

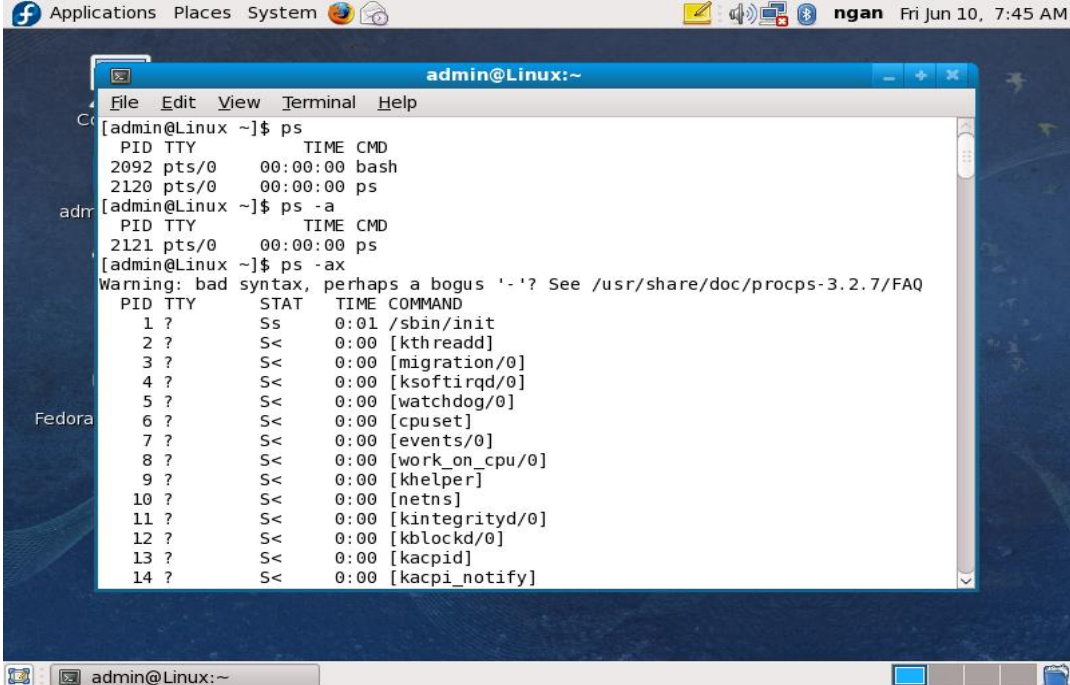
Name: Trần Thị Kim Ngân – SE161483

Class: SE1743

## Lab 3 – OSG202

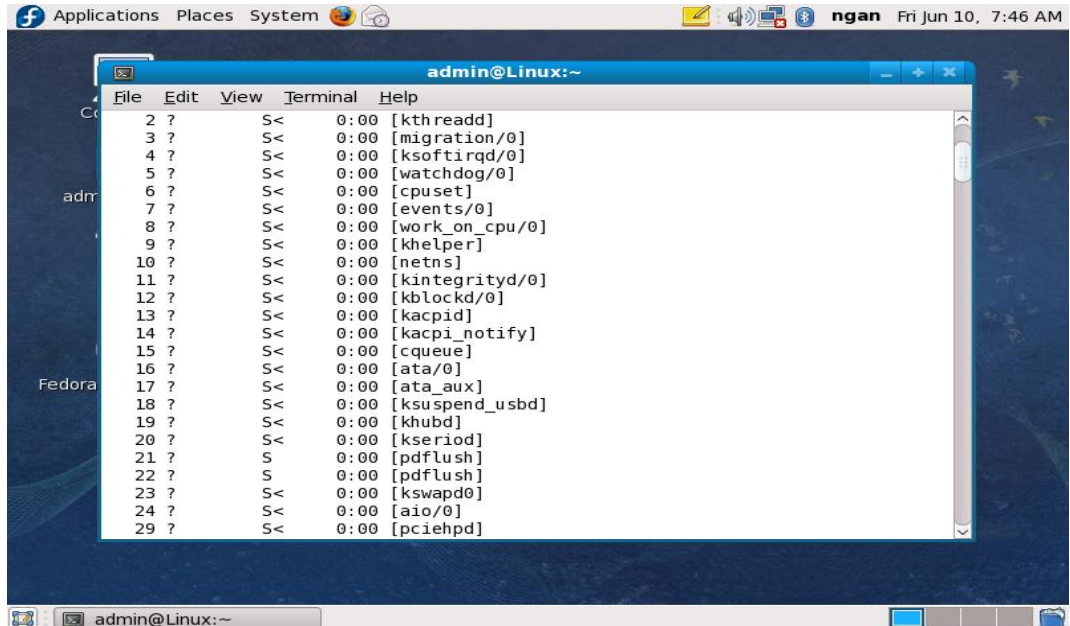
### Process Management

ps



The screenshot shows a terminal window titled 'admin@Linux:~' with a menu bar (File, Edit, View, Terminal, Help). The user has executed the following commands:

```
[admin@Linux ~]$ ps
  PID TTY          TIME CMD
 2092 pts/0    00:00:00 bash
 2120 pts/0    00:00:00 ps
[admin@Linux ~]$ ps -a
  PID TTY          TIME CMD
 2121 pts/0    00:00:00 ps
[admin@Linux ~]$ ps -ax
Warning: bad syntax, perhaps a bogus '- '? See /usr/share/doc/procps-3.2.7/FAQ
  PID TTY     STAT       TIME COMMAND
    1 ?        Ss          0:01 /sbin/init
    2 ?        S<          0:00 [kthreadd]
    3 ?        S<          0:00 [migration/0]
    4 ?        S<          0:00 [ksoftirqd/0]
    5 ?        S<          0:00 [watchdog/0]
    6 ?        S<          0:00 [cpuset]
    7 ?        S<          0:00 [events/0]
    8 ?        S<          0:00 [work_on_cpu/0]
    9 ?        S<          0:00 [khelper]
   10 ?        S<          0:00 [netns]
   11 ?        S<          0:00 [kintegrityd/0]
   12 ?        S<          0:00 [kblockd/0]
   13 ?        S<          0:00 [kacpid]
   14 ?        S<          0:00 [kacpi_notify]
```



