

OSG202 LAB 03

ASSIGNMENT REPORT

System Attributes,
Using Word Processor

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1. PROCESS MANAGEMENT

1.1. View process status (ps)

Syntax: ps [-OPTIONS]...[

Description: report a snapshot of the current processes.

Example:

```
root@fedora:~  
[root@fedora ~]# ps -a  
  PID TTY          TIME CMD  
 1178 tty2        00:00:00 gnome-session-b  
 4651 pts/0        00:00:00 su  
 4664 pts/0        00:00:00 bash  
 4873 pts/0        00:00:00 ps  
[root@fedora ~]# ps  
  PID TTY          TIME CMD  
 4651 pts/0        00:00:00 su  
 4664 pts/0        00:00:00 bash  
 4874 pts/0        00:00:00 ps  
[root@fedora ~]#
```

1.2. Stop a process

Syntax: kill -9 PID

Description: terminate a process

Example:

```
dangloc@fedora:~  
[root@fedora ~]# ps -a  
  PID TTY          TIME CMD  
 1178 tty2        00:00:00 gnome-session-b  
 4651 pts/0        00:00:00 su  
 4664 pts/0        00:00:00 bash  
 4873 pts/0        00:00:00 ps  
[root@fedora ~]# ps  
  PID TTY          TIME CMD  
 4651 pts/0        00:00:00 su  
 4664 pts/0        00:00:00 bash  
 4874 pts/0        00:00:00 ps  
[root@fedora ~]#  
[root@fedora ~]# kill -9 4651  
[root@fedora ~]# Killed  
[dangloc@fedora ~]$  
logout
```

After killing the process with PID 4651, the status was change from user root (#) to normal user(\$)

2. SYSTEM COMMANDS

1.1. vmstat

Syntax: `vmstat [OPTIONS] [DELAY [COUNT]]`

Description: report virtual memory statistics.

Example:

```
root@fedora:~  
[root@fedora ~]# vmstat  
procs -----memory----- --swap-- --io-- --system-- -----cpu-----  
r b swpd free buff cache si so bi bo in cs us sy id wa st  
1 0 366336 88856 192 507888 26 126 498 67 142 96 1 3 95 0 0  
[root@fedora ~]# vmstat -a  
procs -----memory----- --swap-- --io-- --system-- -----cpu-----  
r b swpd free inact active si so bi bo in cs us sy id wa st  
0 0 366336 88856 874452 356208 26 125 494 66 141 95 1 3 96 0 0  
[root@fedora ~]#
```

System performance monitoring command that provides data on processes, memory, paging, block IO, disk, and CPU scheduling

1.2. pstree -np

Syntax: `pstree [OPTIONS] [USER or PID]`

Description: display a tree of processes

Example:

```
root@fedora:~  
[root@fedora ~]# pstree -np  
systemd(1)  
├── systemd-journal(641)  
│   └── vmware-vmblock-(656) ── {vmware-vmblock-}(657)  
│                               └── {vmware-vmblock-}(658)  
├── systemd-udev(659)  
├── systemd-oomd(756)  
├── systemd-resolve(757)  
├── auditd(760) ── {auditd}(761)  
├── ModemManager(783) ── {ModemManager}(799)  
│                       └── {ModemManager}(800)  
│                           └── {ModemManager}(831)  
├── avahi-daemon(784) ── avahi-daemon(813)  
├── firewalld(785) ── {firewalld}(1024)  
├── low-memory-moni(787) ── {low-memory-moni}(804)  
│                           └── {low-memory-moni}(833)  
├── mcelog(790)  
├── rtkit-daemon(792) ── {rtkit-daemon}(832)  
│                       └── {rtkit-daemon}(835)  
├── sssd(794) ── sssd_be(846)  
│               └── sssd_nss(889)  
├── switcheroo-cont(795) ── {switcheroo-cont}(806)  
│                           └── {switcheroo-cont}(834)  
├── systemd-homed(796)  
├── systemd-machine(797)  
├── udisksd(798) ── {udisksd}(811)  
│                 ├── {udisksd}(836)  
│                 ├── {udisksd}(902)  
│                 ├── {udisksd}(906)  
├── upowerd(803) ── {upowerd}(820)  
│                 └── {upowerd}(837)  
├── VGAuthService(808)  
└── vmttoolsd(809) ── {vmttoolsd}(840)  
                    └── {vmttoolsd}(844)
```

Displaying the running processes as a tree, which is a more convenient manner of displaying the process hierarchy and improves the output's aesthetic appeal.

