

Common Linux Commands

cat

To display text file.

Syntax

cat {file name}

Examples

\$cat foo

cfdisk*

To create/modify/delete partition table interactively.

Syntax

Cfdisk

cd

To change current directory.

Syntax

cd {directory name}

Options

- (minus) Change to previous directory location.

Examples

\$ cd /usr/local/apache

\$ pwd

/usr/local/apache

\$ cd /var/log

\$ pwd

/var/log

\$ cd -

\$ pwd

/usr/local/apache

\$ cd (Change to home directory)

NOTE: Linux's **\$OLDPWD** variable holds your last directory setting, if you type **\$ cd \$OLDPWD** it is same as **\$ cd -**. What happen if you type **\$ cd -** as soon as you login into Linux?

chfn

Change the finger information of user.

Syntax

chfn [user-name]

Examples

\$ chfn vivek

\$ chfn # change the currently

chgrp

Change the group owner of a file.

Syntax

chgrp {group name} {file/directory name}

Options



-R Recursively change group owner of files/directory

Examples

```
chgrp oracle /usr/database
chgrp msc /home/cstudents
```

clear

Clear the screen.

Syntax

```
clear
```

cp

To Copy files.

Syntax

```
cp {source} {destination}
```

Options

-f force the cp to copy files even if file exist (overwrite the files).

-i Ask y/n confirmation before coping each file.

Examples

```
$ cp -f /mnt/floppy/* /home/vivek
```

cmp

To use to compare files

Syntax

```
cmp {file1} {file2}
```

Examples

```
$ cmp myfile myfile.old
```

date*

Change or set current date and time.

Syntax

```
date [date or time string ]
```

Examples

```
$date # will show current date & time
```

```
$date --set="2001-3-15" # will set date to 2001-Mar-15
```

```
$date --set="2001-3-15 11:59 AM" # date as well as time
```

df

Display the disk space used file system.

Syntax

```
df
```

Options

-m Displays information in MB.

-k Displays information in KB.

-h Displays information in easy-to-understand format.

diff

Display differences (Comparison between two files) in files.

Syntax

```
diff {file1} {file2}
```

dmesg

To display kernel log messages. (Which are shown when your system first time boot)

Syntax

```
dmesg
```

du



Displays the disk usage according to space used by file/directory.

Syntax

`du [directory name]`

Options

- a all files
- k Displays information in KB.
- h Displays information in easy-to-understand format.
- s Displays only total not details.

fdisk*

To create/ modify/ delete partition table.

Syntax

`fdisk {device -name}`

Options

This are command of fdisk, you have to use this command after fdisk program starts.

- a Mark bootable partition.
- d Delete partition.
- m Help
- n Create new partition.
- p Print partition table on screen.
- q Quit without saving changes.
- t Changes the partition type ID (type)
- w Quit and save changes to disk.

Examples

`$fdisk /dev/hda`

find

To Search files.

Syntax

`find dirname -name files-to-find -print`

Examples

`$ find / -name *.c -print`

finger

Get user information.

Syntax

`finger [user-name]`

Examples

`$finger`
`$finger vivek`

fsck*

To check the file system for errors, and if found repair it.

Syntax

`fsck {device name}`

Options

- f force to repair.
- y Assume "yes" for all questions.

Caution Do't run fsck in multiuser mode, first run system in single mode then un mount file system and then run the fsck.

Examples



```
$ init 1      # go to single user mode or you can type linux
single at    # LILO prompt while booting the system. Note
that if your # LILO is password protected, then you have to
supply       # password for it.
$ umount /dev/hdx # replace x with your partition number for
e.g          # umount /dev/hda1
$ fsck /dev/hda1
$ reboot
```

grep

To search text files for particular text.

Syntax

```
grep "patter- to-search" file- name
```

Examples

```
grep "Red Hat" /etc/*
```

gzip

To compress or decompress file.

Syntax

```
gzip file- nane
```

Options

```
-d decompress
```

```
-S suffix
```

Examples

```
$ gzip ltips
```

```
$ ls
```

```
$ gzip -d ltips
```

init*

Use to switch between different run-levels.

