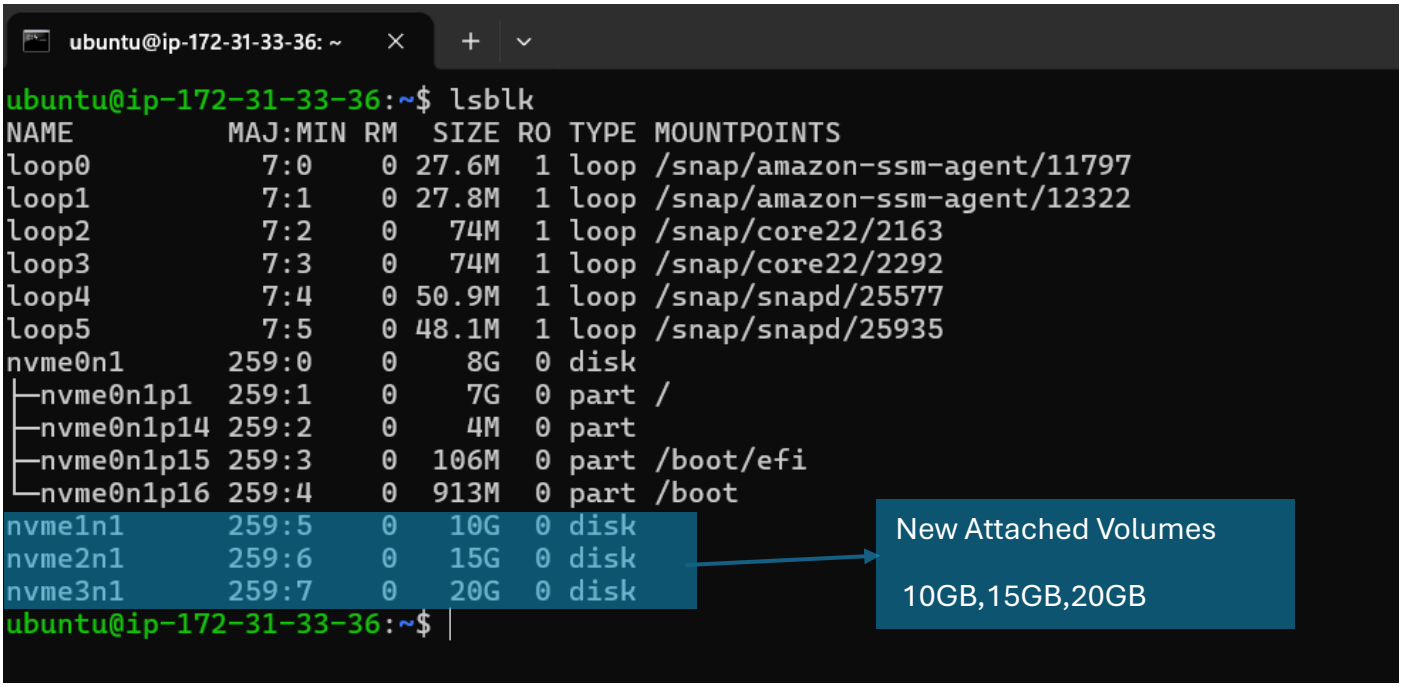


2. df -h : Check storage availability



Created three AWS EBS volumes (10GB, 15GB, 20GB) and attached them to my AWS EC2 instance.





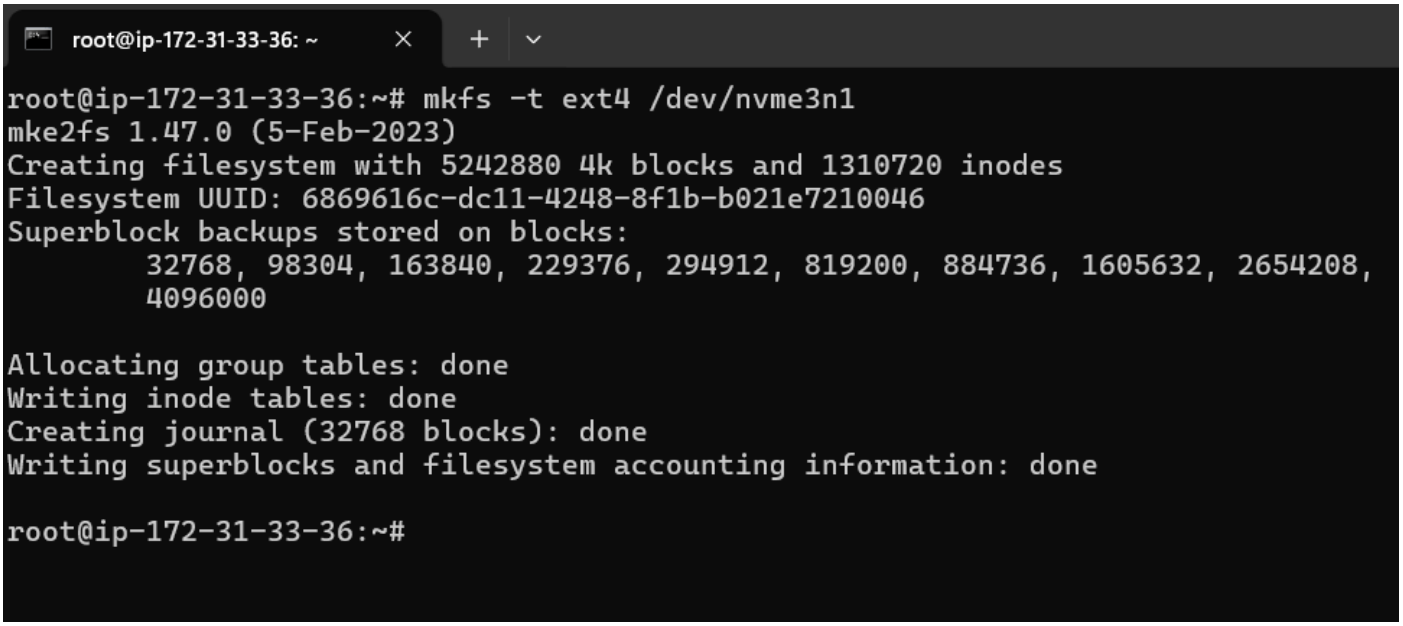
Mount EBS Volume:

