



System Administration

Introduction :-

Administration means controlling & taking decisions to ensure the smart running of a system. System Administrator is a person who performs various functions for controlling the system.



Functions of Administrator





1. Starting up the system:-

2. Super user login:-

It is also known as the administrator who has all the permissions & grant user to access the system. System user's login is "Root" & password is also "root". Root a/c displays a diff prompt i.e. #

3. Shutting down the system :-

System Admin has a duty to shut down the system at the end of the day. The shut down cmd controls this sequence.

It is imp to follow the correct procedure when you shut down a system.

You can use

`$shut down` OR `$halt`

4. Mounting & Un mounting :-

The file system keeps the files in directory structure which is a tree. To mount a file you will do the following :-

(a) go to your home directory

(b) create a sub-directory to mount the device by using
`$mkdir directory1`

© to link the cd/floppy to the created sub-directory use “mount”

```
#mount/etc/dev/gd1  
    home/mukesh/directory1
```

To unmount type

```
#unmount etc/dev/fd1
```


5. Taking backups :-

To create a copy of your data & files. In case original copy is lost then you can recover it from your backup data. Command used to take backup is

```
$tar[options] directory name
```



Options are :-

c-used to create backup on tape & overwrites the existing files

t-used to list the backup files

u-used to append only new files

6. Managing disk space :-

quota - to check how much space is used

df(disk free) - checks free space left

du(disk usage) - tells used space by each file & directory.

History - checks all the cmds you have entered

7. Adding & removing user :-

Adding user :-

```
$adduser username
```

```
passwd username
```

```
new passwd
```

```
retype new passwd
```

```
authenticated successfully
```

Removing user :-

```
$deluser username
```

8. Changing the password :-

to change the current passwd

type :-

```
$passwd:
```

system will prompt you to
enter your old passwd &
dispalys

```
$old passwd: <enter>
```


```
$new passwd: <enter>
```

A vertical bar on the left side of the slide, consisting of a white top section with three black vertical lines, a grey section, a yellow section, and a pink section.

`$re-enter new passwd:
<enter>`

9. Recovering from system crash :-

A system crash can occur suddenly due to interruption of power supply causing damage to 1 or more system files. Unix is considered to have crash when it halts by itself due to some reason. The solution is shutdown the



System, poweroff the system & restart , if it is not possible to boot again then there may be need to check h/w related to booting problem & reinstall or restore the system & its files from backup disk.

10. Accounting system usage & billing :-

It keep track of sys usage by persons, processes & also cmds used by different users over a period of time.

Accounting sys is a sophisticated collection of prgms & structured accounting tools. There are generally 2

Provisions of accounting.

They are

- 1) Process a/c'ing
- 2) connect time a/c'ing

The super user should know how to implement & manage the a/c'ing sys.

11. Setting up remote communication :-

Unix provides an elaborate sub-system that lets a user connect to a remote user i.e. a user working on another system. In that case the remote system must have some communication link with the local system. This link can

be set up in mainly these ways :-

- 1) a dedicated link directly connecting the two m/c.
- 2) a dial-up line using the telephone line with a modem at each end. This connection uses PPP.

No. of cmds can be used for remote communication:-

- 1) rlogin-remote login
- 2) rwho-for listing of users of n/w
- 3) rwall-for addressing all users of n/w
- 4) talk-to communicate with user

12. Maintaining security :-


System security is 1 of the imp jobs that the system administrator has to perform.

He should ensure the follow:-

1) Prevent illegal users from accessing system.


2) maintain integrity of sys.

3) make sure that files of



user is accessible only to the owner or his group-mates.

To prevent unauthorised access, the sys admin should encourage users to change their passwords frequently.



13. Installing printers & peripheral devices :-

The “lpadmin” cmd is used to add/remove a printer or modify its configuration. The cmd has a no. of options that are used to define the printer name, the name of the name of the interface script



& also to set the default
printer.