

Lab no:02

Name of the lab:Basic 15 commands in linux

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Objectives:

Linux Command:

**Command is helpful to get brief information about Linux commands or functions. Whatis command displays man page single line description for command that matches string passed as a command line argument to whatis command. Whatis command searches for string in its index databases which is maintained by mandb program. Whatis command picks short description of NAME section of man page of command that matches to input given to the whatis command.**

**The basic 15 commands of linux are given below:**

## 1. pwd command

This command prints the location of your current working directory. It's important to know actually where you're before going to a parent or sub directories.

```
b00m@acer:share$ pwd
/usr/local/share
b00m@acer:share$
```

## 2. ls command

**ls** is one of the most used basic linux commands, used to **print** contents of a directory, by default it lists contents of current working directory(**pwd**).

```
b00m@acer:share$ ls
ca-certificates  emacs  man    qtermwidget5  xml
cmake            fonts  perl   sgml
b00m@acer:share$
```

## 3. cd command

After knowing your **pwd** and getting an overview with the **ls**, it's time to move around with **cd** command. Clarification, assume you're on your **Home** directory, you need to go to the **/usr/local/share/fonts** directory, use `cd /usr/local/share/fonts`.

```
b00m@acer:share$ ls
ca-certificates  emacs  man    qtermwidget5  xml
cmake            fonts  perl   sgml
b00m@acer:share$ cd fonts/
b00m@acer:fonts$ pwd
/usr/local/share/fonts
b00m@acer:fonts$
```

## 4. mv command

The `mv` command is used to **move** or **rename** directories and files. To rename a file use `mv old_name new_name`, more details about mv [here](#) and [here](#).

```
b00m@acer:~$
```

```
I
```

## 6. cp command

`cp`, You can copy files and directories with this command. Typical usage is like `cp file_a file_1_copy` or `cp directory_a dir_a_copy` Also don't forget to use proper path when you're coping something to different location.

## 7. rm command

The `rm` command is used to [remove directory](#) or files. Like use `rm -r /tmp/backup` to remove everything that folder. Of course you've to be careful before removing anything.

## 8. mkdir command

`mkdir`, it's used to make a new directory in linux. Example, use `mkdir my_new_dir` to make a new directory named my\_new\_directory. The `-p` argument is useful, when you don't want to make parent directories manually.

## 9. rmdir command

`rmdir`, if you need to remove a directory, use this command. As example, use `rmdir my_dir` to remove that specific directory. More details about the rmdir command [here](#).

## 10. touch command

**touch**, It's the equivalent command of `mkdir` for files. You can create a blank file with touch command. As example, use `touch ~/Public/index.html` to create a blank index.html file under the Public directory.

## 11. ln command

This command is used to make link between files and directories. As example, you need to make a symbolic link of the `/var/www` directory to the `/tmp` directory.

```
ln -s /var/www/ /tmp/
```

To un-link that symlink, use

```
unlink /tmp/www
```

You've to be extra careful with complete path and trailing slashes while linking and un-linking.

## 12. df command

This command is used to check disk space usage on a linux system. The most common usage is like below, used along with the `-h` flag.

```
df -h
```

```
b00m@acer:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        1.9G   0    1.9G   0% /dev
tmpfs           1.9G  37M   1.9G   2% /dev/shm
tmpfs           1.9G  9.0M   1.9G   1% /run
tmpfs           5.0M  4.0K   5.0M   1% /run/lock
tmpfs           1.9G   0    1.9G   0% /sys/fs/cgroup
/dev/sda1       20G   7.3G   12G   40% /
tmpfs           1.9G  36K   1.9G   1% /tmp
tmpfs           1.9G   0    1.9G   0% /var/tmp
/dev/sda2      439G   78G  339G   19% /home
tmpfs          382M  16K  382M   1% /run/user/1000
/dev/sdb2       29G   20G   7.4G   73% /media/b00m/home_fs
/dev/sdb1       7.8G   6.1G   1.7G   79% /media/b00m/root_fs
```

### 13.free command

The free command is used to display amount of free and used RAM in the system, also prints the swap space stats.

```
free -h
```

```
b00m@acer:~/PCsuggest$ free -h
```

	total	used	free	shared	buff/cache	available
Mem:	3.7G	1.0G	176M	254M	2.5G	2.2G
Swap:	1.0G	0B	1.0G			

### 14. ifconfig command

`ifconfig` stands for **interface configuration**, and it can do many networking related things, literally.