Step1: To mount an EBS volume, create a mount point directory

mkdir /mnt/EBS_volume_mount

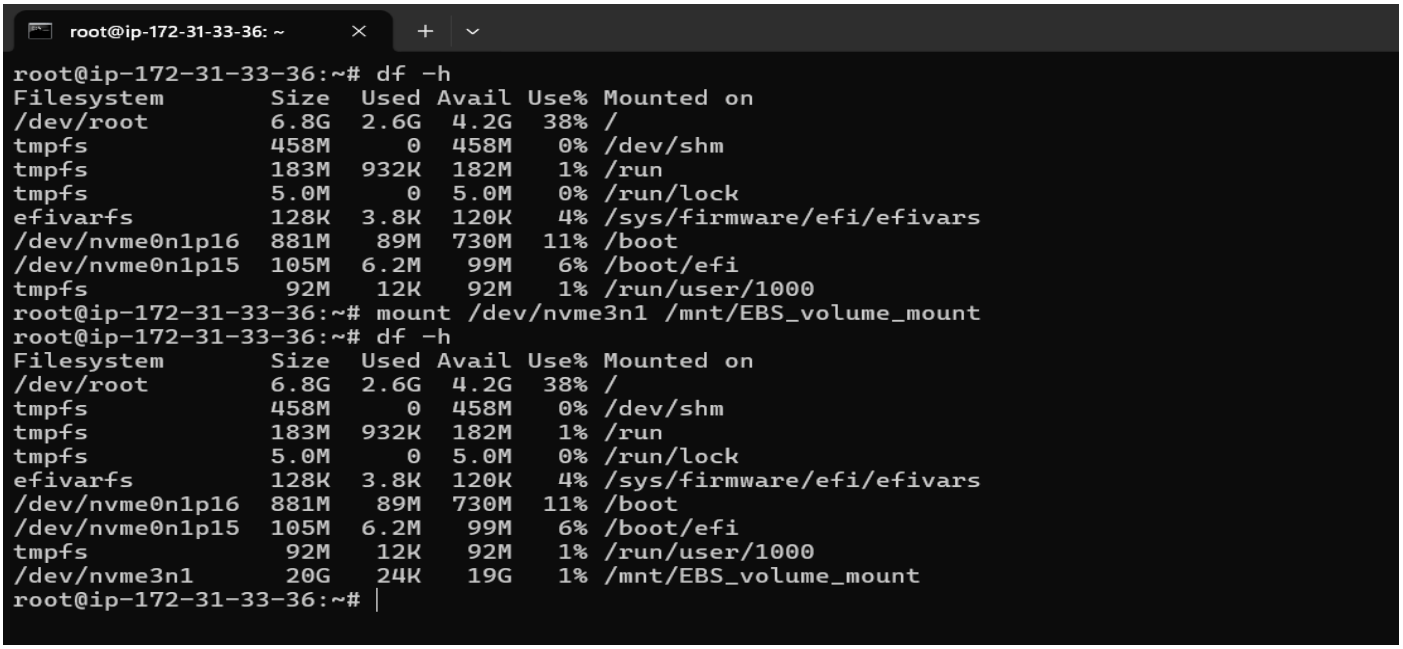
step2: format EBS disk with ext4 file system

mkfs -t ext4 /dev/nvme3n1

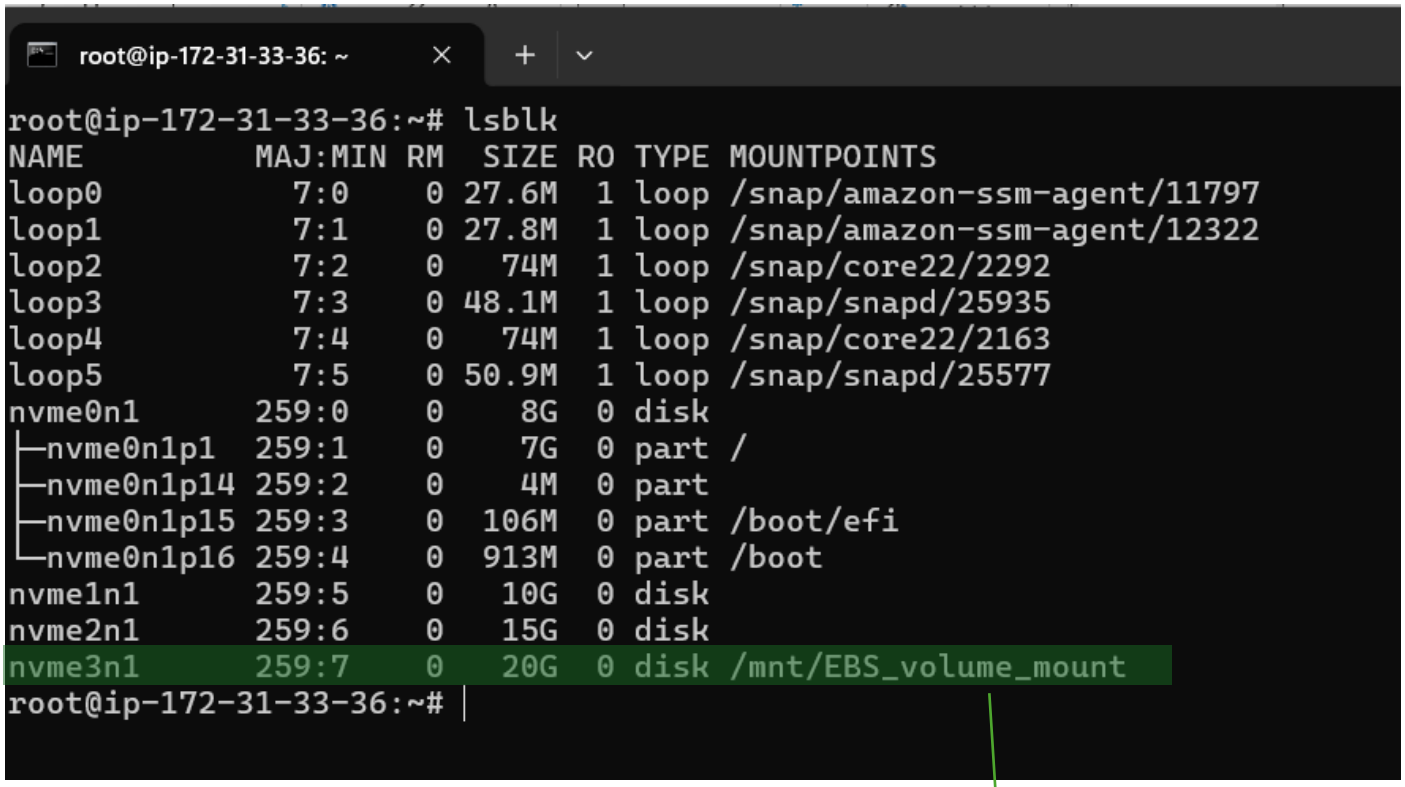


step3: mount an attached EBS volume to a specific directory in the Linux file system.

mount /dev/nvme3n1 /mnt/EBS_volume_mount



Step4: Verify using lsblk command



Its shows disk name, size, type and mounted point

Using LVM (Logical Volume Management) Create Physical volume, Volume Group, Logical Volume

