

Networking and Systems Administration Lab

ASSIGNMENT 3: BASIC LINUX COMMANDS

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Explain linux commands usermod, groupadd, groups, groupmod, groupdel, chmod, chown, id, ps, top with examples

1. usermod

- usermod command is used to change the properties of a user in Linux through the command line
- command-line utility that allows you to modify a user's login information
- #usermod --help
- #usermod -u 2000 Vimal

```
vimal@LAPTOP-0S0SJH6:/home$ sudo usermod -u 2000 student
vimal@LAPTOP-0S0SJH6:/home$ sudo usermod -u 2000 student
usermod: no changes
vimal@LAPTOP-0S0SJH6:/home$
```

2. groupadd

- groupadd command creates a new group account using the values specified on the command line and the default values from the system.
- #groupadd vimal1

```
vimal@LAPTOP-0S0SJH6:/home$ sudo groupadd vimal1
vimal@LAPTOP-0S0SJH6:/home$ sudo groupadd vimal1
groupadd: group 'vimal1' already exists
vimal@LAPTOP-0S0SJH6:/home$ sudo groupadd vimal2
vimal@LAPTOP-0S0SJH6:/home$ sudo groupadd vimal3
```

```
vimal@LAPTOP-0S0SJH6:/home$ compgen -g vimal
vimal
vimal12
vimal1
vimal2
vimal3
```

3. groups - print the groups a user is in

- #groups vimal

```
vimal@LAPTOP-0S0SJH6:/home$ groups vimal
vimal : vimal adm dialout cdrom floppy sudo audio dip video plugdev netdev
```

4. `groupdel` - `groupdel` command modifies the system account files, deleting all entries that refer to group. The named group must exist

- `#groupdel vimal12`

```
vimal@LAPTOP-0SOSJJH6:/home$ compgen -g vimal
vimal
vimal12
vimal1
vimal2
vimal3
vimal@LAPTOP-0SOSJJH6:/home$ sudo groupdel vimal12
vimal@LAPTOP-0SOSJJH6:/home$ compgen -g vimal
vimal
vimal1
vimal2
vimal3
vimal@LAPTOP-0SOSJJH6:/home$
```

5. `groupmod` - The `groupmod` command modifies the definition of the specified group by modifying the appropriate entry in the group database.

`# groupmod -n group1 group2`

```
vimal@LAPTOP-0SOSJJH6:/home$ compgen -g vimal
vimal
vimal1
vimal2
vimal3
vimal@LAPTOP-0SOSJJH6:/home$ sudo groupmod -n new_group vimal1
vimal@LAPTOP-0SOSJJH6:/home$ compgen -g vimal
vimal
vimal2
vimal3
vimal@LAPTOP-0SOSJJH6:/home$ compgen -g new_group
new_group
```

6. chmod - To change directory permissions of file/ Directory in Linux.

#chmod whowhatwhich file/directory

- chmod +rwx filename to add permissions.
- chmod -rwx directoryname to remove permissions.
- chmod +x filename to allow executable permissions.
- chmod -wx filename to take out write and executable permissions.

#chmod u+x test #chmod g-rwx test #chmod o-r test

```
vimal@LAPTOP-0S0SJJH6:/mnt/f$ chmod +rwx vimal.txt
vimal@LAPTOP-0S0SJJH6:/mnt/f$ chmod -w vimal.txt
chmod: vimal.txt: new permissions are r-xrwxrwx, not r-xr-xr-x
vimal@LAPTOP-0S0SJJH6:/mnt/f$
```

7. chown - The chown command allows you to change the user and/or group ownership of a given file, directory.

#chown vimal vimal.txt

```
vimal@LAPTOP-0S0SJJH6:/mnt/f$ chown vimal vimal.txt
```

```
vimal@LAPTOP-0S0SJJH6:/mnt/f$ ls -l vimal.txt
-rwxrwxrwx 1 vimal vimal 0 Aug 10 22:15 vimal.txt
vimal@LAPTOP-0S0SJJH6:/mnt/f$
```

8. id - id command in Linux is used to find out user and group names and numeric ID's (UID or group ID) of the current user.

#id

```
vimal@LAPTOP-0S0SJJH6:/home$ id vimal
uid=1000(vimal) gid=1000(vimal) groups=1000(vimal),4(adm)
vimal@LAPTOP-0S0SJJH6:/home$
```

9. ps - The ps command, short for Process Status, is a command line utility that is used to display or view information related to the processes running in a Linux system.

- PID – This is the unique process ID
- TTY – This is the type of terminal that the user is logged in to
- TIME – This is the time in minutes and seconds that the process has been running
- CMD – The command that launched the process #ps -a

```
vimal@LAPTOP-0S0SJH6:/mnt/f$ ps -a
PID TTY          TIME CMD
 160 tty1        00:00:00 bash
 308 tty1        00:00:00 ps
vimal@LAPTOP-0S0SJH6:/mnt/f$
```

10. top - top command is used to show the Linux processes. It provides a dynamic real-time view of the running system

#top -u vimal

```
vimal@LAPTOP-0S0SJH6:/mnt/f$ top
top - 22:31:56 up 1:06, 0 users, load average: 0.52, 0.58, 0.59
Tasks: 4 total, 1 running, 3 sleeping, 0 stopped, 0 zombie
%Cpu(s): 1.9 us, 2.0 sy, 0.0 ni, 95.8 id, 0.0 wa, 0.2 hi, 0.0 si, 0.0 st
MiB Mem : 7549.3 total, 3282.7 free, 4042.7 used, 224.0 buff/cache
MiB Swap: 12834.0 total, 12741.0 free, 93.0 used, 3376.1 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1	root	20	0	8940	320	276	S	0.0	0.0	0:00.17	init
159	root	20	0	8940	228	184	S	0.0	0.0	0:00.00	init
160	vimal	20	0	18216	3776	3672	S	0.0	0.0	0:00.33	bash
307	vimal	20	0	18920	2184	1524	R	0.0	0.0	0:00.03	top