The screenshot shows the same terminal window with the 'ps -ax' command executed, displaying a warning and a list of system processes:

```
Warning: bad syntax, perhaps a bogus '- '? See /usr/share/doc/procps-3.2.7/FAQ
  PID TTY     STAT       TIME COMMAND
    1 ?        Ss          0:01 /sbin/init
    2 ?        S<          0:00 [kthreadd]
    3 ?        S<          0:00 [migration/0]
    4 ?        S<          0:00 [ksoftirqd/0]
    5 ?        S<          0:00 [watchdog/0]
    6 ?        S<          0:00 [cpuset]
    7 ?        S<          0:00 [events/0]
    8 ?        S<          0:00 [work_on_cpu/0]
    9 ?        S<          0:00 [khelper]
   10 ?        S<          0:00 [netns]
   11 ?        S<          0:00 [kintegrityd/0]
   12 ?        S<          0:00 [kblockd/0]
   13 ?        S<          0:00 [kacpid]
   14 ?        S<          0:00 [kacpi_notify]
   15 ?        S<          0:00 [cqueue]
   16 ?        S<          0:00 [ata/0]
   17 ?        S<          0:00 [ata_aux]
   18 ?        S<          0:00 [ksuspend_usbd]
   19 ?        S<          0:00 [khubd]
   20 ?        S<          0:00 [kseriod]
   21 ?        S          0:00 [pdflush]
   22 ?        S          0:00 [pdflush]
   23 ?        S<          0:00 [kswapd0]
   24 ?        S<          0:00 [aio/0]
   29 ?        S<          0:00 [pciehpd]
```