1. **create physical volume:**

   pvcreate /dev/nvme1n1 /dev/nvme2n1

```
root@ip-172-31-33-36:~# pvcreate /dev/nvme1n1 /dev/nvme2n1
  Physical volume "/dev/nvme1n1" successfully created.
  Physical volume "/dev/nvme2n1" successfully created.
root@ip-172-31-33-36:~# pvs
  PV           VG Fmt  Attr PSize  PFree
  /dev/nvme1n1    lvm2 ---  10.00g 10.00g
  /dev/nvme2n1    lvm2 ---  15.00g 15.00g
root@ip-172-31-33-36:~#
```

2. **list physical volume:** *pvs*
3. **Create a volume group:**

   vgcreate “<vg_name>” “<pv_name>” “<pv_name>”

```
root@ip-172-31-33-36: ~
root@ip-172-31-33-36:~# pvs
  PV           VG Fmt  Attr PSize  PFree
  /dev/nvme1n1    lvm2 ---  10.00g 10.00g
  /dev/nvme2n1    lvm2 ---  15.00g 15.00g
root@ip-172-31-33-36:~# vgcreate "lvm_practice" /dev/nvme1n1 /dev/nvme2n1
  Volume group "lvm_practice" successfully created
root@ip-172-31-33-36:~# vgs
  VG           #PV #LV #SN Attr   VSize  VFree
  lvm_practice   2   0   0 wz--n- 24.99g 24.99g
root@ip-172-31-33-36:~#
```

4. **Create a logical volume from volume group:**

   lvcreate -L <size> -n <lv_name> <vg_name>

   a. Create 8GB logical volume from lvm_practice volume group

```
root@ip-172-31-33-36: ~
root@ip-172-31-33-36:~# vgs
  VG           #PV #LV #SN Attr   VSize  VFree
  lvm_practice   2   0   0 wz--n- 24.99g 24.99g
root@ip-172-31-33-36:~# lvcreate -L 8G -n 8G_lv lvm_practice
  Logical volume "8G_lv" created.
root@ip-172-31-33-36:~# lvs
  LV    VG           Attr       LSize Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  8G_lv lvm_practice -wi-a----- 8.00g
root@ip-172-31-33-36:~#
```

b. Create 3.5GB logical volume from lvm_practice volume group

```
root@ip-172-31-33-36:~# lvs
  LV     VG           Attr       LSize Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  7GB_lv lvm_practice -wi-a----- 7.00g
  8G_lv  lvm_practice -wi-a----- 8.00g
root@ip-172-31-33-36:~# lvcreate -L 3500M -n 3.5Gb_lv lvm_practice
  Logical volume "3.5Gb_lv" created.
root@ip-172-31-33-36:~# lvs
  LV       VG           Attr       LSize  Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  3.5Gb_lv lvm_practice -wi-a----- <3.42g
  7GB_lv   lvm_practice -wi-a-----  7.00g
  8G_lv    lvm_practice -wi-a-----  8.00g
root@ip-172-31-33-36:~#
```

Mounting Logical Volumes

1. **Mount logical volume 8G_lv to mount point /mnt/8G_lv_mount**
   a. Create directory in mnt for mounting logical volume /mnt/8G_lv_mount

   mkdir /mnt/8G_lv_mount

```
root@ip-172-31-33-36:~# mkdir /mnt/8G_lv_mount
root@ip-172-31-33-36:~# ls /mnt/
8G_lv_mount  EBS_volume_mount
root@ip-172-31-33-36:~#
```

   b. Formatting logical volume to file system:

   mkfs.ext4 /dev/<vg_name>/<lv_name>

```
root@ip-172-31-33-36:~# mkfs.ext4 /dev/lvm_practice/8G_lv
mke2fs 1.47.0 (5-Feb-2023)
Creating filesystem with 2097152 4k blocks and 524288 inodes
Filesystem UUID: 41aaa302-e458-446f-ae0d-accfcf3fe589
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-172-31-33-36:~#
```

   c. Verify filesystem:

   lsblk -f

```
nvme1n1        LVM2_membe LVM2 00                c99OAj-LjrP-BY9n-S0MN-qx8v-S3Rz-K1cqqs
└─lvm_practice-8G_lv
               ext4       1.0                    41aaa302-e458-446f-ae0d-accfcf3fe589
```

   d. Mount logical volume to mount point:

   mount /dev/<vg_name>/<lv_name> /mnt/<directory_name>

```
root@ip-172-31-33-36:~# mount /dev/lvm_practice/8G_lv /mnt/8G_lv_mount
root@ip-172-31-33-36:~# df-h
df-h: command not found
root@ip-172-31-33-36:~# df -h
Filesystem                      Size  Used Avail Use% Mounted on
/dev/root                       6.8G  2.6G  4.2G  38% /
tmpfs                           458M     0  458M   0% /dev/shm
tmpfs                           183M  932K  182M   1% /run
tmpfs                           5.0M     0  5.0M   0% /run/lock
efivarfs                        128K  3.8K  120K   4% /sys/firmware/efi/efivars
/dev/nvme0n1p16                 881M   89M  730M  11% /boot
/dev/nvme0n1p15                 105M  6.2M   99M   6% /boot/efi
tmpfs                            92M   12K   92M   1% /run/user/1000
/dev/mapper/lvm_practice-8G_lv  7.8G   24K  7.4G   1% /mnt/8G_lv_mount
```

Extend Logical Volume: storage becomes full, increase size without downtime

```
root@ip-172-31-33-36:~# lvs
  LV       VG           Attr       LSize  Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  3.5Gb_lv lvm_practice -wi-a----- <3.42g
  7GB_lv   lvm_practice -wi-a-----  7.00g
  8G_lv    lvm_practice -wi-ao----  8.00g
root@ip-172-31-33-36:~# vgs
  VG           #PV #LV #SN Attr   VSize  VFree
  lvm_practice   2   3   0 wz--n- 24.99g 6.57g
root@ip-172-31-33-36:~#
```

1. **Extend Logical volume size:**

   lvextend -L +<additional size> /dev/<vg_name>/<lv_name>

```
root@ip-172-31-33-36:~# lvextend -L +2G /dev/lvm_practice/8G_lv
  Size of logical volume lvm_practice/8G_lv changed from 8.00 GiB (2048 extents) to 10.00 GiB (2560 extents).
  Logical volume lvm_practice/8G_lv successfully resized.
root@ip-172-31-33-36:~# lvs
  LV       VG           Attr       LSize  Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  3.5Gb_lv lvm_practice -wi-a----- <3.42g
  7GB_lv   lvm_practice -wi-a-----  7.00g
  8G_lv    lvm_practice -wi-ao---- 10.00g
root@ip-172-31-33-36:~# vgs
  VG           #PV #LV #SN Attr   VSize  VFree
  lvm_practice   2   3   0 wz--n- 24.99g 4.57g
root@ip-172-31-33-36:~#
```

