Class 23

LVM = logical volume manager = in this partition type we can easily extend and reduce the size without loss the data

Package name = LVM2

Lab 1

Make the LVM

Make the partition and change the ID 8e

Make the physical volume

Pvcreate /dev/sda1 /dev/sdb1 /dev/sdc1

To see it

Pvs or pvdisplay

Make the volume group

Vgcreate test /dev/sda1 /dev/sdb1 /dev/sdc1

To see it

Vgs or vgdisplay

To make Logical volume

Lvcreate -L 12G –n abc test

To see it

Lvs or lvdisplay

Format the partition

Mkfs.ext4 /dev/test/abc

Mount

Mount /dev/test/abc /mnt

Extend the LV size without loss the data

Q = can we extend LV size in fly mode (mountd)

A = we can

2 way

Lv size =12G

Lvextend -L +2G /dev/test/abc

Resize2fs /dev/test/abc

Or

Lvresize -L 18G -r /dev/test/abc (-r - resize)

Reduce the size

Q = can we reduce the size in fly mode

A - no

LV =18G

Reduce 8G means new size will 10G

E2fsck -ff /dev/test/abc

Resize2fs /dev/test/abc 10G

Lvreduce -L 10G /dev/test/abc

Change the lv and vg name

Lv = abc

Vg = test

Lvrename VGname old new

Lvrename test abc xyz

Change VG name

Vgrename old new

Vgrename test india

Lab 5

Extend the VG size

Add a new HD , id =8e , make PV

Vgextend india /dev/sdd1

Lab 6

Delete the LV and VG

Lvremove /dev/india/xyz

Vgremove india

Lab 7 merge the VG

Vgchange -an clientVG

Vgmerge serverVG clientVG

Lab 8

Lvm migration

/dev/sdc1 = make vg (myvg) = make LV (test)

Add the HD /dev/sdd1

Vgextend myvg /dev/sdd1

Pvmove /dev/sdc1 /dev/sdd1

Vgreduce myvg /dev/sdc1

Lab 9

Change the PE and LE size

LE = logical extent = change to parititon size = lvdispaly

PE = physical extent =4MB = vgdispaly

/dev/sde =2GB

PE =4MB

LE =256

256x4 = 1024 M = 1G

Change the PE size

Add a new partition , id 8e

Vgcreate -s 16M myvg /dev/sdg1

We cant change PE size of existing volume

LVM 2 type

LVM - RHEL 3,5 - max 2TB , 255 PVa and VG

LVM2 =Rhel 5,6,7,8,9 (32 bit = 16bit , 64 bit = 8EB) , unlimited