Mawlana Bhashani Science and Technology University

Lab-Report

Report No:06

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Experiment No: 06

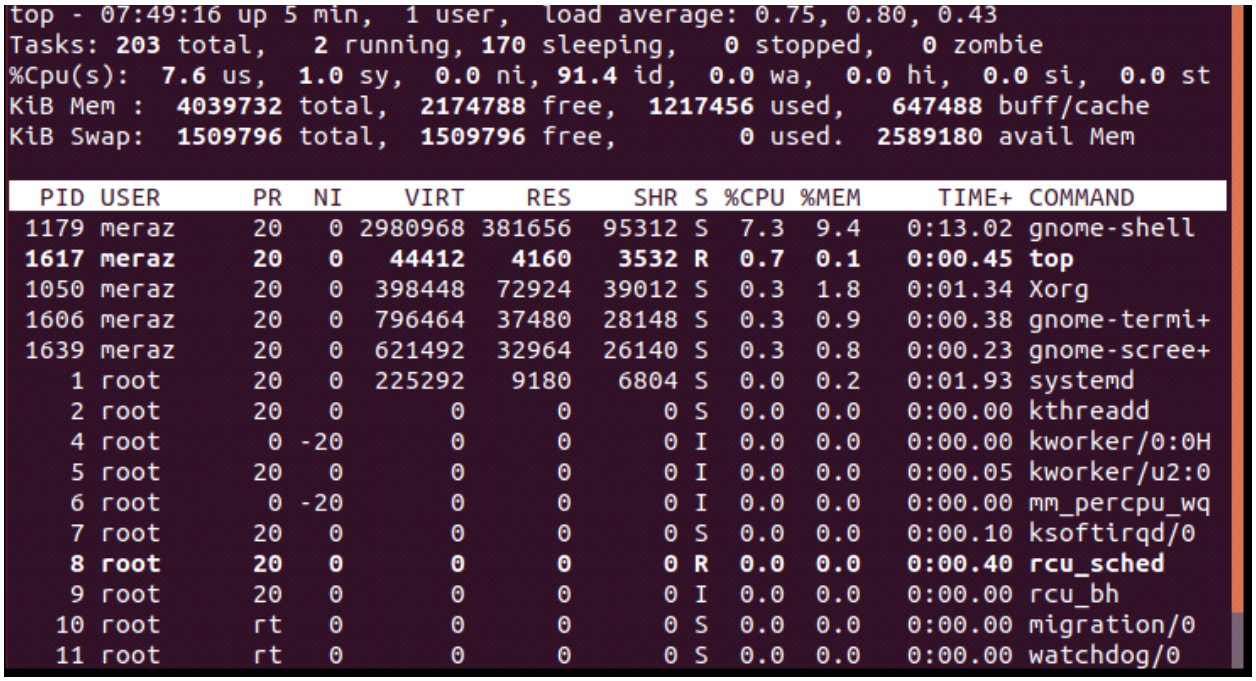
Experiment Name: **Linux Command for process**

Aim and Objective :

To understand and handle processes in Linux . How process work in Linux , how to manipulate and process and see all the running process , to store them in a local file and thus have the basic understanding of the whole thing

Commands :

ps aux :This command is used to see all the running process in Linux . Every process has a PID number or process id which uniquely identifies the process , the CPU and memory usages are also shown along with the start and running time .



kill :This command is used to terminate running a process , hear the PID is put into use the syntax for killing a process is " kill PID "

xkill:This is a GUI version of kill it does not require a PID to terminate a process , a process is terminated in this process by putting the mouse cursor over the process the left button down .

killall :This kill command does not require a PID but a process name has to be giver as it kills by name , this command is used when a session is to be killed.

```
meraz@meraz-VirtualBox:~$ ps aux
USER       PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.2 225292  9180 ?        Ss   07:43   0:02 /sbin/init spla
root         2  0.0  0.0      0     0 ?        S    07:43   0:00 [kthreadd]
root         4  0.0  0.0      0     0 ?        I<   07:43   0:00 [kworker/0:0H]
root         5  0.0  0.0      0     0 ?        I    07:43   0:00 [kworker/u2:0]
root         6  0.0  0.0      0     0 ?        I<   07:43   0:00 [mm_percpu_wq]
root         7  0.0  0.0      0     0 ?        S    07:43   0:00 [ksoftirqd/0]
root         8  0.0  0.0      0     0 ?        I    07:43   0:00 [rcu_sched]
root         9  0.0  0.0      0     0 ?        I    07:43   0:00 [rcu_bh]
root        10  0.0  0.0      0     0 ?        S    07:43   0:00 [migration/0]
root        11  0.0  0.0      0     0 ?        S    07:43   0:00 [watchdog/0]
root        12  0.0  0.0      0     0 ?        S    07:43   0:00 [cpuhp/0]
root        13  0.0  0.0      0     0 ?        S    07:43   0:00 [kdevtmpfs]
root        14  0.0  0.0      0     0 ?        I<   07:43   0:00 [netns]
```

tee and pipes:

the tee command is used when it is both necessary to show the data in terminal and save the data to a file and the parameter needed to tee comes from pipes , it is represented by “|” this takes the result of a command and sends it to another , in this case it takes from ps aux and gives to tee

```
meraz@meraz-VirtualBox:~$ pstree
systemd─┬─ModemManager───2*[{ModemManager}]
        ├─NetworkManager─┬─dhclient
        │                └─2*[{NetworkManager}]
        ├─accounts-daemon───2*[{accounts-daemon}]
        ├─acpid
        ├─avahi-daemon───avahi-daemon
        ├─boltd───2*[{boltd}]
        ├─colord───2*[{colord}]
        ├─cron
        ├─cups-browsed───2*[{cups-browsed}]
        ├─cupsd───dbus
        ├─dbus-daemon
        ├─fwupd───4*[{fwupd}]
        ├─gdm3─┬─gdm-session-wor─┬─gdm-wayland-ses─┬─gnome-session-b─┬─gnome-sh+
```