2. **Resize filesystem:**

   resize2fs /dev/<vg_name>/<lv_name>

```
root@ip-172-31-33-36:~# df -h
Filesystem                      Size  Used Avail Use% Mounted on
/dev/root                       6.8G  2.6G  4.2G  38% /
tmpfs                           458M     0  458M   0% /dev/shm
tmpfs                           183M  932K  182M   1% /run
tmpfs                           5.0M     0  5.0M   0% /run/lock
efivarfs                        128K  3.8K  120K   4% /sys/firmware/efi/efivars
/dev/nvme0n1p16                 881M   89M  730M  11% /boot
/dev/nvme0n1p15                 105M  6.2M   99M   6% /boot/efi
tmpfs                            92M   12K   92M   1% /run/user/1000
/dev/mapper/lvm_practice-8G_lv  7.8G   24K  7.4G   1% /mnt/8G_lv_mount
root@ip-172-31-33-36:~# resize2fs /dev/lvm_practice/8G_lv
resize2fs 1.47.0 (5-Feb-2023)
Filesystem at /dev/lvm_practice/8G_lv is mounted on /mnt/8G_lv_mount; on-line resizing required
old_desc_blocks = 1, new_desc_blocks = 2
The filesystem on /dev/lvm_practice/8G_lv is now 2621440 (4k) blocks long.

root@ip-172-31-33-36:~# df -h
Filesystem                      Size  Used Avail Use% Mounted on
/dev/root                       6.8G  2.6G  4.2G  38% /
tmpfs                           458M     0  458M   0% /dev/shm
tmpfs                           183M  932K  182M   1% /run
tmpfs                           5.0M     0  5.0M   0% /run/lock
efivarfs                        128K  3.8K  120K   4% /sys/firmware/efi/efivars
/dev/nvme0n1p16                 881M   89M  730M  11% /boot
/dev/nvme0n1p15                 105M  6.2M   99M   6% /boot/efi
tmpfs                            92M   12K   92M   1% /run/user/1000
/dev/mapper/lvm_practice-8G_lv  9.8G   24K  9.3G   1% /mnt/8G_lv_mount
root@ip-172-31-33-36:~#
```

Reduce size of logical volume:

1. **Unmount a volume:**

   umount /mnt/<lv_mount_directory_name>

```
root@ip-172-31-33-36:~# df -h
Filesystem                      Size  Used Avail Use% Mounted on
/dev/root                       6.8G  2.6G  4.2G  38% /
tmpfs                           458M     0  458M   0% /dev/shm
tmpfs                           183M  932K  182M   1% /run
tmpfs                           5.0M     0  5.0M   0% /run/lock
efivarfs                        128K  3.8K  120K   4% /sys/firmware/efi/efivars
/dev/nvme0n1p16                 881M   89M  730M  11% /boot
/dev/nvme0n1p15                 105M  6.2M   99M   6% /boot/efi
tmpfs                            92M   12K   92M   1% /run/user/1000
/dev/mapper/lvm_practice-8G_lv  9.8G   24K  9.3G   1% /mnt/8G_lv_mount
root@ip-172-31-33-36:~# umount /mnt/8G_lv_mount/
root@ip-172-31-33-36:~# df -h
Filesystem       Size  Used Avail Use% Mounted on
/dev/root        6.8G  2.6G  4.2G  38% /
tmpfs            458M     0  458M   0% /dev/shm
tmpfs            183M  932K  182M   1% /run
tmpfs            5.0M     0  5.0M   0% /run/lock
efivarfs         128K  3.8K  120K   4% /sys/firmware/efi/efivars
/dev/nvme0n1p16  881M   89M  730M  11% /boot
/dev/nvme0n1p15  105M  6.2M   99M   6% /boot/efi
tmpfs             92M   12K   92M   1% /run/user/1000
root@ip-172-31-33-36:~#
```

2. **Check filesystem:**

   e2fsck -f /dev/lvm_practice/8G_lv

```
root@ip-172-31-33-36:~# e2fsck -f /dev/lvm_practice/8G_lv
e2fsck 1.47.0 (5-Feb-2023)
Pass 1: Checking inodes, blocks, and sizes
Pass 2: Checking directory structure
Pass 3: Checking directory connectivity
Pass 4: Checking reference counts
Pass 5: Checking group summary information
/dev/lvm_practice/8G_lv: 11/655360 files (0.0% non-contiguous), 66735/2621440 blocks
root@ip-172-31-33-36:~#
```

