

# Install logical volumes (LVM)

## Prepare and install volumes

Prepare a single disk or a disk raid:

```
mkfs.ext3 <physvol>
lvm
lvm> pvcreate <physvol>
lvm> vgcreate <physvol> // or several physical volumes: <physvol1>
<physvol2> <physvol3>
lvm> lvcreate <volgroup> <physical>
lvm> quit
mkfs.ext3 /dev/mapper/<volgroup-logvol>
mount /dev/mapper/<volgroup-logvol> <dir>
```

Auto-mount during boot:

```
vim /etc/fstab
/dev/mapper/<volgroup-logvol> <dir> ext3 noatime,user_xattr 0 0
```

## Install LVM manually

If you need to install LVM after having setup the base system, note that there is a bug in Edgy and Feisty where the executable files will not be found. To fix it, execute the 2nd instruction below:

```
apt-get install lvm2
ln -s /lib/lvm-200 /lib/lvm-0
```

## Install LVM volumes

1. lvm > pvcreate /dev/sde1 > pvcreate /dev/md2
2. lvm > vgcreate vg\_backup /dev/sde1 > vgcreate vg\_data /dev/md2
3. lvm > vdisplay vg\_backup to check ### of free extents (following steps same for vg\_data, but 2 logical volumes)
4. lvm > lvcreate -l### vg\_backup (do not use -LxxGB, use size with -l### which is number of extents)
5. lvm > lvrename vg\_backup lv0 lv\_backup
6. lvm > vcfgbackup to backup volume group configurations
7. lvm > exit
8. umount /home > umount /srv
9. mkfs -t ext3 /dev/vg\_backup/lv\_backup > mkfs -t ext3 /dev/vg\_data/lv\_home > mkfs -t ext3 /dev/vg\_data/lv\_srv
10. mkdir /backup
11. mount /dev/vg\_backup/lv\_backup /backup > mount /dev/vg\_data/lv\_home /home > mount /dev/vg\_data/lv\_srv /srv

- As I use this machine as a server I did not consider to upgrade Edgy to Feisty, but I would expect that this can be done without problems. I'm not sure this is the best way or the fastest, but it worked for me.

## Check whether all volumes get mounted during system boot

For whatever reason, my swap volume which resides on raid1 was not mounted during system boot. After some searching I found that the uuid was not matching between `/dev/disk/by-uuid` and `/etc/fstab`.

to check whether root and swap are mounted, enter:

```
mount
free -m -t
```

to check mismatching uuid's, enter:

```
ls -la /dev/disk/by-uuid
cat /etc/fstab
```

to fix, do:

```
vim /etc/fstab
```

replace the uuid's found in `fstab` with the ones found in `/dev/disk`. Make sure you copy the correct uuid (md0, md1) to the respective entry in `fstab`.

## Copy content of entire partition

```
rsync -avH /backup /mnt/new_backup/
```

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