

```
[root@localhost Desktop]# fdisk -l
```

```
Disk /dev/sda: 21.5 GB, 21474836480 bytes
255 heads, 63 sectors/track, 2610 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0x0006ec6b
```

Device	Boot	Start	End	Blocks	Id	System
/dev/sda1	*	1	39	307200	83	Linux
Partition 1 does not end on cylinder boundary.						
/dev/sda2		39	2350	18566144	83	Linux
/dev/sda3		2350	2611	2097152	82	Linux swap / Solaris

```
Disk /dev/sdb: 21.5 GB, 21474836480 bytes
255 heads, 63 sectors/track, 2610 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0x22232b78
```

Device	Boot	Start	End	Blocks	Id	System
/dev/sdb1		1	654	5253223+	83	Linux
/dev/sdb2		655	1308	5253255	83	Linux

```
[root@localhost Desktop]# df -hT
```

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda2	ext4	18G	2.5G	14G	16%	/
tmpfs	tmpfs	931M	224K	931M	1%	/dev/shm
/dev/sda1	ext4	283M	40M	228M	15%	/boot
/dev/sr0	iso9660	3.7G	3.7G	0	100%	/media/RHEL-6.9 Server.x86_64
/dev/sdb1	ext4	4.9G	11M	4.6G	1%	/linux103

```
[root@localhost Desktop]# df -h
```

Filesystem	Size	Used	Avail	Use%	Mounted on
/dev/sda2	18G	2.5G	14G	16%	/
tmpfs	931M	224K	931M	1%	/dev/shm
/dev/sda1	283M	40M	228M	15%	/boot
/dev/sr0	3.7G	3.7G	0	100%	/media/RHEL-6.9 Server.x86_64
/dev/sdb1	4.9G	11M	4.6G	1%	/linux103

```
[root@localhost Desktop]#
```

```
[root@localhost Desktop]#
```

```
==>{ here we need to scan to get hard disk of sdc}<==
```

```
[root@localhost Desktop]# ls /sys/class/scsi_host/
```

```
host0  host12  host16  host2  host23  host27  host30  host5  host9
host1  host13  host17  host20  host24  host28  host31  host6
host10 host14  host18  host21  host25  host29  host32  host7
host11 host15  host19  host22  host26  host3  host4  host8
```

```
[root@localhost Desktop]# echo " - - - " > /sys/class/scsi_host/host0/scan
```

```
[root@localhost Desktop]# echo " - - - " > /sys/class/scsi_host/host1/scan
```

```
[root@localhost Desktop]# echo " - - - " > /sys/class/scsi_host/host2/scan
```

```
[root@localhost Desktop]# echo " - - - " > /sys/class/scsi_host/host3/scan
```

```
[root@localhost Desktop]# fdisk -l
```

```
Disk /dev/sda: 21.5 GB, 21474836480 bytes
255 heads, 63 sectors/track, 2610 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
```

Sector size (logical/physical): 512 bytes / 512 bytes
 I/O size (minimum/optimal): 512 bytes / 512 bytes
 Disk identifier: 0x0006ec6b

Device	Boot	Start	End	Blocks	Id	System
/dev/sda1	*	1	39	307200	83	Linux
Partition 1 does not end on cylinder boundary.						
/dev/sda2		39	2350	18566144	83	Linux
/dev/sda3		2350	2611	2097152	82	Linux swap / Solaris

Disk /dev/sdb: 21.5 GB, 21474836480 bytes
 255 heads, 63 sectors/track, 2610 cylinders
 Units = cylinders of 16065 * 512 = 8225280 bytes
 Sector size (logical/physical): 512 bytes / 512 bytes
 I/O size (minimum/optimal): 512 bytes / 512 bytes
 Disk identifier: 0x22232b78

Device	Boot	Start	End	Blocks	Id	System
/dev/sdb1		1	654	5253223+	83	Linux
/dev/sdb2		655	1308	5253255	83	Linux