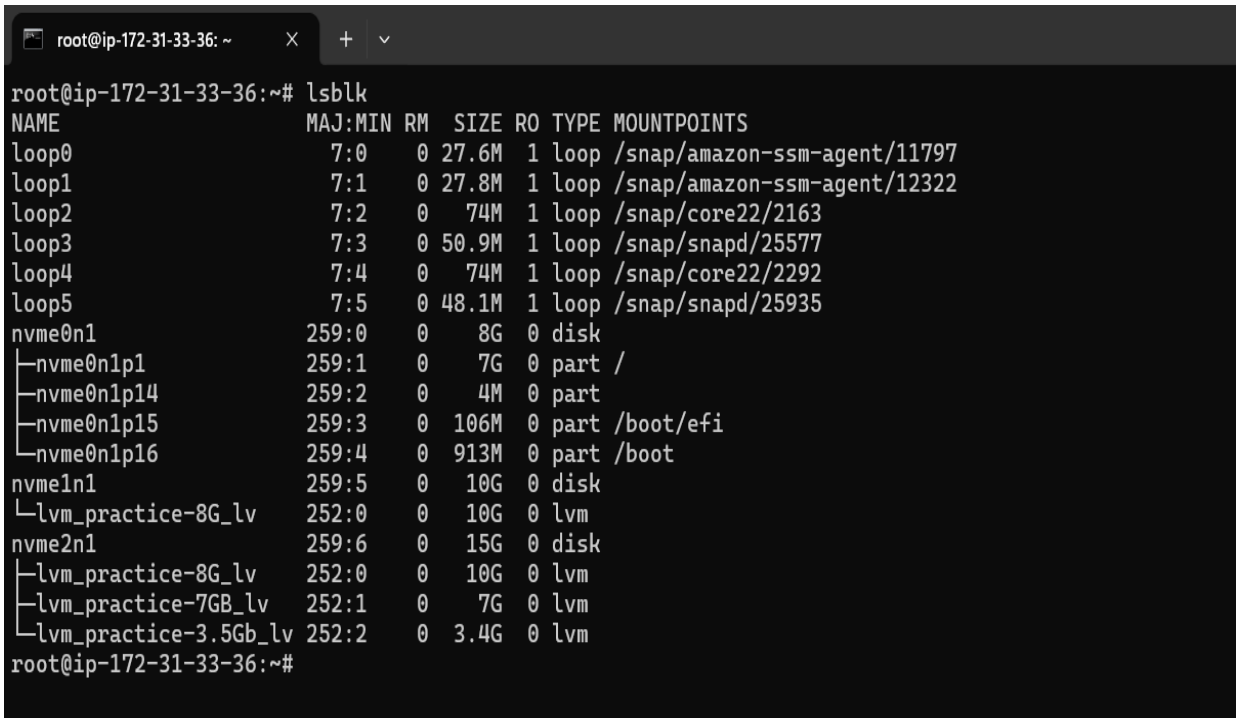
3. **Resize file system:**

   resize2fs /dev/lvm_practice/8G_lv 6G

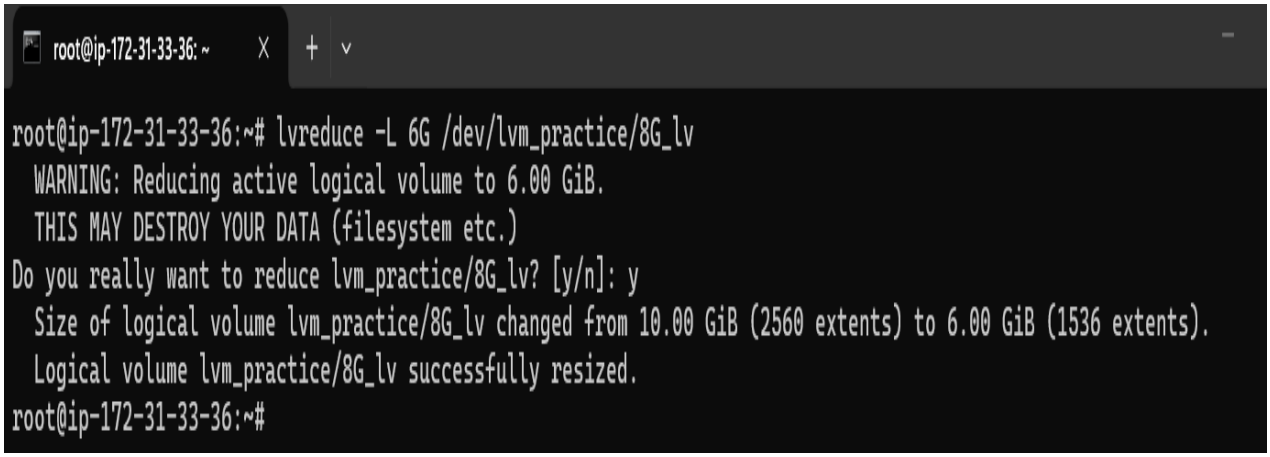
```
root@ip-172-31-33-36: ~
root@ip-172-31-33-36:~# resize2fs /dev/lvm_practice/8G_lv 6G
resize2fs 1.47.0 (5-Feb-2023)
Resizing the filesystem on /dev/lvm_practice/8G_lv to 1572864 (4k) blocks.
The filesystem on /dev/lvm_practice/8G_lv is now 1572864 (4k) blocks long.

root@ip-172-31-33-36:~#
```

4. **Reduce Logical Volume size:**

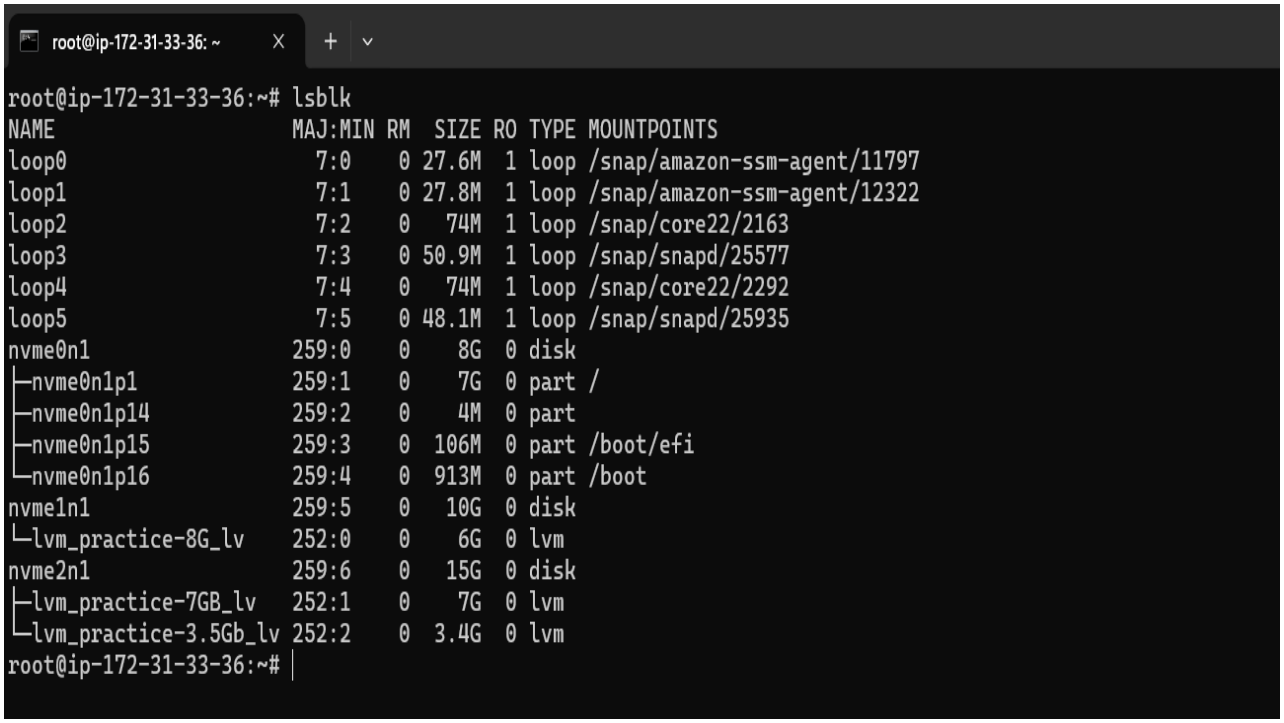
   lvreduce -L 6G /dev/lvm_practice/8G_lv



```
root@ip-172-31-33-36: ~
root@ip-172-31-33-36:~# lsblk
NAME                    MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0                     7:0    0 27.6M  1 loop /snap/amazon-ssm-agent/11797
loop1                     7:1    0 27.8M  1 loop /snap/amazon-ssm-agent/12322
loop2                     7:2    0   74M  1 loop /snap/core22/2163
loop3                     7:3    0 50.9M  1 loop /snap/snapd/25577
loop4                     7:4    0   74M  1 loop /snap/core22/2292
loop5                     7:5    0 48.1M  1 loop /snap/snapd/25935
nvme0n1                 259:0    0    8G  0 disk
├─nvme0n1p1             259:1    0    7G  0 part /
├─nvme0n1p14            259:2    0    4M  0 part
├─nvme0n1p15            259:3    0  106M  0 part /boot/efi
└─nvme0n1p16            259:4    0  913M  0 part /boot
nvme1n1                 259:5    0   10G  0 disk
└─lvm_practice-8G_lv    252:0    0   10G  0 lvm
nvme2n1                 259:6    0   15G  0 disk
├─lvm_practice-8G_lv    252:0    0   10G  0 lvm
├─lvm_practice-7GB_lv   252:1    0    7G  0 lvm
└─lvm_practice-3.5Gb_lv 252:2    0  3.4G  0 lvm
root@ip-172-31-33-36:~#
```



