RAID 5 CONFIGURATION COMMAND: Add 4 extra disks of 20 GB other than boot disk.

1. [root@localhost ~]# yum install mdadm –y
2. [root@localhost ~]# lsblk
3. [root@localhost ~]# mdadm --create --verbose /dev/md5 --level=5 --raid-devices=3 /dev/sdb /dev/sdc /dev/sdd --spare-devices=1 /dev/sde
4. [root@localhost ~]# cat /proc/mdstat

Personalities : [raid6] [raid5] [raid4]

md5 : active raid5 sdd[4] sde[3](S) sdc[1] sdb[0]

4188160 blocks super 1.2 level 5, 512k chunk, algorithm 2 [3/3] [UUU]

unused devices: <none>

1. [root@localhost ~]# fdisk /dev/md5

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.

Device does not contain a recognized partition table

Building a new DOS disklabel with disk identifier 0x3470b31d.

Command (m for help): n

Partition type:

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

e extended

Select (default p): p

Partition number (1-4, default 1):

First sector (2048-8376319, default 2048):

Using default value 2048

Last sector, +sectors or +size{K,M,G} (2048-8376319, default 8376319):

Using default value 8376319

Partition 1 of type Linux and of size 4 GiB is set

Command (m for help): w

The partition table has been altered!

Calling ioctl() to re-read partition table.

Syncing disks.

1. [root@localhost ~]# mkfs.ext4 /dev/md5
2. [root@localhost ~]# mkdir /mnt/raid5
3. [root@localhost ~]# mount /dev/md5 /mnt/raid5/
4. [root@localhost ~]# df -TH

Filesystem Type Size Used Avail Use% Mounted on

devtmpfs devtmpfs 498M 0 498M 0% /dev

tmpfs tmpfs 510M 0 510M 0% /dev/shm

tmpfs tmpfs 510M 8.1M 502M 2% /run

tmpfs tmpfs 510M 0 510M 0% /sys/fs/cgroup

/dev/mapper/centos-root xfs 19G 1.6G 17G 9% /

/dev/sda1 xfs 1.1G 144M 920M 14% /boot

tmpfs tmpfs 102M 0 102M 0% /run/user/0

/dev/md5 ext4 4.2G 17M 4.0G 1% /mnt/raid5

1. [root@localhost ~]# cd /mnt/raid5/
2. [root@localhost raid5]# mdadm --detail /dev/md5
3. [root@localhost raid5]# echo This is RAID5 > test.txt
4. [root@localhost raid5]# cat test.txt
5. [root@localhost raid5]# vi /etc/fstab
6. [root@localhost raid5]# cat /etc/fstab

#

# /etc/fstab

# Created by anaconda on Sun Nov 27 00:26:18 2022

#

# Accessible filesystems, by reference, are maintained under '/dev/disk'

# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info

#

/dev/mapper/centos-root / xfs defaults 0 0

UUID=fbf76286-7b82-442d-abd8-5369f4f56909 /boot xfs defaults 0 0

/dev/mapper/centos-swap swap swap defaults 0 0

UUID="140051d1-f9fb-4899-8042-11768cb6afe9" /mnt/raid5 ext4 defaults 0 0

1. [root@localhost raid5]# mount –a
2. [root@localhost raid5]# mdadm --detail /dev/md5
3. [root@localhost raid5]# mdadm --fail /dev/md5 /dev/sdc
4. [root@localhost raid5]# mdadm --detail /dev/md5
5. [root@localhost raid5]# mdadm -r /dev/md5
6. [root@localhost raid5]# mdadm -r /dev/md5 /dev/sdc

mdadm: hot removed /dev/sdc from /dev/md5

1. [root@localhost raid5]# mdadm --add /dev/md5 /dev/sdc
2. [root@localhost raid5]# lsblk