Disk /dev/sdc: 21.5 GB, 21474836480 bytes
 255 heads, 63 sectors/track, 2610 cylinders
 Units = cylinders of 16065 * 512 = 8225280 bytes
 Sector size (logical/physical): 512 bytes / 512 bytes
 I/O size (minimum/optimal): 512 bytes / 512 bytes
 Disk identifier: 0x00000000

```
[root@localhost Desktop]# pvcreate /dev/sdc
Physical volume "/dev/sdc" successfully created
[root@localhost Desktop]# vgcreate vg02 /dev/sdc
Volume group "vg02" successfully created
[root@localhost Desktop]# lvcreate -L 5G -n lv02 vg02
Logical volume "lv02" created.
[root@localhost Desktop]# vgdisplay
--- Volume group ---
VG Name                vg02
System ID
Format                 lvm2
Metadata Areas         1
Metadata Sequence No   2
VG Access              read/write
VG Status              resizable
MAX LV                 0
Cur LV                1
Open LV               0
Max PV                 0
Cur PV                1
Act PV                1
VG Size                20.00 GiB
PE Size                4.00 MiB
Total PE              5119
Alloc PE / Size       1280 / 5.00 GiB
Free PE / Size        3839 / 15.00 GiB
VG UUID                GHyU8b-hC2l-7yaN-4igx-vqrQ-jyzl-9uYv05
```

```
[root@localhost Desktop]# vgs
VG      #PV #LV #SN Attr   VSize  VFree
```

```

vg02    1    1    0 wz--n- 20.00g 15.00g
[root@localhost Desktop]# lvs
LV      VG      Attr      LSize Pool Origin Data%  Meta%  Move Log Cpy%Sync
Convert
lv02    vg02    -wi-a----- 5.00g
[root@localhost Desktop]# lvdisplay
--- Logical volume ---
LV Path                /dev/vg02/lv02
LV Name                 lv02
VG Name                 vg02
LV UUID                 QSzbYo-aEqE-wMXI-BmR1-N3RL-BWCW-mxDwJW
LV Write Access         read/write
LV Creation host, time localhost.localdomain, 2023-05-24 14:17:35 -0700
LV Status                available
# open                  0
LV Size                 5.00 GiB
Current LE              1280
Segments                1
Allocation              inherit
Read ahead sectors      auto
- currently set to     256
Block device            253:0

```

```

[root@localhost Desktop]# mkfs.ext4 /dev/vg02/lv02
mke2fs 1.41.12 (17-May-2010)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
327680 inodes, 1310720 blocks
65536 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=1342177280
40 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912, 819200, 884736

```

```

Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done

```

This filesystem will be automatically checked every 31 mounts or 180 days, whichever comes first. Use tune2fs -c or -i to override.

```

[root@localhost Desktop]# mkdir /linux113
[root@localhost Desktop]# mount /dev/vg02/lv02 /linux113
[root@localhost Desktop]# df -hT
Filesystem              Type      Size  Used Avail Use% Mounted on
/dev/sda2                ext4       18G   2.5G   14G   16% /
tmpfs                   tmpfs     931M   224K   931M    1% /dev/shm
/dev/sda1                ext4      283M    40M   228M   15% /boot
/dev/sr0                 iso9660   3.7G   3.7G     0  100% /media/RHEL-6.9
Server.x86_64
/dev/sdb1                ext4       4.9G    11M   4.6G    1% /linux103
/dev/mapper/vg02-lv02    ext4       4.8G    10M   4.6G    1% /linux113

```

```
[root@localhost Desktop]# vgs
```

```
VG      #PV #LV #SN Attr   VSize  VFree
vg02    1   1   0 wz--n- 20.00g 15.00g
```

```
[root@localhost Desktop]# lvextend -L +10G /dev/vg02/lv02
```

Size of logical volume vg02/lv02 changed from 5.00 GiB (1280 extents) to 15.00 GiB (3840 extents).

Logical volume lv02 successfully resized.

```
[root@localhost Desktop]# df -hT
```

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda2	ext4	18G	2.5G	14G	16%	/
tmpfs	tmpfs	931M	224K	931M	1%	/dev/shm
/dev/sda1	ext4	283M	40M	228M	15%	/boot
/dev/sr0	iso9660	3.7G	3.7G	0	100%	/media/RHEL-6.9
Server.x86_64						
/dev/sdb1	ext4	4.9G	11M	4.6G	1%	/linux103
/dev/mapper/vg02-lv02	ext4	4.8G	10M	4.6G	1%	/linux113

```
[root@localhost Desktop]# resize2fs /dev/vg02/lv02
```

resize2fs 1.41.12 (17-May-2010)

Filesystem at /dev/vg02/lv02 is mounted on /linux113; on-line resizing required

old desc_blocks = 1, new_desc_blocks = 1

Performing an on-line resize of /dev/vg02/lv02 to 3932160 (4k) blocks.

The filesystem on /dev/vg02/lv02 is now 3932160 blocks long.

```
[root@localhost Desktop]# df -hT
```

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda2	ext4	18G	2.5G	14G	16%	/
tmpfs	tmpfs	931M	224K	931M	1%	/dev/shm
/dev/sda1	ext4	283M	40M	228M	15%	/boot
/dev/sr0	iso9660	3.7G	3.7G	0	100%	/media/RHEL-6.9
Server.x86_64						
/dev/sdb1	ext4	4.9G	11M	4.6G	1%	/linux103
/dev/mapper/vg02-lv02	ext4	15G	13M	14G	1%	/linux113

```
[root@localhost Desktop]# umount /linux113
```

```
[root@localhost Desktop]# e2fsck -f /dev/vg02/lv02
```

e2fsck 1.41.12 (17-May-2010)

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/vg02/lv02: 11/983040 files (0.0% non-contiguous), 97664/3932160 blocks

```
[root@localhost Desktop]# resize2fs /dev/vg02/lv02 2G
```

bash: resize2fs: command not found

```
[root@localhost Desktop]# resize2fs /dev/vg02/lv02 2G
```

resize2fs 1.41.12 (17-May-2010)

Resizing the filesystem on /dev/vg02/lv02 to 524288 (4k) blocks.