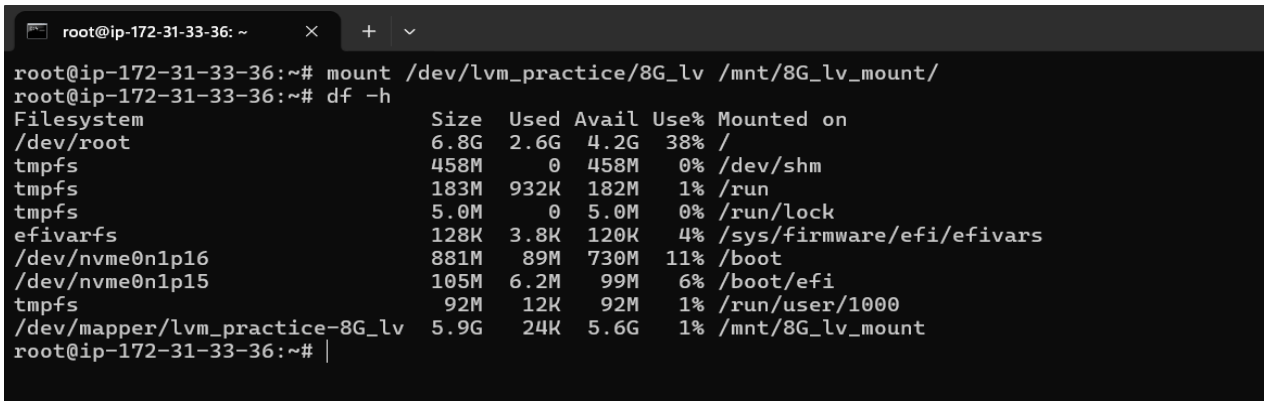
```
root@ip-172-31-33-36: ~
root@ip-172-31-33-36:~# lvreduce -L 6G /dev/lvm_practice/8G_lv
  WARNING: Reducing active logical volume to 6.00 GiB.
  THIS MAY DESTROY YOUR DATA (filesystem etc.)
Do you really want to reduce lvm_practice/8G_lv? [y/n]: y
  Size of logical volume lvm_practice/8G_lv changed from 10.00 GiB (2560 extents) to 6.00 GiB (1536 extents).
  Logical volume lvm_practice/8G_lv successfully resized.
root@ip-172-31-33-36:~#
```



```
root@ip-172-31-33-36: ~
root@ip-172-31-33-36:~# lsblk
NAME                    MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0                     7:0    0 27.6M  1 loop /snap/amazon-ssm-agent/11797
loop1                     7:1    0 27.8M  1 loop /snap/amazon-ssm-agent/12322
loop2                     7:2    0   74M  1 loop /snap/core22/2163
loop3                     7:3    0 50.9M  1 loop /snap/snapd/25577
loop4                     7:4    0   74M  1 loop /snap/core22/2292
loop5                     7:5    0 48.1M  1 loop /snap/snapd/25935
nvme0n1                 259:0    0    8G  0 disk
├─nvme0n1p1             259:1    0    7G  0 part /
├─nvme0n1p14            259:2    0    4M  0 part
├─nvme0n1p15            259:3    0  106M  0 part /boot/efi
└─nvme0n1p16            259:4    0  913M  0 part /boot
nvme1n1                 259:5    0   10G  0 disk
└─lvm_practice-8G_lv    252:0    0    6G  0 lvm
nvme2n1                 259:6    0   15G  0 disk
├─lvm_practice-7GB_lv   252:1    0    7G  0 lvm
└─lvm_practice-3.5Gb_lv 252:2    0  3.4G  0 lvm
root@ip-172-31-33-36:~#
```

5. **Mount again:**

   mount /dev/<vg_name>/<lv_name> /mnt/<directory_name>



Add New Disk to Volume Group

1. **Attach new EBS volume to ec2 instance:**

   created 13 GB volume and attach to ec2 instance.

```
root@ip-172-31-33-36:~# lsblk
NAME                    MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0                     7:0    0 27.6M  1 loop /snap/amazon-ssm-agent/11797
loop1                     7:1    0 27.8M  1 loop /snap/amazon-ssm-agent/12322
loop2                     7:2    0   74M  1 loop /snap/core22/2163
loop3                     7:3    0 50.9M  1 loop /snap/snapd/25577
loop4                     7:4    0   74M  1 loop /snap/core22/2292
loop5                     7:5    0 48.1M  1 loop /snap/snapd/25935
nvme0n1                 259:0    0    8G  0 disk
├─nvme0n1p1             259:1    0    7G  0 part /
├─nvme0n1p14            259:2    0    4M  0 part
├─nvme0n1p15            259:3    0  106M  0 part /boot/efi
└─nvme0n1p16            259:4    0  913M  0 part /boot
nvme1n1                 259:5    0   10G  0 disk
└─lvm_practice-8G_lv    252:0    0    6G  0 lvm  /mnt/8G_lv_mount
nvme2n1                 259:6    0   15G  0 disk
├─lvm_practice-7GB_lv   252:1    0    7G  0 lvm
└─lvm_practice-3.5Gb_lv 252:2    0  3.4G  0 lvm
nvme3n1                 259:7    0   13G  0 disk
root@ip-172-31-33-36:~#
```

2. **Create physical volume:**

   pvcreate /dev/nvme3n1

```
root@ip-172-31-33-36: ~
root@ip-172-31-33-36:~# pvcreate /dev/nvme3n1
  Physical volume "/dev/nvme3n1" successfully created.
root@ip-172-31-33-36:~# pvs
  PV           VG           Fmt  Attr PSize   PFree
  /dev/nvme1n1 lvm_practice lvm2 a--  <10.00g <4.00g
  /dev/nvme2n1 lvm_practice lvm2 a--  <15.00g <4.58g
  /dev/nvme3n1              lvm2 ---   13.00g 13.00g
root@ip-172-31-33-36:~#
```