Syntax

```
init 0 to 6
```

Options

```
0 halt the system
```

```
1 Single-user mode
```

```
2 Multi- user without NFS
```

```
3 Full Multi- user (Default)
```

```
4 Unused
```

```
5 Start X windows
```

```
6 Reboot system
```

Examples

```
$ su -l
```

```
# init 6 # reboot
```

```
# init 1 # single user mode
```

logout

To login out

Syntax

```
logout
```

last/lastlog*

To Display login, telnet and ftp log of your Linux Server.

less

To display file contents

Syntax

less filename

ln

Create a link.

Syntax

ln -s {file/directory} {file/directory}

Examples

\$ln -s longprograme p

\$ls -l

locate*

To quickly (securely also) search file.

Syntax

locate {file name}

Options

-R Recursively display the files & directory.

-l Long listing of files & directory.

Note

If you are running locate first time then run following command, which will create database file. (Run as root user)

\$ su

password

#/etc/cron.daily/slocate.cron

Examples

\$locate -l foo

ls

Shows list of files and dirs

Syntax

ls [file/dir name]

Options

-R Recursively display the files & directory.

-l Long listing of files & directory.

-a Show all files start with . (DOT) # for e.g.: .

bash_profile

-N Name wise sorting.

Examples

\$ ls

\$ ls -lR / > alist &

\$ ls -a

mail

Read or send the mail.

Syntax

mail {user-name}

Options

If you are reading mail use following command



- d - Delete the mail.
- q - Quit the mail program.
- s - Save the mail to mailbox.

Examples

```
$ mail          # read your mail
$ mail vivek
```

mount/umount*

Mount/unmount the file system. Useful to work with floppy, cdrom, other (DOS/Windows) partition etc.

Syntax

```
mount -t {file system type} {device name} {mount point}
```

Options

-t can be msdos or vfat

Examples

```
# must be root user
# To mount your Cd-Rom
# mount /dev/cdrom
# mount -t msdos /dev/fd0 /mnt/floppy
```

```
# cd /mnt/floppy
```

```
# ls
```

```
# mount          # to see all mounted device
```

more

To view text file

Syntax

```
more {file name}
```

mv

To move the file(s)/directory.

Syntax

```
mv {source} {destination}
```

pr

To print file.

Syntax

```
pr {file- name}
```

Examples

```
$pr myfile
```

passwd

To change the password.

Syntax

```
passwd {username}
```

Options

-d Delete the password. (Use with very carefully)

Examples

```
$ passwd
```

ping

Network related command, to verify that network is connected and working properly.

Syntax

```
ping {host- name | IP Number}
```

Examples



```
$ping www.yahoo.com # if connectd to Internet
$ping 192.168.1.78
```

pwd

Print working directory.

Syntax

```
$ pwd
```

rpm*

Red Hat Linux Package Management program. Use this to install/uninstall/ upgrade software under Linux

Syntax

```
rpm {option} {rpm file}
```

Options

- i Install .rpm software.
- U Upgrade the software.
- e Delete the software.
- l List all files in .rpm software package

Examples

```
$ rpm -i demo.rpm
```

rm

Remove the files.

Syntax

```
rm {filename}
```

Options

- rf Remove all files/directory with subdirectories. (DOS's - deltree)

Examples

```
$ rm foo
$ rm -rf /home/vivek/oldfiles
```

sort

To sort files.

Syntax

```
sort {file- name}
```

Options

- r Reverse normal order
- n Sort in numeric order
- nr Sort in reverse numeric order

Examples

```
$sort myfile
```

startx

Start X windows system.

Syntax

```
startx
```

Options

Press ctrl + alt + backspace to kill x windows.

shutdown*

Shutdown linux.

Syntax

```
shutdown
```



Options

-r Reboot Linux.
-h Halt or Shutdown

Example

\$shutdown -h now

smbpasswd*

Samba password change.

Syntax

smbpasswd {username}

Examples

\$smbpasswd rani

su*

Become super user if user name is not given, or change the user ID.

Syntax

su [username]

tar

Linux archive program.

