



Requirements

- Linux distribution with LVM support
- Free unpartitioned space available for extending the volume group (such as the partition scheme of Lab 1)

To Do

1. Change the IP address of your machine using *vi* for changing the configuration file (e.g. *ifcfg-eth0*).
2. Change the default runlevel from 5 to 3.
3. Create a user with your username.
4. Login to the GUI with your username and do the following exercises.
5. Create a logical volume */dev/system/data* for mounpoint */data* with the reiser file system.
6. Extend the */tmp* file system with 2GB.
7. Create a snapshot volume of */data* called *snap*.

Quick Reference Objectives to learn

Partitioning

```
fdisk /dev/hda
parted /dev/hdb
cfdisk /dev/sda
df -h
du -h
fdformat /dev/fd0H1440
mkdosfs /dev/fd0
```

#LVM

```
lvm
```

```
pvdisplay
```

```
vgdisplay
```

```
lvdisplay
```

```
fdisk /dev/sdb
```

```
partprobe
```

```
pvcreate /dev/sdb2
```

```
vgcreate system /dev/sdb2
```

```
vgextend system /dev/sdb2
```

```
lvcreate -L 4M -n data system
```

```
mkfs.reiserfs /dev/system/data
```

```
vi /etc/fstab
```

```
mount -a
```

```
lvextend -L +2G /dev/system/lv-tmp
```

```
e2fsadm -L +2G /dev/system/lv-tmp
```

```
resize_reiserfs -s+2G /dev/system/tmp
```

```
#Create and use an LVM Snapshot Volume named 'snap':
```

```
mkdir /snapdir
```

```
mount -o remount,ro /data
```

```
lvcreate -s -L 5M -n snap /dev/system/data
```

```
mount -o remount,rw /data
```

```
mount /dev/system/snap /snapdir #Backup snapdir. Run after backup:
```

```
umount /snapdir
```

```
lvremove /dev/system/snap
```

```
#Three example tools (as root):
```

```
#Partition master disk on primary channel
```

```
#Partition slave disk on primary channel
```

```
#Partition first serial disk
```

```
#Show disk free space (-human readable)
```

```
#Show disk usage (-human readable)
```

```
#Low level floppy disk format
```

```
#High level floppy disk format
```

```
#Logical Volume Management (8e):
```



```
#Show LVM commands
```

```
#Show physical volumes
```

```
#Show volume groups
```

```
#Show logical volumes
```

```
#Create partition type '8e', e.g. sdb2
```

```
#Reread the partition table without reboot
```

```
#Create physical volume
```

```
#Create volume group 'system'
```

```
#Extend volume group 'system'
```

```
#Create logical volume 'data' on 'system'
```

```
#Format lv. Or e.g. mke2fs -j /dev/sys...
```

```
#Edit to survive a reboot
```

```
#Mount all stuff from /etc/fstab
```

```
#Resize logical volume. Resize fs:
```

```
#Includes an lv resize
```



Theory Modules

LPIC 1 Certification Bible, isbn 0-7645-4772-0

- p. 21-27 Partitioning schemes

Downloadable manual(www.novell.com/documentation)

SUSE LINUX Enterprise Server – Install. and Admin.

- p. 22-29 Expert Partitioning with YaST

- p. 138-144 LVM Configuration

Extra References

- www.tldp.org

- Quick Reference 2, page 2, column 1:

- User and Group Management

- Start and Stop

- Lab 00 Prerequisites Installing, LVM, RAID