Applications Places System ngan Fri Jun 10, 7:46 AM

```
admin@Linux:~  
File Edit View Terminal Help  
31 ? S< 0:00 [scsi_eh_1]  
32 ? S< 0:00 [kpsmoused]  
33 ? S< 0:00 [kstripped]  
34 ? S< 0:00 [ksnapd]  
54 ? S< 0:00 [mpt_poll_0]  
55 ? S< 0:00 [scsi_eh_2]  
61 ? S< 0:00 [kjournald]  
67 ? S< 0:00 [kauditd]  
115 ? S<s 0:00 /sbin/udev -d  
893 ? S< 0:00 [bluetooth]  
930 ? S< 0:00 [kmpathd/0]  
931 ? S< 0:00 [kmpath_handlerd]  
1143 ? S<sl 0:00 auditd  
1145 ? S<sl 0:00 /sbin/audispd  
1146 ? S< 0:00 /usr/sbin/sedispd  
1170 ? Sl 0:00 rsyslogd -c 3  
1188 ? Ss 0:00 rpcbind  
1201 ? Ss 0:00 rpc.statd  
1230 ? S< 0:00 [rpciod/0]  
1238 ? Ss 0:00 rpc.idmapd  
1251 ? Ssl 0:00 dbus-daemon --system  
1261 ? Ss 0:00 avahi-daemon: running [Linux.local]  
1262 ? Ss 0:00 avahi-daemon: chroot helper  
1271 ? Ss 0:00 cupsd
```

