Mawlana Bhashani Science and Technology University

Lab-Report

Report No:06

Lab Report Name: Linux command for process

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Submitted to

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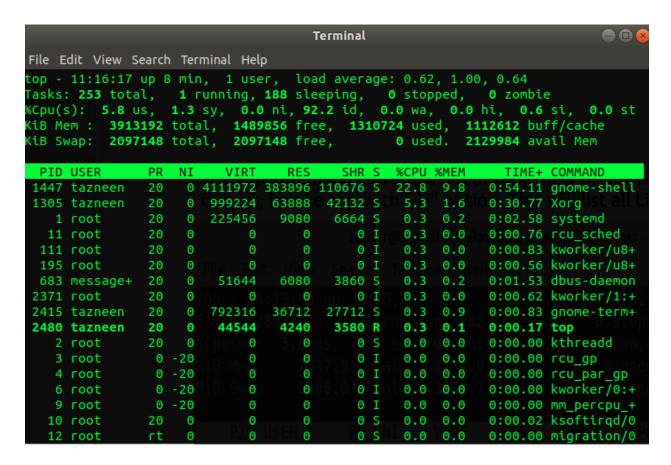
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Experiment no : 06

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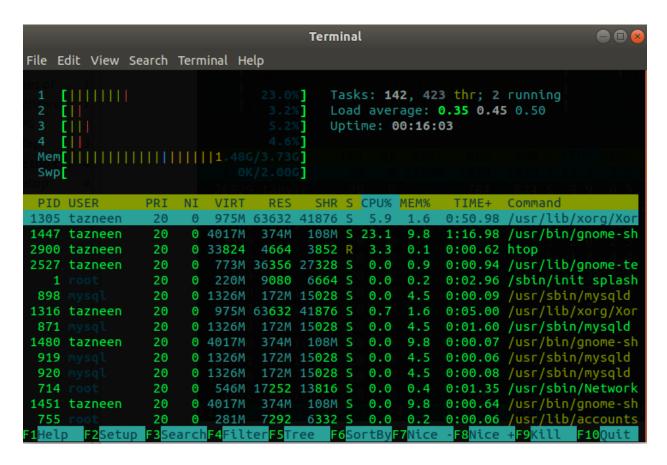
Theory :

The Linux terminal has a number of useful commands that can display running processes, kill them, and change their priority level. This post lists the classic, traditional commands, as well as some more useful, modern ones. Many of the commands here perform a single function and can be combined that's the Unix philosophy of designing programs. Other programs, like htop, provide a friendly interface on top of the commands. We have to executes this commands Top, htop, ps, pstree, kill, pgrep, pkill ,killall, renice, xkill.

Working Process :

1.Top : This command is the traditional way to view your system's resource usage and see the processes that are taking up the most system resources. Top displays a list of processes, with the ones using the most CPU at the top.

```
                                    Terminal                          ⊖ ▣ ✕
File  Edit  View  Search  Terminal  Help
top - 11:16:17 up 8 min,  1 user,  load average: 0.62, 1.00, 0.64
Tasks: 253 total,   1 running, 188 sleeping,   0 stopped,   0 zombie
%Cpu(s):  5.8 us,  1.3 sy,  0.0 ni, 92.2 id,  0.0 wa,  0.0 hi,  0.6 si,  0.0 st
KiB Mem :  3913192 total,  1489856 free,  1310724 used,  1112612 buff/cache
KiB Swap:  2097148 total,  2097148 free,        0 used.  2129984 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU %MEM     TIME+ COMMAND
 1447 tazneen   20   0 4111972 383896 110676 S  22.8  9.8   0:54.11 gnome-shell
 1305 tazneen   20   0  999224  63888  42132 S   5.3  1.6   0:30.77 Xorg
    1 root      20   0  225456   9080   6664 S   0.3  0.2   0:02.58 systemd
   11 root      20   0       0      0      0 I   0.3  0.0   0:00.76 rcu_sched
  111 root      20   0       0      0      0 I   0.3  0.0   0:00.83 kworker/u8+
  195 root      20   0       0      0      0 I   0.3  0.0   0:00.56 kworker/u8+
  683 message+  20   0   51644   6080   3860 S   0.3  0.2   0:01.53 dbus-daemon
 2371 root      20   0       0      0      0 I   0.3  0.0   0:00.62 kworker/1:+
 2415 tazneen   20   0  792316  36712  27712 S   0.3  0.9   0:00.83 gnome-term+
 2480 tazneen   20   0   44544   4240   3580 R   0.3  0.1   0:00.17 top
    2 root      20   0       0      0      0 S   0.0  0.0   0:00.00 kthreadd
    3 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 rcu_gp
    4 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 rcu_par_gp
    6 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kworker/0:+
    9 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 mm_percpu_+
   10 root      20   0       0      0      0 S   0.0  0.0   0:00.02 ksoftirqd/0
   12 root      rt   0       0      0      0 S   0.0  0.0   0:00.00 migration/0
```