The filesystem on /dev/vg02/lv02 is now 524288 blocks long.

```
[root@localhost Desktop]# lvreduce --size 2G /dev/vg02/lv02
```

WARNING: Reducing active logical volume to 2.00 GiB.

THIS MAY DESTROY YOUR DATA (filesystem etc.)

Do you really want to reduce vg02/lv02? [y/n]: mount /dev/vg02/lv02 /linux113

Logical volume vg02/lv02 NOT reduced

```
[root@localhost Desktop]# resize2fs /dev/vg02/lv02 2G
```

```
resize2fs 1.41.12 (17-May-2010)
The filesystem is already 524288 blocks long.  Nothing to do!
```

```
[root@localhost Desktop]# lvreduce --size 2G /dev/vg02/lv02
WARNING: Reducing active logical volume to 2.00 GiB.
THIS MAY DESTROY YOUR DATA (filesystem etc.)
Do you really want to reduce vg02/lv02? [y/n]: y
Size of logical volume vg02/lv02 changed from 15.00 GiB (3840 extents) to
2.00 GiB (512 extents).
Logical volume lv02 successfully resized.
```

```
[root@localhost Desktop]# mount /dev/vg02/lv02 /linux113
```

```
[root@localhost Desktop]# df -hT
```

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sda2	ext4	18G	2.5G	14G	16%	/
tmpfs	tmpfs	931M	224K	931M	1%	/dev/shm
/dev/sda1	ext4	283M	40M	228M	15%	/boot
/dev/sr0	iso9660	3.7G	3.7G	0	100%	/media/RHEL-6.9
Server.x86_64						
/dev/sdb1	ext4	4.9G	11M	4.6G	1%	/linux103
/dev/mapper/vg02-lv02	ext4	1.9G	7.5M	1.8G	1%	/linux113

```
[root@localhost Desktop]# cd /etc/lvm/backup
```

```
[root@localhost backup]# blkid
```

```
/dev/sda2: UUID="309c9a27-5001-4104-a683-461e3b6853ab" TYPE="ext4"
/dev/sda1: UUID="b3aa8379-99b6-4f78-b8f4-c474b0e07a90" TYPE="ext4"
/dev/sda3: UUID="98f5f584-872f-49b4-8fa9-0233774a0f27" TYPE="swap"
/dev/sdb1: UUID="6f51c965-c2bb-46ac-8e1d-d520df0092c2" TYPE="ext4"
/dev/mapper/vg02-lv02: UUID="6fcb6feb-8e06-4b5c-b0a5-370ce1872137"
TYPE="ext4"
/dev/sdc: UUID="LQe66K-J06w-VF9U-f3PR-clzM-dhyV-G3DfzG" TYPE="LVM2_member"
```

```
[root@localhost backup]# cd
```

```
[root@localhost ~]# cd -
```

```
/etc/lvm/backup
```

```
[root@localhost backup]# cd vg02
```

```
bash: cd: vg02: Not a directory
```

```
[root@localhost backup]# more vg02
```

```
# Generated by LVM2 version 2.02.143(2)-RHEL6 (2016-12-13): Wed May 24
14:27:39
2023
```

```
contents = "Text Format Volume Group"
```

```
version = 1
```

```
description = "Created *after* executing 'lvreduce --size 2G
/dev/vg02/lv02'"
```

```
creation_host = "localhost.localdomain" # Linux localhost.localdomain
2.6.32-696
```

```
.el6.x86_64 #1 SMP Tue Feb 21 00:53:17 EST 2017 x86_64
```

```
creation_time = 1684963659 # Wed May 24 14:27:39 2023
```

```
vg02 {
    id = "GHyU8b-hC2l-7yaN-4igx-vqrQ-jyzl-9uYv05"
    seqno = 4
    format = "lvm2" # informational
    status = ["RESIZEABLE", "READ", "WRITE"]
    flags = []
}
```

```

extent_size = 8192          # 4 Megabytes
max_lv = 0
max_pv = 0
metadata_copies = 0

physical_volumes {

    pv0 {
        id = "LQe66K-J06w-VF9U-f3PR-clzM-dhyV-G3DfzG"
        device = "/dev/sdc"    # Hint only

        status = ["ALLOCATABLE"]
        flags = []
        dev_size = 41943040    # 20 Gigabytes
        pe_start = 2048
        pe_count = 5119    # 19.9961 Gigabytes
    }
}

logical_volumes {

    lv02 {
        id = "QSzbYo-aEqE-wMXI-BmR1-N3RL-BWCW-mxDwJW"
        status = ["READ", "WRITE", "VISIBLE"]
        flags = []
        creation_host = "localhost.localdomain"
        creation_time = 1684963055    # 2023-05-24 14:17:35 -0

        segment_count = 1

        segment1 {
            start_extent = 0
            extent_count = 512    # 2 Gigabytes

            type = "striped"
            stripe_count = 1 # linear

            stripes = [
                "pv0", 0
            ]
        }
    }
}

```

700

[root@localhost backup]#