

# Installing Using the GUI

- Disc Partitioning
- Allocation of swap space
- Selection of packages to install
- Configuring system settings
- Setting the user account

# Network Installation

- Note the network location of the Linux CDs
- Insert the first installation CD
- Type **linux askmethod**
- Select **network Installation**
- Provide the IP and location when asked

# Installing new packages

- We will show you directly how to do it !
- 
- When you get the source code of a new software. Usually follow these steps
- **./configure**
- **make**
- **sudo make install**

# Linux Recovery

- Insert the Linux Installation CD
- Type **linux rescue**
- Select the Linux version on the hard disc after it is detected
- You will be provided with a root login after the system boots up

# Recovering the GRUB

- If you install Windows after using Linux, this will erase and write onto the boot sector
- You should use the **linux rescue** mode as described previously
- After you obtain the root login, you should type the following commands to restore the GRUB.
- Type **chroot / mnt/ sysimage**
- Type **grub- install / dev/ hda**

# File System Structure

- /home – Contains the directories of users
- /root – The directory of the administrator
- /mnt – Position of mounted file systems (CDROM, windows hard drives, network drives)
- /boot – Contains the boot image of the OS
- /etc – Contains configuration files of the programs
- /usr – Contains user related files – extra /bin, /lib
- /bin – Binary executables
- /lib – Dynamic library files
- /tmp – Temporary files

# Navigating the Files

- Listing the files **ls**
- Making a new directory **mkdir**
- Changing to a directory **cd**
- Clearing the screen **clear**
- Removing a file **rm**
- Linking to a file **ln, ln -s**
- Moving a file **mv**

# Navigating the Files

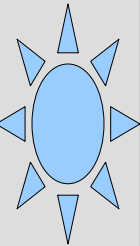


Where am I ??? **pwd**



# The Coolest Desktops

- KDE
- Gnome- Desktop
- Try browsing the file system structures using the GUI File Browser !!!
- More fun to use than boring windows
- You can have gServelets too !



# Applications Unlimited



# Shell : Cooler than Desktops

- How to list all jpg images whose filenames start with “t” and contain “at” in between ?

```
ls t*at*.jpg
```

```
teens- at- sea.jpg
```

```
tatto.jpg
```

```
thatsit.jpg
```

```
tommycat.jpg
```

# Shell : system properties

- What is the time ? **date**
- Show me the calendar of 2007 **cal 2007**
- How much of disc space is free ? **df - h**
- What programs am I running now ? **ps x**
- How busy is the cpu now ? **tload**
- Compare all the processes based on how they are eating memory and CPU time : **top**

# Shell : redirection

- How to save the list of files into a new text file ??

```
ls > files-list.txt
```

- How to see what is in the file now ?

```
cat files-list.txt
```

# Shell : file- search

- How to search for all the jpg images that are hidden inside the subfolders of the current directory ?

```
find . -name *.jpg
```

- Where in the computer are the songs of the *athadu* movie ?

```
locate *athadu*
```

# Shell : variables

- What is your home directory ? **echo \$HOME**
- I found out about this cool command called **ifconfig**, but it is not running.
- **which ifconfig /sbin/ifconfig**
- **echo \$PATH**
- **PATH=\$PATH:/sbin/**
- What if I have more than one shell running ?  
To do get the same effect in all the shells,
- **export PATH=\$PATH:/sbin/**

# Shell : pipe

- How to find out all the images whose file-name contains a number in between ?
  - `ls *jpg *gif | grep "[0-9]"`
- How to further find out if any of these files begin with the word "James" ?
  - `ls *jpg *gif | grep "[0-9]" | grep "^James"`



# Shell : Command Line Programs

- How to edit a file ? **emacs, vi**
- How to print a file ? **lpr filename.pdf**
- How to increase the volume ? **aumix**
- How to browse in text mode !!? **links**
- How to listen to mp3s ? **mplayer**
- How to check email ? **pine**
- How to convert a file format ?
- **convert a.jpg a.gif**

# Shell : Isn't it awesome ?

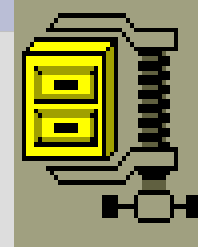
Why do I need a Desktop at all !!?



# Shell : Having fun with users

- How to know if my friend is logged in now ?
- **w friend**
- How to know my friend's phone number ?
- **finger friend**
- How to change my phone number so my friends can see ? **chfn**
- How to write to friends ? **write friend**
- How to talk to friends ? **talk friend**
- When did my friend last log in ??
- **last friend**

# Shell : How to open .zip files ??



- **unzip** nicePicturesHeHe.zip
- Also **gunzip** notSoNicePicsHeHe.zip
- Sometimes **tar - xvzf** tarPics.tar.gz
- Some other times **tar - xvjf** tarPics.tar.bz2
- 
- What if I want to put everything into an archive ?
- You can do **zip pics/ pics.zip**
- You can also do **tar - cvzf pics.tgz pics/**

# How to set permissions

- Each file has 3 types of users – owner, group of the owner and all other users.
- Each file has 3 types of permissions – read, write and execute
- How to change the permissions to a file **chmod**
- How to see the permissions set to a file **ls -l filename**

# Connecting from Remotely

- You can use the telnet/ssh client **putty** from a Windows machine
- From a linux machine use **ssh IP- address**
- You can install the **XServer** program on your windows machine and export your linux desktop there !!!
- Let's say your IP is 192.168.36.2
- Start the **XServer**, connect through **putty** and run the following commands.
- **export DISPLAY=192.168.36.2:0.0**
- **gnome-session &**

# Help !!!!!

- How to use a command ? **man**
- How to use a command ? **info**
- Why is anything not working ? Google on the **error message**
- Where to find software to download ?  
**www.sourceforge.net,**  
**www.rpmfind.net**
- Where to find more help ?
- Form a **mailing list** !! Join other mailing lists.

# Managing Users

- To add a new user **useradd**
- To delete a user **userdel**
- To change the group of a user **chgrp**
- To assign a file or folder to a user  
**chown**
- To login as that user **su – user**
- To login as root **su -**
- To change the password **passwd**



# Mounting File Systems

- Mounting the music on your Windows drive :
- **mkdir /mnt/win- e**
- **df - h**
- **mount / dev/ hda6 / mnt/ win- e**
- Unmounting the data
- **umount / mnt/ win- e**
- Mounting the CDROM
- **mount / dev/ cdrom / mnt/ cdrom**
- Unmounting **umount / mnt/ cdrom**
-

# Configuring the Network

- You can set the IP using **netconfig**
- You have to restart the network using
- **service network restart**
- You can check the IP with **ifconfig**
- You can check if the net is working by pinging the gateway
- **ping 172.16.8.1**
- You can stop/ start the network by using
- **service network stop/ start**

# Configuring the I/O Devices

- With Root Password, you can use several GUI based applications to configure the system.
- **system- config- soundcard**
- **system- config- mouse**
- **system- config- printer**
- **system- config- display**
- **system- config- network**

# Editing .conf files in / etc

- **/ etc/ grub.conf** for GRUB settings
- **/ etc/ crontab** for setting processes to run periodically at a time of the day
- **/ etc/ inittab** for deciding how you want your computer to boot up – single user, multi user, GUI/ textmode etc.
- **/ etc/ passwd** (not for editing) contains the login, group and home directory information of all the users