1.3. pgrep

Syntax: `pgrep [OPTION] PATTERN`

Description: Looks through the currently running processes and lists the process following name, properties,...

Example:

```
root@fedora:~  
[root@fedora ~]# pgrep -l firefox  
1887 firefox  
[root@fedora ~]# pgrep -l sh  
260 zswap-shrink  
514 btrfs-flush_del  
886 kworker/u256:10-flush-btrfs-1  
1261 gnome-shell  
1324 gnome-shell-cal  
1516 gsd-sharing  
2264 gvfsd-trash  
2363 bash  
2619 bash  
[root@fedora ~]#
```

Displaying the process IDs that match the selection criteria to stdout from the currently executing processes..

1.4. pkill

Syntax: `pkill [OPTIONS] PATTERN`

Description: send the specified signal (by default SIGTERM) to each process instead of listing them on stdout

Example:

```
root@fedora:~  
[root@fedora ~]# pgrep -l firefox  
3117 firefox  
[root@fedora ~]# pkill firefox  
[root@fedora ~]# pgrep -l firefox  
[root@fedora ~]#
```

Firefox is processing with PID 3177, after use pkill command, there was no firefox process with 3177 PID.

Use the [kill -l](#) command to list all available signals.

The most commonly used signals are:

- 1 (HUP): to reload a process.
- 9 (KILL): to kill a process.
- 15 (TERM): to gracefully stop a process.

1.5. uptime

Syntax: `uptime [OPTIONS]`

Description: Tell how long the system has been running.

Example:

```
root@fedora:~  
[root@fedora ~]# uptime -p  
up 39 minutes  
[root@fedora ~]# uptime  
08:27:42 up 39 min,  1 user,  load average: 0.02, 0.04, 0.08  
[root@fedora ~]#
```

The following information displayed in a single

1.6. free

Syntax: `free [OPTIONS]`

Description: Display amount of free and used memory in the system

Example:

```
root@fedora:~  
[root@fedora ~]# free  
              total        used        free      shared  buff/cache   available  
Mem:        1992120      1118720       326760         8436       546640       706120  
Swap:        1991676       345088      1646588  
[root@fedora ~]# free -w  
              total        used        free      shared    buffers       cache   available  
Mem:        1992120      1118972       326508         8436         104       546536       705868  
Swap:        1991676       345088      1646588  
[root@fedora ~]#
```

Showing how much physical and swap memory is free and utilised in the system, as well as the kernel's buffers and caches.

3. Editor program VIM

The file **text2.txt** in directory **lab02DangLoc** has the content of “dang loc” in initial.

```
root@fedora:~/home/dangloc/lab02DangLoc
[root@fedora ~]# cd /home/dangloc/lab02DangLoc
[root@fedora lab02DangLoc]# ls
data data2 run_mc.sh text2.txt text.txt
[root@fedora lab02DangLoc]# cat text2.txt
dang loc
[root@fedora lab02DangLoc]# vi text2.txt
E1187: Failed to source defaults.vim
Press ENTER or type command to continue
```

Use editor program **vi** to edit the contents in the text2.txt

[illegible]

The contents of the **text2.txt** was changed.

```
[root@fedora lab02DangLoc]# vi text2.txt
E1187: Failed to source defaults.vim
Press ENTER or type command to continue
[root@fedora lab02DangLoc]# cat text2.txt
Duong may rong thenh thang cu bo
No tang bong trang trang vo tay reo
Thanh thoi tho tui ruou bau
-----
Dang Loc - SE160199
-----
[root@fedora lab02DangLoc]#
```

Thank you!