

Partitioning

Naming conventions

hdd1 = /dev/sda - partition1 (/dev/sda1), -partiton2 (/dev/sda2)

hdd2 = /dev/sdb - partition1 (/dev/sdb1), -partiton2 (/dev/sdb2)

hdd3 = /dev/sdc - partition1 (/dev/sdc1)

Types of partitions

1. Primary partition
2. Extended partition

In one hdd, we can create maximum 4 partitions

p1, p2, p3, p4

or

p1, p2, p3, e(L1, L2, L3...)

//e=extended,L=Logical

MBR (master boot record)

- *. total size = 512 bytes (size cannot be modified)
- *. 1st sector on hdd
- *. 446 bytes = GRUB (GRand Unified Boot) loader
- *. 64 bytes = Partition info (hdd geometry, 16 bytes per partition)
- *. 2 bytes = magic bytes (partition validation, partition is perfect(geo)or not)

Creating partition

Query:- create the partition with 5gb size & mount it on /oracle mount point

steps:

1. fdisk = to create partition
2. mkxfs.xfs = to create xfs file system
3. mkdir = create a mount point
4. vim = to add an entry of new partition in /etc/fstab file
5. mount = to mount new partition & verify it

Method:

Step 1:

```
#fdisk /dev/sda  
m = help  
p = print table  
n = new partition  
p = primary partition  
partiton number = <3>  
w = write & save  
init 6 // to reboot for initiate the partition
```

Step 2:

```
#mkfs.xfs /dev/sda6
```

step 3.

```
#mkdir /oracle
```

step 4.

```
#vim /etc/fstab  
at end  
press o  
/dev/sda3    /oracle    xfs        defaults    1 2  
:wq!
```

step 5.

```
#mount -a //mount  
#mount //verify  
#df -h
```

Advance partitioning

step a

physical partitions [hdd1], [hdd2], [hdd3]

step b

physical volume (pv)

to create = pvcreate

to display = pvdisplay

to remove = pvremove

step c

volume group (vg) // name = vg1

to create = vgcreate

to display = vgdisplay

to remove = vgremove

step d

logical volume (lv) // name = lv1

to create = lvcreate

to display = lvdisplay

to remove = lvremove

Now full procedure for advance partitoning

s1. fdisk

s2. physical partitions [hdd1], [hdd2], [hdd3]

s3. physical volume (pv)

s4. volume group (vg)

s5. logical volume (lv)

s6. mkfs.xfs

s7. mkdir

s8. vim

s9. mount

checking new partition

```
#fdisk -l
```

create disks

```
#fdisk /dev/sda
```

```
n                // to create a new partition
```

```
w                // save & quit
```

```
#fdisk /dev/sdb
```

```
n
```

```
w
```

```
#fdisk /dev/sdc
```

```
n
```

```
w
```

```
reboot
```

pv create

```
#pvcreate /dev/sda7 /dev/sba1 /dev/sdc1
```

```
#pvdisplay
```

vg create

```
#vgcreate vg1 /dev/sda7 /dev/sdb1 /dev/sdc1
```

vg1 = name for volume group

```
#vgdisplay
```

lv create

```
#lvcreate -n lv1 -L 20G vg1
```

n=name

L=size

```
#lvdisplay
```

#mkfs.xfs

#mkdir

#vim

#mount