├─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}]
└─2*[{gdm-session-wor}]
├─gdm-session-wor─┬─gdm-x-session─┬─Xorg───{Xorg}


└─2*[{gdm-wayland-ses}]
└─2*[{gdm-session-wor}]
├─gdm-session-wor─┬─gdm-x-session─┬─Xorg───{Xorg}
└─gnome-session-b─┬─deja-dup-m+
├─gnome-shel+
├─gnome-soft+
├─gsd-a11y-s+
├─gsd-clipbo+
├─gsd-color─+
+
├─gsd-dateti+
├─gsd-disk-u+
├─gsd-housek+
├─gsd-keyboa+
├─gsd-media-+
├─gsd-mouse─+
+
├─gsd-power─+
+
├─gsd-print-+
├─gsd-rfkill+

```
        └─2*[{gdm3}]
      ├─gnome-keyring-d───3*[{gnome-keyring-d}]
      ├─gsd-printer───2*[{gsd-printer}]
      ├─2*[ibus-x11───2*[{ibus-x11}]]
      ├─2*[kerneloops]
      ├─mysqld───26*[{mysqld}]
      ├─networkd-dispat───{networkd-dispat}
      ├─packagekitd───2*[{packagekitd}]
      ├─polkitd───2*[{polkitd}]
      ├─pulseaudio───2*[{pulseaudio}]
      ├─rsyslogd───3*[{rsyslogd}]
      ├─rtkit-daemon───2*[{rtkit-daemon}]
      ├─snapd───17*[{snapd}]
      ├─systemd─┬─(sd-pam)
      │         ├─at-spi-bus-laun─┬─dbus-daemon
      │         │                 └─3*[{at-spi-bus-laun}]
      │         ├─at-spi2-registr───2*[{at-spi2-registr}]
      │         ├─dbus-daemon
      │         ├─ibus-portal───2*[{ibus-portal}]
      │         └─pulseaudio───2*[{pulseaudio}]
```

head data was saved in a file named three.txt file we can see the data using nano.

```
  PID USER      PRI  NI  VIRT   RES   SHR S CPU% MEM%   TIME+  Command
 1179 meraz      20   0 2930M  397M 95544 S 10.7 10.1  1:30.36 /usr/bin/gnome-sh
 2323 meraz      20   0  7916  4092  3216 R  3.3  0.1  0:01.41 /snap/htop/1279/u
 1050 meraz      20   0  398M 82188 39020 S  1.3  2.0  0:23.29 /usr/lib/xorg/Xor
  837 mysql      20   0 1136M  173M 15568 S  1.3  4.4  0:00.28 /usr/sbin/mysqld
 1056 meraz      20   0  398M 82188 39020 S  0.0  2.0  0:01.29 /usr/lib/xorg/Xor
  776 mysql      20   0 1136M  173M 15568 S  0.0  4.4  0:03.41 /usr/sbin/mysqld
 1606 meraz      20   0  778M 37996 28156 S  0.0  0.9  0:10.30 /usr/lib/gnome-te
 1735 meraz      20   0  193M  6008  5412 S  0.0  0.1  0:00.01 /usr/lib/gvfs/gvf
  822 mysql      20   0 1136M  173M 15568 S  0.0  4.4  0:00.25 /usr/sbin/mysqld
  823 mysql      20   0 1136M  173M 15568 S  0.0  4.4  0:00.16 /usr/sbin/mysqld
 2370 meraz      20   0  606M 33332 26512 S  0.0  0.8  0:00.21 /usr/bin/gnome-sc
 1206 meraz      20   0 2930M  397M 95544 S  0.0 10.1  0:00.03 /usr/bin/gnome-sh
 1433 meraz      20   0  193M  6444  5796 S  0.0  0.2  0:00.13 /usr/lib/ibus/ibu
 1305 meraz      20   0  476M 22144 16984 S  0.0  0.5  0:00.12 /usr/lib/gnome-se
 1402 meraz      20   0 1102M  153M 38444 S  0.0  3.9  0:04.00 /usr/bin/gnome-so
 1563 meraz      20   0  574M 27028 21816 S  0.0  0.7  0:00.24 update-notifier
 1211 meraz      20   0  346M  8132  6640 S  0.0  0.2  0:00.71 ibus-daemon --xim
F1Help  F2Setup  F3Search F4Filter F5Tree  F6SortByF7Nice -  F8Nice +  F9Kill   F
```

Conclusion :

In this experiment we had a basic grasp of process in Linux operating system , how to kill them how to save there data in memory we also learnt about pipes.We learnt several methos to kill a process in linux both in GUI and command line , by using name and PID .