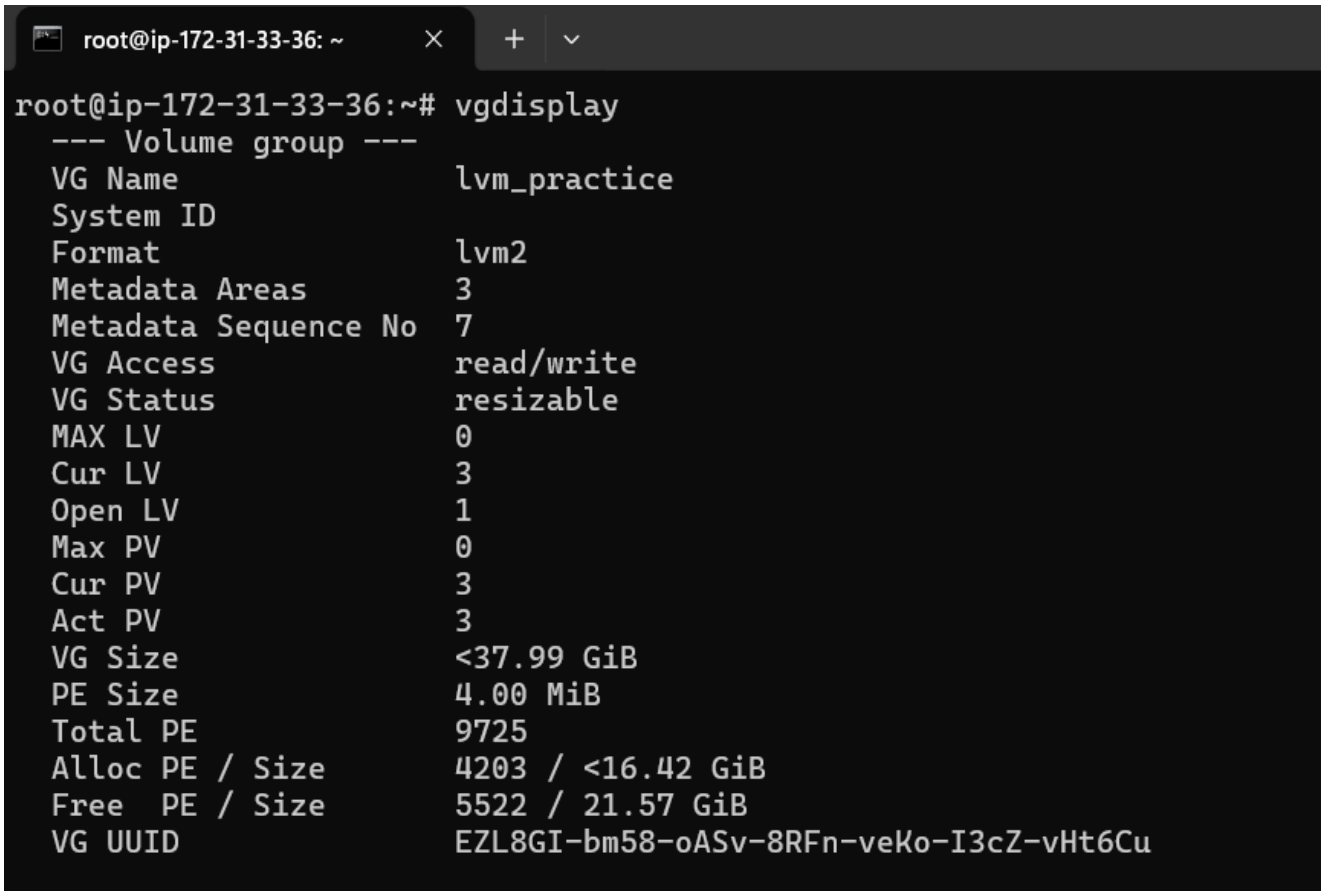
3. **Add new physical volume in volume group:**

   vgextend <vg_name> </dev/nvme3n1>

```
root@ip-172-31-33-36: ~
root@ip-172-31-33-36:~# vgs
  VG           #PV #LV #SN Attr   VSize  VFree
  lvm_practice   2   3   0 wz--n- 24.99g 8.57g
root@ip-172-31-33-36:~# vgextend lvm_practice /dev/nvme3n1
  Volume group "lvm_practice" successfully extended
root@ip-172-31-33-36:~# vgs
  VG           #PV #LV #SN Attr   VSize   VFree
  lvm_practice   3   3   0 wz--n- <37.99g 21.57g
root@ip-172-31-33-36:~#
```

4. **Verify volume group:**

   vgdisplay



Display detail information about physical volume, volume group, logical volume

1. **Display physical volume information:**

   pvdisplay

```
root@ip-172-31-33-36:~# pvdisplay
  --- Physical volume ---
  PV Name               /dev/nvme1n1
  VG Name               lvm_practice
  PV Size               10.00 GiB / not usable 4.00 MiB
  Allocatable           yes
  PE Size               4.00 MiB
  Total PE              2559
  Free PE               1023
  Allocated PE          1536
  PV UUID               c99OAj-LjrP-BY9n-S0MN-qx8v-S3Rz-K1cqqs

  --- Physical volume ---
  PV Name               /dev/nvme2n1
  VG Name               lvm_practice
  PV Size               15.00 GiB / not usable 4.00 MiB
  Allocatable           yes
  PE Size               4.00 MiB
  Total PE              3839
  Free PE               1172
  Allocated PE          2667
  PV UUID               5huCK5-CR1M-8901-DcOG-oEyc-Vhjj-Z7qk21

  --- Physical volume ---
  PV Name               /dev/nvme3n1
  VG Name               lvm_practice
  PV Size               13.00 GiB / not usable 4.00 MiB
  Allocatable           yes
  PE Size               4.00 MiB
  Total PE              3327
  Free PE               3327
  Allocated PE          0
  PV UUID               cdmTPI-Puwc-Z3VL-YpC2-kOU1-rBco-EZNJ3A

root@ip-172-31-33-36:~#
```

2. **Display information about volume group:**

   vgdisplay

```
root@ip-172-31-33-36:~# vgdisplay
  --- Volume group ---
  VG Name               lvm_practice
  System ID
  Format                lvm2
  Metadata Areas        3
  Metadata Sequence No  7
  VG Access             read/write
  VG Status             resizable
  MAX LV                0
  Cur LV                3
  Open LV               1
  Max PV                0
  Cur PV                3
  Act PV                3
  VG Size               <37.99 GiB
  PE Size               4.00 MiB
  Total PE              9725
  Alloc PE / Size       4203 / <16.42 GiB
  Free  PE / Size       5522 / 21.57 GiB
  VG UUID               EZL8GI-bm58-oASv-8RFn-veKo-I3cZ-vHt6Cu

root@ip-172-31-33-36:~#
```