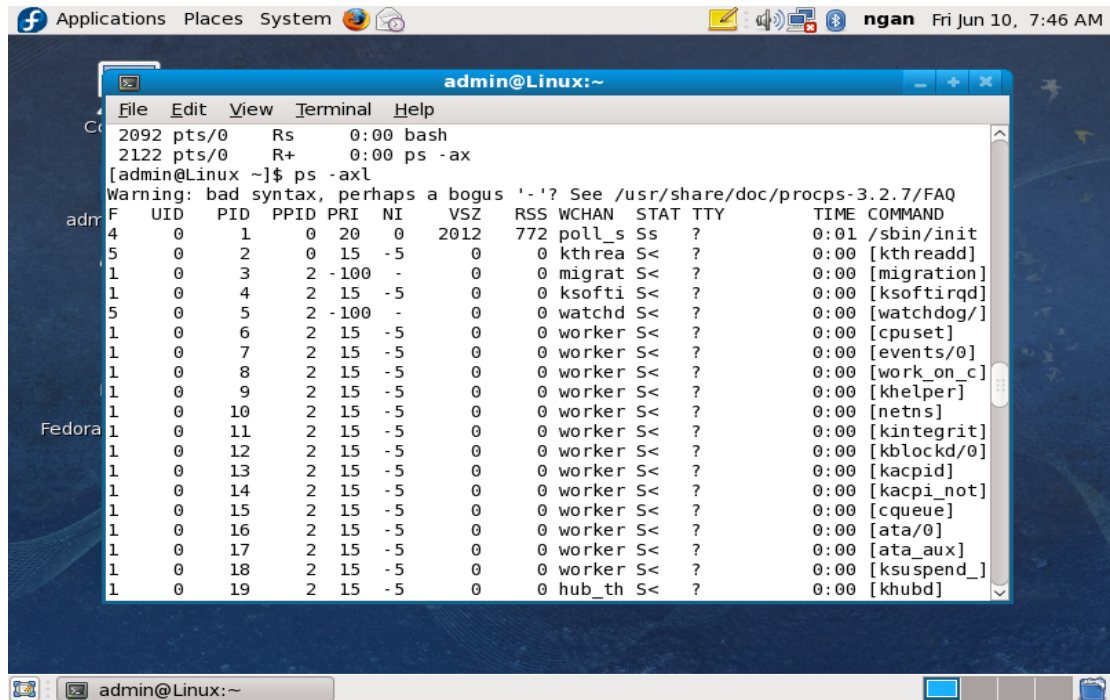
admin@Linux:~

Applications Places System ngan Fri Jun 10, 7:46 AM

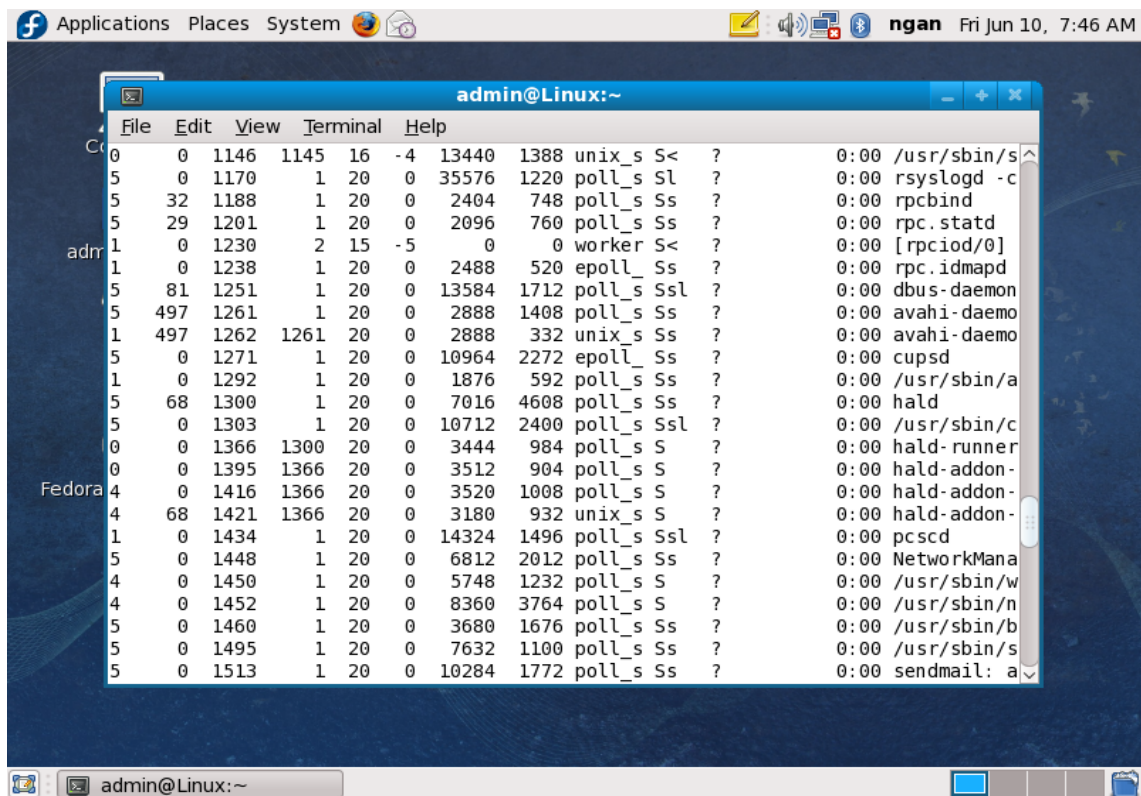
```
admin@Linux:~  
File Edit View Terminal Help  
1292 ? Ss 0:00 /usr/sbin/acpid  
1300 ? Ss 0:00 hald  
1303 ? Ssl 0:00 /usr/sbin/console-kit-daemon  
1366 ? S 0:00 hald-runner  
1395 ? S 0:00 hald-addon-input: Listening on /dev/input/event0 /dev  
1416 ? S 0:00 hald-addon-storage: polling /dev/sr0 (every 2 sec)  
1421 ? S 0:00 hald-addon-acpi: listening on acpid socket /var/run/a  
1434 ? Ssl 0:00 pcscd  
1448 ? Ss 0:00 NetworkManager --pid-file=/var/run/NetworkManager/Net  
1450 ? S 0:00 /usr/sbin/wpa_supplicant -c /etc/wpa_supplicant/wpa_s  
1452 ? S 0:00 /usr/sbin/nm-system-settings --config /etc/NetworkMan  
1460 ? Ss 0:00 /usr/sbin/bluetoothd  
1495 ? Ss 0:00 /usr/sbin/sshd  
1513 ? Ss 0:00 sendmail: accepting connections  
1516 ? S< 0:00 [krfcommnd]  
1524 ? Ss 0:00 sendmail: Queue runner@01:00:00 for /var/spool/client  
1534 ? Ss 0:00 /usr/sbin/gpm -m /dev/input/mice -t exps2  
1545 ? Ss 0:00 crond  
1556 ? Ss 0:00 /usr/sbin/atd  
1564 ? Ss 0:00 /usr/sbin/gdm-binary -nodaemon  
1566 tty4 Ss+ 0:00 /sbin/mingetty tty4  
1568 tty5 Ss+ 0:00 /sbin/mingetty tty5  
1569 tty2 Ss+ 0:00 /sbin/mingetty tty2  
1570 tty3 Ss+ 0:00 /sbin/mingetty tty3
```