Some basic use for beginners could be like checking which network interfaces are connected and their respective IP address.

Or you can find out how much data passed through a specific interface, all could be done just by running the `ifconfig` command.

```
ifconfig -a
```

```

b00m@acer:~/PCsuggest$ ifconfig -a
enp2s0    Link encap:Ethernet  HWaddr [REDACTED]
          UP BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:1084 errors:0 dropped:0 overruns:0 frame:0
          TX packets:1084 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:182014 (182.0 KB)  TX bytes:182014 (182.0 KB)

wlp3s0    Link encap:Ethernet  HWaddr [REDACTED]
          inet addr:192.168.1.101  Bcast:192.168.1.255  Mask:255.255.255.0
          inet6 addr: 2405:205:6484:f86b:ceaf:78ff:fe38:9859/64 Scope:Global
          inet6 addr: fe80::ceaf:78ff:fe38:9859/64 Scope:Link
          inet6 addr: 2405:205:6484:f86b:8590:b11a:c6b8:8e3/64 Scope:Global
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:241898 errors:0 dropped:0 overruns:0 frame:0
          TX packets:140998 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000

```

## 15. zip command

No doubt you often need to create and extract zip archives, here's the `zip` and `unzip` commands for that.

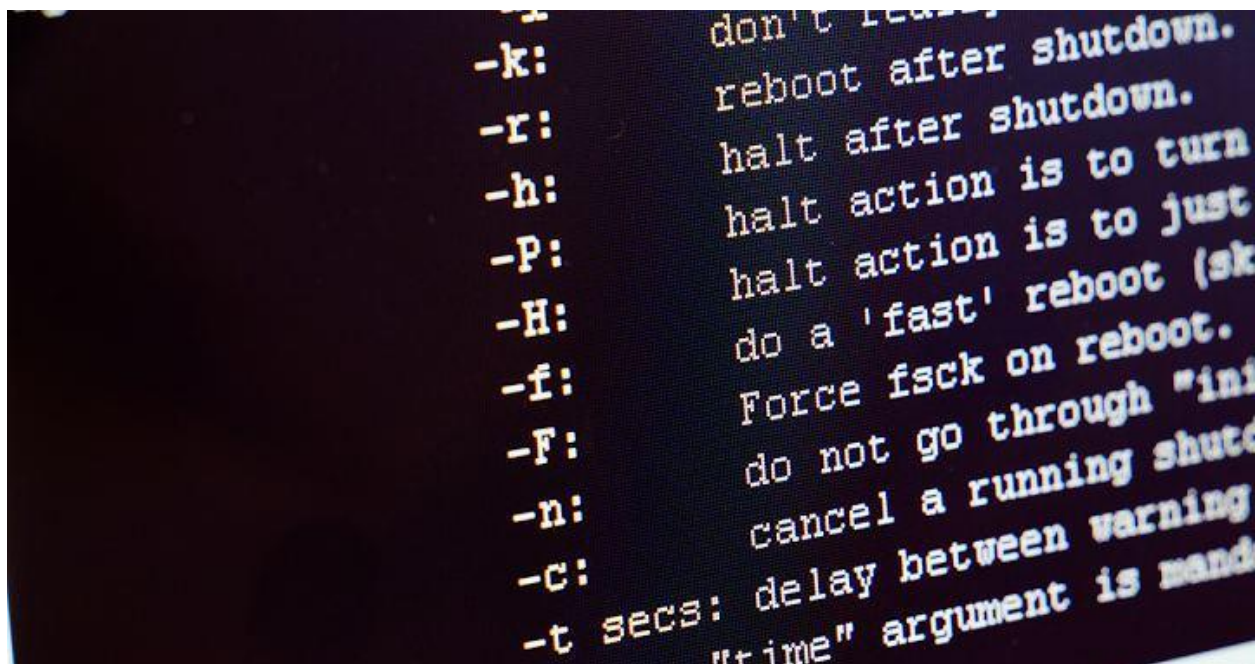
Most probably these commands are not pre-installed, install them with apt in Ubuntu.

```
sudo apt-get install zip unzip
```

The syntax to create a zip archive,

```
zip -9r my_archive.zip file_1 file_2 folder_1 folder_2 folder_3
```

When the `-9` option is used, zip attempts maximum compression on all files and `-r` option is for recursive archiving.



## Conclusion

So that's all bout basic linux commands, I have learned something new. i thing it will be very interesting for me.It is new experience for me and I have enjoyed it...