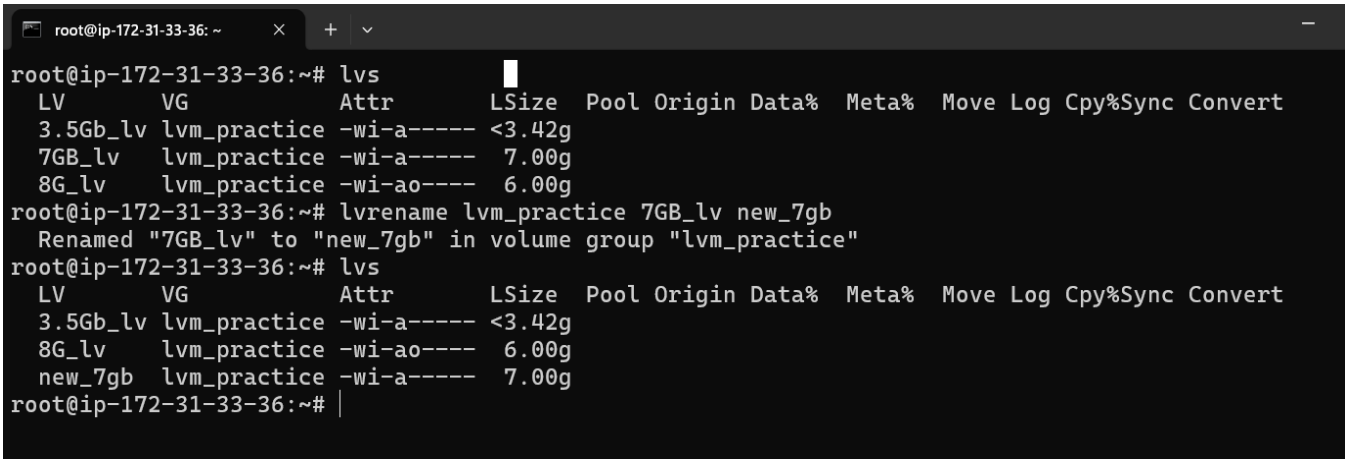
3. **Display information about logical volumes:**

   lvdisplay

```
root@ip-172-31-33-36:~# lvdisplay
  --- Logical volume ---
  LV Path                /dev/lvm_practice/8G_lv
  LV Name                8G_lv
  VG Name                lvm_practice
  LV UUID                QMwCLT-TOGw-pyyk-CJSN-JD9t-s7t2-1o38du
  LV Write Access        read/write
  LV Creation host, time ip-172-31-33-36, 2026-02-18 10:32:06 +0000
  LV Status              available
  # open                 1
  LV Size                6.00 GiB
  Current LE             1536
  Segments               1
  Allocation             inherit
  Read ahead sectors     auto
  - currently set to     256
  Block device           252:0

  --- Logical volume ---
  LV Path                /dev/lvm_practice/7GB_lv
  LV Name                7GB_lv
  VG Name                lvm_practice
  LV UUID                hzVXwf-Vutt-UZxB-peGN-zbsk-Yreo-4RBEM1
  LV Write Access        read/write
  LV Creation host, time ip-172-31-33-36, 2026-02-18 10:37:00 +0000
  LV Status              available
  # open                 0
  LV Size                7.00 GiB
  Current LE             1792
  Segments               1
  Allocation             inherit
  Read ahead sectors     auto
  - currently set to     256
  Block device           252:1

  --- Logical volume ---
  LV Path                /dev/lvm_practice/3.5Gb_lv
  LV Name                3.5Gb_lv
  VG Name                lvm_practice
  LV UUID                Vkd9h6-x9Gf-RyeT-HSIh-4zhm-56H0-QgE8ma
  LV Write Access        read/write
  LV Creation host, time ip-172-31-33-36, 2026-02-18 11:00:18 +0000
  LV Status              available
  # open                 0
  LV Size                <3.42 GiB
  Current LE             875
  Segments               1
  Allocation             inherit
  Read ahead sectors     auto
  - currently set to     256
  Block device           252:2

root@ip-172-31-33-36:~#
```

Rename logical volume: change logical volume name.

lvrename <vg_name> <lv_name> <new_name>



Remove logical volume: Delete logical volume permanently.

1. **Step 1: Unmount logical volume.**

```
root@ip-172-31-33-36:~# df -h
Filesystem                      Size  Used Avail Use% Mounted on
/dev/root                       6.8G  2.6G  4.2G  38% /
tmpfs                           458M     0  458M   0% /dev/shm
tmpfs                           183M  944K  182M   1% /run
tmpfs                           5.0M     0  5.0M   0% /run/lock
efivarfs                        128K  3.8K  120K   4% /sys/firmware/efi/efivars
/dev/nvme0n1p16                 881M   89M  730M  11% /boot
/dev/nvme0n1p15                 105M  6.2M   99M   6% /boot/efi
/dev/mapper/lvm_practice-8G_lv  5.9G   24K  5.6G   1% /mnt/8G_lv_mount
tmpfs                            92M   12K   92M   1% /run/user/1000
root@ip-172-31-33-36:~# umount /mnt/8G_lv_mount/
```

```
root@ip-172-31-33-36:~# df -h
Filesystem       Size  Used Avail Use% Mounted on
/dev/root        6.8G  2.6G  4.2G  38% /
tmpfs            458M     0  458M   0% /dev/shm
tmpfs            183M  944K  182M   1% /run
tmpfs            5.0M     0  5.0M   0% /run/lock
efivarfs         128K  3.8K  120K   4% /sys/firmware/efi/efivars
/dev/nvme0n1p16  881M   89M  730M  11% /boot
/dev/nvme0n1p15  105M  6.2M   99M   6% /boot/efi
tmpfs             92M   12K   92M   1% /run/user/1000
root@ip-172-31-33-36:~#
```

2. **Step 2 : Remove logical volume**

   lvremove /dev/<vg_name>/<lv_name>

```
root@ip-172-31-33-36: ~
root@ip-172-31-33-36:~# lvs
  LV       VG          Attr       LSize  Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  3.5Gb_lv lvm_practice -wi-a----- <3.42g
  8G_lv    lvm_practice -wi-a-----  6.00g
  new_7gb  lvm_practice -wi-a-----  7.00g
root@ip-172-31-33-36:~# lvremove /dev/lvm_practice/8G_lv
Do you really want to remove and DISCARD active logical volume lvm_practice/8G_lv? [y/n]: y
  Logical volume "8G_lv" successfully removed.
root@ip-172-31-33-36:~# lvs
  LV       VG          Attr       LSize  Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  3.5Gb_lv lvm_practice -wi-a----- <3.42g
  new_7gb  lvm_practice -wi-a-----  7.00g
root@ip-172-31-33-36:~#
```