[root@localhost ~]# df -h

Filesystem Size Used Avail Use% Mounted on

/dev/mapper/centos-root 18G 8.0G 9.6G 46% /

devtmpfs 905M 0 905M 0% /dev

tmpfs 914M 80K 914M 1% /dev/shm

tmpfs 914M 8.8M 905M 1% /run

tmpfs 914M 0 914M 0% /sys/fs/cgroup

/dev/sda1 497M 119M 379M 24% /boot

[root@localhost ~]# fdisk /dev/sda

Welcome to fdisk (util-linux 2.23.2).

Changes will remain in memory only, until you decide to write them.

Be careful before using the write command.

Command (m for help): m

Command action

a toggle a bootable flag

b edit bsd disklabel

c toggle the dos compatibility flag

d delete a partition

g create a new empty GPT partition table

G create an IRIX (SGI) partition table

l list known partition types

m print this menu

n add a new partition

o create a new empty DOS partition table

p print the partition table

q quit without saving changes

s create a new empty Sun disklabel

t change a partition's system id

u change display/entry units

v verify the partition table

w write table to disk and exit

x extra functionality (experts only)

Command (m for help): n

Partition type:

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

e extended

Select (default p): p

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

First sector (41943040-83886079, default 41943040):

Using default value 41943040

Last sector, +sectors or +size{K,M,G} (41943040-83886079, default 83886079):

Using default value 83886079

Partition 3 of type Linux and of size 20 GiB is set

Command (m for help): n

Partition type:

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

e extended

Select (default e): p

Selected partition 4

No free sectors available

Command (m for help): t

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

Value out of range.

Partition number (1-3, default 3):

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

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

Command (m for help): p

Disk /dev/sda: 42.9 GB, 42949672960 bytes, 83886080 sectors

Units = sectors of 1 \* 512 = 512 bytes

Sector size (logical/physical): 512 bytes / 512 bytes

I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk label type: dos

Disk identifier: 0x000a38de

Device Boot Start End Blocks Id System

/dev/sda1 \* 2048 1026047 512000 83 Linux

/dev/sda2 1026048 41943039 20458496 8e Linux LVM

/dev/sda3 41943040 83886079 20971520 8e Linux LVM

Command (m for help): w

The partition table has been altered!

Calling ioctl() to re-read partition table.

WARNING: Re-reading the partition table failed with error 16: Device or resource busy.

The kernel still uses the old table. The new table will be used at

the next reboot or after you run partprobe(8) or kpartx(8)

Syncing disks.

[root@localhost ~]# reboot

[root@localhost ~]# pvcreate /dev/sda3

Physical volume "/dev/sda3" successfully created

[root@localhost ~]# pvdisplay

--- Physical volume ---

PV Name /dev/sda2

VG Name centos

PV Size 19.51 GiB / not usable 3.00 MiB

Allocatable yes (but full)

PE Size 4.00 MiB

Total PE 4994

Free PE 0

Allocated PE 4994

PV UUID YmuRHM-XCVx-GA9e-2aBa-imC2-m6At-0wslVm

"/dev/sda3" is a new physical volume of "20.00 GiB"

--- NEW Physical volume ---

PV Name /dev/sda3

VG Name

PV Size 20.00 GiB

Allocatable NO

PE Size 0

Total PE 0

Free PE 0

Allocated PE 0

PV UUID 11k2yD-PMxY-bkBu-c310-JG6s-iMKI-O7FeVF

[root@localhost ~]# vgextend centos /dev/sda3

Volume group "centos" successfully extended

[root@localhost ~]# vgdisplay

--- Volume group ---

VG Name centos

System ID

Format lvm2

Metadata Areas 2

Metadata Sequence No 4

VG Access read/write

VG Status resizable

MAX LV 0

Cur LV 2

Open LV 2

Max PV 0

Cur PV 2

Act PV 2

VG Size 39.50 GiB

PE Size 4.00 MiB

Total PE 10113

Alloc PE / Size 4994 / 19.51 GiB

Free PE / Size 5119 / 20.00 GiB

VG UUID WBX7QD-zst3-jZAg-eYWJ-JP8l-yi8W-oxFniL

[root@localhost ~]# lvresize -L 29.99G /dev/mapper/centos-root

Rounding size to boundary between physical extents: 29.99 GiB

Extending logical volume root to 29.99 GiB

Logical volume root successfully resized

[root@localhost ~]# xfs\_growfs /dev/mapper/centos-root

meta-data=/dev/mapper/centos-root isize=256 agcount=4, agsize=1147392 blks

= sectsz=512 attr=2, projid32bit=1

= crc=0

data = bsize=4096 blocks=4589568, imaxpct=25

= sunit=0 swidth=0 blks

naming =version 2 bsize=4096 ascii-ci=0 ftype=0

log =internal bsize=4096 blocks=2560, version=2

= sectsz=512 sunit=0 blks, lazy-count=1

realtime =none extsz=4096 blocks=0, rtextents=0

data blocks changed from 4589568 to 7862272

[root@localhost ~]# df -h

文件系统 容量 已用 可用 已用% 挂载点

/dev/mapper/centos-root 30G 8.0G 22G 27% /

devtmpfs 905M 0 905M 0% /dev

tmpfs 914M 80K 914M 1% /dev/shm

tmpfs 914M 8.8M 905M 1% /run

tmpfs 914M 0 914M 0% /sys/fs/cgroup

/dev/sda1 497M 119M 379M 24% /boot