Syntax

tar options {tar-file-name} {dir-name-to-archive}

Options

-c Create the file.
-f {filename} Name of archive file
-z Compress the file.
-x Extract the files from archive

Examples

To create archive file of /home/vivek directory

\$ tar -czf mybackup.tar.gz /home/vivek

#If you want to extract file from above

\$ tar -xf mybackup.tar.gz

testparm/testprns*

Test the /etc/smb.conf file for errors.

testparm – To test share setting.

testprns – To test printer setting.

Above will also display setting and error if any.

Syntax

testparm

testprns

top

To see process information in neat format.

Syntax

top

Options

? Get more information about top command.

touch

Create empty file or change/update time stamp of file.

Syntax

touch {filename}

Examples

```
$ touch /etc/dhcpd.leases #create file for dhcpd demon
$ touch /etc/modules      # update time stamp of file
```

umask

Specify the permission for files when files are created for owner(u),group(g), and others(o).

Syntax

```
umask -S {u=xx,g=xx,o=xx}
```

Where xx can be (r)ead,(w)rite.

Or you can use 022 for read only file permission for others and 077 for read and write permission.

Examples

```
$umask -S u=rw,g=,o=
```

```
$umask 022
```

useradd/userdel*

Add/delete new user to your system

Syntax

```
useradd -g {group-name} {user-name-to-add}
```

```
userdel {user-name-to-delete}
```

Examples

```
#add rani user to system (must be root)
```

```
#useradd -g oracle rani
```

```
#passwd rani
```

```
#Delete the user kaju
```

```
#userdel kaju
```

w

Shows who logged on and what they are doing

Syntax

```
w
```

who am i

About your self.

Syntax

```
who am i
```

which

Show the location of file from which it is executed when you type the name.

Syntax

```
which {file name}
```

Examples

```
$ which cc
```

```
$ ls -l `which cc`
```

xinit

Initializes X window without loading any windows manager.

Syntax

```
xinit
```

Examples

```
$ xinit
```

```
$ kde
```

* For this command you must be root or root equivalent user

User Admin. Commands

- User database is **/etc/passwd**.
- User password and password aging options are stored in **/etc/shadow**
- User group information stored in **/etc/group** file.
- Default values for new accounts are read from **/etc/login.defs** file, here you can specify the minimum password length, mail directory etc.
- All default options related to new user account creation are read from the file **/etc/default/useradd**. For e.g. default group, home directory path etc.
- When you create new user account **/etc/skel** directories contains i.e. files copied to the new user home directory.

useradd

To add new user account

Syntax:

`useradd username`

Examples:

`# useradd raj`

useradd -D

To see the defaults options when you create new user.

Examples:

`# useradd -D`

passwd

To change the password of user

Syntax:

`passwd usernan`

Examples:

`# useradd raj`

userdel

To remove the user



Synnyax:

userdel

Examples:

userdel raj

find

To find all files & directories owned by the user and delete it.

Synnyax:

find /{directory-to-search} -user {user-name} -exec rm {} \;

Examples:

find /home -user raj -exec rm {} \;

usermod

To modify the user account information such as shell, home directory etc.

Synnyax:

usermod [options] user-name

Examples:

usermod -d /users/raj raj - Will change the home directory of user raj from /home/raj to /users/raj directory.

usermod -l rajesh raj - Will change the login name raj to rajesh.

chage

Use to change user password expiry information i.e. password aging.

Synnyax:

chage username

Examples:

chage raj

groupadd

To add new group.

Synnyax:

groupadd group-name

Examples:

groupadd ftpusers

groupdel

To delete group.

Synnyax:

groupdel group-name

Examples:

groupdel telnetusers

groupmod

To modify group.

Synnyax:

groupmod group-name

Examples:

groupmod -n ftpusers webusers

This will change the webusers group to ftpusers.

File Admin. Command

chmod

Change the file/directory permission directory

Syntax:



`chmod permission-options file/directory name.`

Options

(a)permission-options -

`rxw rxw rxw`

1 2 3

- 1 – owner
- 2 – group
- 3 – others

For r,w,x octal value is 4,2,1 respectively.

