



Mawlana Bhashani Science And Technology University

Lab-Report

Lab Report No: 04

Lab Report Name: Process Handling in Linux .

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Experiment Name : Process Handling in Linux

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 , here 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 given as it kills

```
sharif@sharif-VirtualBox: ~  
File Edit View Search Terminal Help  
sharif@sharif-VirtualBox:~$ ps aux  
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND  
root         1   0.2   0.4 159916   9232 ?        Ss   15:46   0:07 /sbin/init spl  
root         2   0.0   0.0      0       0 ?        S    15:46   0:00 [kthreadd]  
root         3   0.0   0.0      0       0 ?        I<   15:46   0:00 [rcu_gp]  
root         4   0.0   0.0      0       0 ?        I<   15:46   0:00 [rcu_par_gp]  
root         6   0.0   0.0      0       0 ?        I<   15:46   0:00 [kworker/0:0H-  
root         8   0.0   0.0      0       0 ?        I<   15:46   0:00 [mm_percpu_wq]  
root         9   0.0   0.0      0       0 ?        S    15:46   0:00 [ksoftirqd/0]  
root        10   0.0   0.0      0       0 ?        I    15:46   0:01 [rcu_sched]  
root        11   0.0   0.0      0       0 ?        S    15:46   0:00 [migration/0]  
root        12   0.0   0.0      0       0 ?        S    15:46   0:00 [idle_inject/0]  
root        14   0.0   0.0      0       0 ?        S    15:46   0:00 [cpuhp/0]  
root        15   0.0   0.0      0       0 ?        S    15:46   0:00 [cpuhp/1]  
root        16   0.0   0.0      0       0 ?        S    15:46   0:00 [idle_inject/1]  
root        17   0.0   0.0      0       0 ?        S    15:46   0:00 [ksoftirqd/1]
```

by name , this command is used when a session is to be killed

```

shariful 1557 0.2 3.1 1069188 62848 ? Sl 15:50 0:01 /usr/lib/evolu
shariful 1567 0.0 1.2 735304 24504 ? Ssl 15:51 0:00 /usr/lib/evolu
shariful 1584 0.0 1.4 876832 27836 ? Sl 15:51 0:00 /usr/lib/evolu
shariful 1601 0.0 0.3 204816 5964 ? Ssl 15:51 0:00 /usr/lib/gvfs/
shariful 1617 1.2 2.5 926688 50816 ? Sl 15:51 0:10 /usr/bin/nauti
shariful 1633 0.0 1.3 678160 26608 tty2 Sl+ 15:51 0:00 update-notifie
shariful 1635 2.5 7.8 1318000 154588 tty2 Sll+ 15:51 0:20 /usr/bin/gnome
root 1661 0.1 1.4 569448 28892 ? Ssl 15:52 0:01 /usr/lib/fwupd
shariful 1734 0.0 1.6 863720 32816 tty2 Sl+ 15:52 0:00 /usr/lib/deja-
shariful 1757 0.0 0.3 152888 6196 ? Sl 15:53 0:00 /usr/lib/libre
shariful 1777 6.0 10.6 1185396 209616 ? Sl 15:53 0:44 /usr/lib/libre
shariful 1862 0.8 1.9 803400 37956 ? Rsl 15:56 0:04 /usr/lib/gnome
shariful 1871 0.0 0.2 29888 4804 pts/0 Ss+ 15:56 0:00 bash
root 1888 0.0 0.0 0 0 ? I 15:59 0:00 [kworker/u4:0-
root 1929 0.0 0.0 0 0 ? I 16:02 0:00 [kworker/1:0]
root 1979 0.0 0.0 0 0 ? I 16:04 0:00 [kworker/0:0]
shariful 1982 0.4 0.2 29892 4856 pts/1 Ss 16:04 0:00 bash
shariful 2026 0.0 0.1 47100 3716 pts/1 R+ 16:05 0:00 ps aux
shariful@shariful-VirtualBox:~/Desktop$ kill pid 7351
bash: kill: pid: arguments must be process or job IDs
bash: kill: (7351) - No such process
shariful@shariful-VirtualBox:~/Desktop$ █

```

> and >> redirectors :

Redirectors are used when the result needs to be stored in a file . ‘>’ is used when the previous data in the file is not to be kept ,nano was used hear to see what is in a file .

```
shariful@shariful-VirtualBox: ~/Desktop
File Edit View Search Terminal Help
GNU nano 2.9.3 two.txt

[ New File ]
^G Get Help      ^O Write Out    ^W Where Is     ^K Cut Text     ^J Justify
^X Exit          ^R Read File    ^\ Replace      ^U Uncut Text   ^T To Spell
```

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

```

shariful 1522 0.0 3.4 894656 67232 ? Ssl 15:50 0:02 /usr/lib/evolu
shariful 1542 0.0 0.4 221260 8268 tty2 Sl 15:50 0:00 /usr/lib/ibus/
shariful 1557 0.0 3.1 1069188 62848 ? Sl 15:50 0:01 /usr/lib/evolu
shariful 1567 0.0 1.2 735304 24504 ? Ssl 15:51 0:00 /usr/lib/evolu
shariful 1584 0.0 1.4 876832 27836 ? Sl 15:51 0:00 /usr/lib/evolu
shariful 1601 0.0 0.3 204816 5964 ? Ssl 15:51 0:00 /usr/lib/gvfs/
shariful 1617 0.6 2.5 926584 51096 ? Sl 15:51 0:13 /usr/bin/nauti
shariful 1633 0.0 1.3 678160 26608 tty2 Sl+ 15:51 0:00 update-notifie
shariful 1635 0.9 7.8 1318000 154588 tty2 Sll+ 15:51 0:20 /usr/bin/gnome
root 1661 0.0 1.4 569448 28892 ? Ssl 15:52 0:01 /usr/lib/fwupd
shariful 1734 0.0 1.6 863720 32816 tty2 Sl+ 15:52 0:00 /usr/lib/deja-
shariful 1757 0.0 0.3 152888 6196 ? Sl 15:53 0:00 /usr/lib/libre
shariful 1777 3.1 10.6 1185884 210752 ? Sl 15:53 1:05 /usr/lib/libre
shariful 1862 0.7 2.0 806528 39548 ? Rsl 15:56 0:13 /usr/lib/gnome
shariful 1871 0.0 0.2 29888 4804 pts/0 Ss+ 15:56 0:00 bash
root 1929 0.0 0.0 0 0 ? I 16:02 0:00 [kworker/1:0]
root 1979 0.0 0.0 0 0 ? I 16:04 0:00 [kworker/0:0]
root 2049 0.0 0.0 0 0 ? I 16:10 0:00 [kworker/u4:2-
root 2087 0.0 0.0 0 0 ? R 16:23 0:00 [kworker/u4:0-
shariful 2109 0.2 0.2 29892 5032 pts/1 Ss 16:26 0:00 bash
shariful 2132 0.0 0.1 47100 3660 pts/1 R+ 16:27 0:00 ps aux
shariful@shariful-VirtualBox:~/Desktop$ █

```

conclusion:

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