admin@Linux:~

## ps -axl



```
admin@Linux:~  
File Edit View Terminal Help  
2092 pts/0 Rs 0:00 bash  
2122 pts/0 R+ 0:00 ps -ax  
[admin@Linux ~]$ ps -axl  
Warning: bad syntax, perhaps a bogus '-?' See /usr/share/doc/procps-3.2.7/FAQ  
F UID PID PPID PRI NI VSZ RSS WCHAN STAT TTY TIME COMMAND  
4 0 1 0 20 0 2012 772 poll_s Ss ? 0:01 /sbin/init  
5 0 2 0 15 -5 0 0 kthrea S< ? 0:00 [kthreadd]  
1 0 3 2 -100 - 0 0 migrat S< ? 0:00 [migration]  
1 0 4 2 15 -5 0 0 ksofti S< ? 0:00 [ksoftirqd]  
5 0 5 2 -100 - 0 0 watchd S< ? 0:00 [watchdog/]  
1 0 6 2 15 -5 0 0 worker S< ? 0:00 [cpuset]  
1 0 7 2 15 -5 0 0 worker S< ? 0:00 [events/0]  
1 0 8 2 15 -5 0 0 worker S< ? 0:00 [work_on_c]  
1 0 9 2 15 -5 0 0 worker S< ? 0:00 [khelper]  
1 0 10 2 15 -5 0 0 worker S< ? 0:00 [netns]  
1 0 11 2 15 -5 0 0 worker S< ? 0:00 [kintegrity]  
1 0 12 2 15 -5 0 0 worker S< ? 0:00 [kblockd/0]  
1 0 13 2 15 -5 0 0 worker S< ? 0:00 [kacpid]  
1 0 14 2 15 -5 0 0 worker S< ? 0:00 [kacpi_not]  
1 0 15 2 15 -5 0 0 worker S< ? 0:00 [cqueue]  
1 0 16 2 15 -5 0 0 worker S< ? 0:00 [ata/0]  
1 0 17 2 15 -5 0 0 worker S< ? 0:00 [ata_aux]  
1 0 18 2 15 -5 0 0 worker S< ? 0:00 [ksuspend_]  
1 0 19 2 15 -5 0 0 hub_th S< ? 0:00 [khud]
```

