

# **ASSIGNMENT 3**

**Submitted By,**

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**Question:** Basic Linux Commands: Explain linux commands usermod, groupadd, groups, groupmod, groupdel, chmod, chown, id, ps, top with examples.

**usermod:**

- It is used to change the properties of a user in Linux through the command line.

```
ashtami@ashtami-VirtualBox:~$ sudo usermod - G mca anu
[sudo] password for ashtami:
Usage: usermod [options] LOGIN

Options:
  -b, --badnames          allow bad names
  -c, --comment COMMENT   new value of the GECOS field
  -d, --home HOME_DIR     new home directory for the user account
  -e, --expiredate EXPIRE_DATE set account expiration date to EXPIRE_DATE
  -f, --inactive INACTIVE set password inactive after expiration
                           to INACTIVE
  -g, --gid GROUP          force use GROUP as new primary group
  -G, --groups GROUPS      new list of supplementary GROUPS
  -a, --append             append the user to the supplemental GROUPS
                           mentioned by the -G option without removing
                           the user from other groups
  -h, --help              display this help message and exit
  -l, --login NEW_LOGIN    new value of the login name
  -L, --lock              lock the user account
  -m, --move-home         move contents of the home directory to the
                           new location (use only with -d)
  -o, --non-unique         allow using duplicate (non-unique) UID
  -p, --password PASSWORD use encrypted password for the new password
  -R, --root CHROOT_DIR    directory to chroot into
  -P, --prefix PREFIX_DIR  prefix directory where are located the /etc/* f
                           iles
  -s, --shell SHELL        new login shell for the user account
  -u, --uid UID            new UID for the user account
  -U, --unlock            unlock the user account
  -v, --add-subuids FIRST-LAST add range of subordinate uids
  -V, --del-subuids FIRST-LAST remove range of subordinate uids
  -w, --add-subgids FIRST-LAST add range of subordinate gids
  -W, --del-subgids FIRST-LAST remove range of subordinate gids
  -Z, --selinux-user SEUSER new SELinux user mapping for the user account
```

### groupadd:

- The groupadd command creates a new group account.

```
ashtami@ashtami-VirtualBox:~$ sudo groupadd newgrp  
[sudo] password for ashtami:
```

```
ashtami@ashtami-VirtualBox:~$ sudo tail /etc/group  
gdm:x:130:  
lxd:x:131:ashtami  
ashtami:x:1000:  
sambashare:x:132:ashtami  
systemd-coredump:x:999:  
Mca:x:1001:  
MCA:x:1002:  
Newgrp:x:1003:  
grp:x:1004:  
newgrp:x:1005:
```

### groups:

- It prints the names of the primary and any supplementary groups for each given username.

```
ashtami@ashtami-VirtualBox:~$ groups ashtami  
ashtami : ashtami adm cdrom sudo dip plugdev lpadmin lxd sambashare
```

### groupmod:

- It is used to modify or change the existing group on Linux system.

```
ashtami@ashtami-VirtualBox:~$ sudo groupmod new MCA
Usage: groupmod [options] GROUP

Options:
  -g, --gid GID            change the group ID to GID
  -h, --help               display this help message and exit
  -n, --new-name NEW_GROUP change the name to NEW_GROUP
  -o, --non-unique         allow to use a duplicate (non-unique) GID
  -p, --password PASSWORD change the password to this (encrypted)
                           PASSWORD
  -R, --root CHROOT_DIR    directory to chroot into
  -P, --prefix PREFIX_DIR  prefix directory where are located the /etc/* files
```

### groupdel:

- It is used to delete a existing group.

```
ashtami@ashtami-VirtualBox:~$ ls
book      Downloads  MCA        newfile.txt  Public  Templates
Desktop   file1      Music      new.txt      q1.txt  Videos
Documents file2.txt  myfile.txt Pictures      q2.txt

ashtami@ashtami-VirtualBox:~$ sudo groupdel myfile.txt
[sudo] password for ashtami:
```

### chmod:

- It is used to change the access mode of a file.

#### **chmod+rwxfilename**

To add permissions.

#### **chmod-rwxdirectoryname**

To remove permissions.

#### **chmod+x filename**

To allow executable permissions.

#### **chmod-wxfilename**

To take out write and executable permissions.

```
ashtami@ashtami-VirtualBox:~/mca$ chmod +rwx my.txt
ashtami@ashtami-VirtualBox:~/mca$ chmod -rwx my.txt
ashtami@ashtami-VirtualBox:~/mca$ chmod +r my.txt
ashtami@ashtami-VirtualBox:~/mca$ chmod -wx my.txt
ashtami@ashtami-VirtualBox:~/mca$ chmod g-rwx my.txt
```

### chown:

- It is used to change the file Owner or group.

```
ashtami@ashtami-VirtualBox:~/mca$ chown ashtami my.txt
ashtami@ashtami-VirtualBox:~/mca$
```

### Id:

- It is used to find out user and group names and numeric ID's (of the current user or any other user in the server).

```
ashtami@ashtami-VirtualBox:~/mca$ id
uid=1000(ashtami) gid=1000(ashtami) groups=1000(ashtami),4(adm),24(cdrom),27(sudo),30(dip),46(plugdev),120(lpadmin),131(lxd),132(sambashare)
```

### Ps:

- It is used to list the currently running processes and their PIDs along with some other information depends on different options.

```
ashtami@ashtami-VirtualBox:~/mca$ ps -a
  PID TTY          TIME CMD
   759 tty2        00:00:10 Xorg
   885 tty2        00:00:00 gnome-session-b
  1638 pts/0        00:00:00 ps
```

### top:

- It is used to show the Linux processes.

```
ashtami@ashtami-VirtualBox:~/mca$ top -u ashtami
```

```
top - 09:49:38 up 16 min, 1 user, load average: 0.16, 0.27, 0.43
Tasks: 165 total, 1 running, 164 sleeping, 0 stopped, 0 zombie
%Cpu(s): 23.8 us, 4.1 sy, 0.0 ni, 72.1 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 1064.4 total, 72.7 free, 565.5 used, 426.2 buff/cache
MiB Swap: 448.5 total, 400.8 free, 47.7 used. 353.0 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1028	ashtami	20	0	3689572	285608	89712	S	13.9	26.2	0:37.38	gnome-+
759	ashtami	20	0	527404	43568	28676	S	8.3	4.0	0:10.94	Xorg
1481	ashtami	20	0	823332	49520	36904	S	4.3	4.5	0:06.41	gnome-+
1644	ashtami	20	0	20496	3776	3204	R	0.7	0.3	0:00.12	top
1176	ashtami	20	0	699344	30476	19772	S	0.3	2.8	0:00.80	gsd-me+
1187	ashtami	20	0	357604	29388	18708	S	0.3	2.7	0:00.74	gsd-xs+
710	ashtami	20	0	19268	8744	7264	S	0.0	0.8	0:01.47	systemd
711	ashtami	20	0	168968	2024	0	S	0.0	0.2	0:00.00	(sd-pa+
748	ashtami	9	-11	1417016	12396	10540	S	0.0	1.1	0:02.05	pulsea+
751	ashtami	39	19	520016	14624	12628	S	0.0	1.3	0:00.47	tracke+
753	ashtami	20	0	248660	5476	4964	S	0.0	0.5	0:00.15	gnome-+
757	ashtami	20	0	172652	6028	5740	S	0.0	0.6	0:00.04	gdm-x-+