So if you want to give r,w,x permission to owner, for group r,x, and for w,x to others. Then,

`rxw rxw rxw`
`421 401 021`

For owner add this number as $4+2+1 = 7$

For group add this number as $4+0+1 = 5$

For others add this number as $0+2+1 = 3$

So command will be `$ chmod 753 filename`

Examples

`$chmod 755 first.sh`

(b)permission-options

`chmod {u|g|o|a} {+|-} {r|w|x} {filename}`

- u - User who owns the file
- g - Group file owner
- o - User classified as other
- a - All other system user

- + Set permission
- Remove permission

r - Read permission

w - Write permission

Examples:

```
# chmod 0700 /etc/shadow
```

chown

Change the owner of file/directory

Synax:

```
chown {username}[.group-name] {file/directory-name}
```

Options

-R Recursively change group owner of files/directory

Examples:

```
$chown vivek.users *.jsp
```

All files ending with .jsp are now owned by user vivek of the group users

chattr

Change file attributes on a Linux second extended file system

Synax:

```
chattr [ -RV ] [ mode ] files...
```

Options

-R : Recursively change attributes of directories and their contents.

-V : Be verbose with chattr's output and print the program version.

+ : Set the attribute

- : Removes the attribute

Attributes can be:

A don't update atime

c Compress the file

d With this file is not backed up with dump program.

i File can not be modified.

Examples:

```
chattr +i /etc/passwd
```

umask

Set the default mask for file and directory permission.

Synax:

```
umask maskvalue
```

Examples:

```
# umask 002 : To set default file permission mode to 775
```

```
# umask 077: To set default file permission mode to 700
```

Backup Admin. Commands

tar

Unix/Linux command to create archive.

Synax:

```
tar -zcvfxt files
```

Where Options are

z : Compress or decompresses the tar archive.

c : Create an archive.

v : Verbosely list files processed

f : Specifies the filename

x : Extract (restore) the files from archive.

t : List the files in archive

N : Stores an incremental backup and only stores files newer than DATE.

Examples:



```
# tar -zcvf home-2000-oct-5.tar /home : Will create the home-2000-oct-5.tar
archive file i.e. create the backup of entire home directories.
# tar -zxvf home-2000-oct-5.tar : Will extract the archive files.
# tar -ztvf home-2000-oct-5.tar : List all files in home-2000-oct-5.tar
verbosely.
# tar -cpf /dev/st0 --label="Full backup for webserver.nixcraft.org as on
2002-Oct-5" --directory /webroot : Create full backup on tape drive for the
directory /webroot.
# tar -cpNf /dev/st0 --label="Full backup for webserver.nixcraft.org as on
2002-Oct-6" --directory /webroot : Create incremental backup on the tape
drive.
```

tar -cMpf /dev/st0 /webroot

Use above command if your backup doesn't fit on one tape, you can use multi-volume (M) option for this purpose.

tar -dvf /dev/st0

To compare the backup.

dump

Use dump to backing up and restoring the file systems.

Synax:

`dump -level -f device filesystem`

Examples:

```
# dump -0u -f /dev/st0 /webroot : Backup the full /webroot file system to
tape drive.
```

Here 0 indicates the backup level (0 means full and 1-9 means incremental levels)

u Option specifies that update the file /etc/dumpdates after successful dump.

restore

Use restore command to restores the files / backups created with dump.

Synax:

`restore -f device`

Examples:

```
# restore -if /dev/st0
```

cpio

Use copy files to and from archives

Synax:

`cpio options < | > device-name`

Where options can be

o : Create archive

c : Identical to "-H newc", use the new (SVR4) portable format.

v : Verbosely list files processed

i : Extract the archive.

d : Create leading directories where needed.

Examples:

```
# find /home/vivek/ -name *.c | cpio -ocv > cbackup
```

Find all the c files and create file archive.

```
# find /home/vivek/ -name *.c | cpio -ocv > /dev/st0
```

Find all the c files and create the archive on tape.

```
# cpio -icdv < cbackup
```

Restore files from files - cbackup.

```
# cpio -icdv < /dev/st0
```

Restore files from files from tape.

mt

Use to control magnetic tape drive operation



Synnyax:

`mt -f device rewind | offline | erase`

Where `rewind` will rewind the tape

`offline` will rewind and unload the tape.

`erase` will erase tape.

Examples:

```
# mt -f /dev/st0 rewind
```

```
# mt -f /dev/st0 offline
```

```
# mt -f /dev/st0 erase
```