2.htop: The htop command is an improved top. It's not installed by default on most Linux distributions — here's the command you'll need to install it on Ubuntu:

3.ps : The ps command lists running processes.

4.pstree : The pstree command is another way of visualizing processes. It displays them in tree format. So, for example, your X server and graphical environment would appear under the display manager that spawned them.

```
File  Edit  View  Search  Terminal  Help
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ pstree
systemd─┬─ModemManager───2*[{ModemManager}]
        ├─NetworkManager─┬─dhclient
        │                └─3*[{NetworkManager}]
        ├─accounts-daemon───2*[{accounts-daemon}]
        ├─acpid
        ├─avahi-daemon───avahi-daemon
        ├─bluetoothd
        ├─boltd───2*[{boltd}]
        ├─colord───2*[{colord}]
        ├─cron
        ├─cups-browsed───2*[{cups-browsed}]
        ├─cupsd
        ├─dbus-daemon
        ├─fwupd───4*[{fwupd}]
        ├─gdm3─┬─gdm-session-wor─┬─gdm-wayland-ses─┬─gnome-session-b─┬─gnome-sh+
        │                                          │                 ├─gsd-a11y+
        │                                          │                 ├─gsd-clip+
        │                                          │                 ├─gsd-colo+
        │                                          │                 ├─gsd-date+
        │                                          │                 ├─gsd-hous+
        │                                          │                 ├─gsd-keyb+
        │                                          │                 ├─gsd-medi+
        │                                          │                 ├─gsd-mous+
        │                                          │                 ├─gsd-powe+
        │                                          │                 ├─gsd-prin+
        │                                          │                 ├─gsd-rfki+
        │                                          │                 ├─gsd-scre+
        │                                          │                 ├─gsd-shar+
        │                                          │                 ├─gsd-smar+
        │                                          │                 ├─gsd-soun+
        │                                          │                 ├─gsd-waco+
        │                                          │                 ├─gsd-xset+
        │                                          │                 └─3*[{gnom+
        │                                          └─2*[{gdm-wayland-ses}]
```

5. kill : The kill command can kill a process, given its process ID. You can get this information from the ps -A, top or pgrep commands.

kill PID


```
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ kill evince
bash: kill: evince: arguments must be process or job IDs
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ ps -A | grep evince
 3371 ?        00:00:18 evince
 3439 ?        00:00:27 evince
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ sudo kill 3371
[sudo] password for tazneen:
tazneen@tazneen-HP-Laptop-14-bs0xx:~$ █
```

6. pkill & killall : The pkill and killall commands can kill a process.

7. pgrep : Given a search term,pgrep returns the process IDs that match it.

8. renice : The renice command changes the nice value of an already running process. The nice value determines what priority the process runs with. A value of -15 is very high priority, while a value of 15 is very low priority. A value of 0 is the default priority.

9. .xkill : The xkill command is a way of easily killing graphical programs. Run it and your cursor will turn into an x sign. Click a program's window to kill that program. If you don't want to kill a program, you can back out of xkill by rightclicking instead.

Discussion: We have implemented some Linux command for process in this lab. We can easily executes our work and do our work firster by using this terminal and very easy commands.