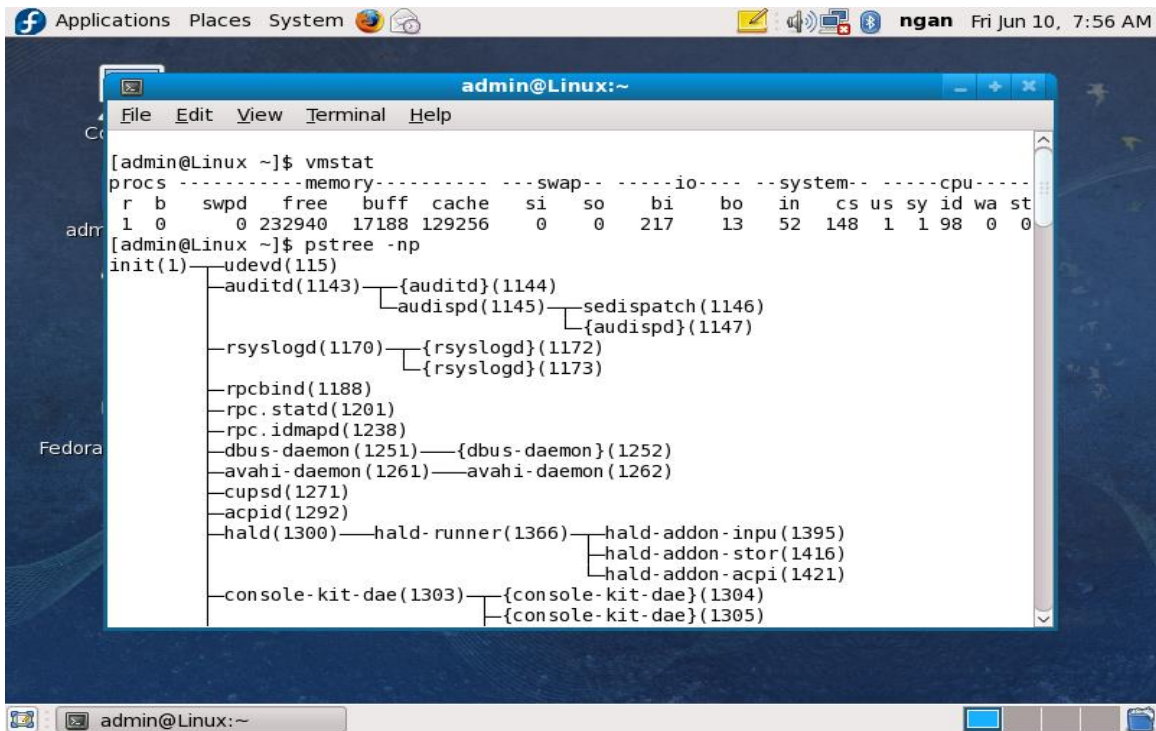


```
admin@Linux:~  
File Edit View Terminal Help  
0 0 1146 1145 16 -4 13440 1388 unix_s S< ? 0:00 /usr/sbin/s  
5 0 1170 1 20 0 35576 1220 poll_s Sl ? 0:00 rsyslogd -c  
5 32 1188 1 20 0 2404 748 poll_s Ss ? 0:00 rpcbind  
5 29 1201 1 20 0 2096 760 poll_s Ss ? 0:00 rpc.statd  
1 0 1230 2 15 -5 0 0 worker S< ? 0:00 [rpciod/0]  
1 0 1238 1 20 0 2488 520 epoll_ Ss ? 0:00 rpc.idmapd  
5 81 1251 1 20 0 13584 1712 poll_s Ssl ? 0:00 dbus-daemon  
5 497 1261 1 20 0 2888 1408 poll_s Ss ? 0:00 avahi-daemo  
1 497 1262 1261 20 0 2888 332 unix_s Ss ? 0:00 avahi-daemo  
5 0 1271 1 20 0 10964 2272 epoll_ Ss ? 0:00 cupsd  
1 0 1292 1 20 0 1876 592 poll_s Ss ? 0:00 /usr/sbin/a  
5 68 1300 1 20 0 7016 4608 poll_s Ss ? 0:00 hald  
5 0 1303 1 20 0 10712 2400 poll_s Ssl ? 0:00 /usr/sbin/c  
0 0 1366 1300 20 0 3444 984 poll_s S ? 0:00 hald-runner  
0 0 1395 1366 20 0 3512 904 poll_s S ? 0:00 hald-addon-  
0 0 1416 1366 20 0 3520 1008 poll_s S ? 0:00 hald-addon-  
4 68 1421 1366 20 0 3180 932 unix_s S ? 0:00 hald-addon-  
1 0 1434 1 20 0 14324 1496 poll_s Ssl ? 0:00 pcscd  
5 0 1448 1 20 0 6812 2012 poll_s Ss ? 0:00 NetworkMana  
4 0 1450 1 20 0 5748 1232 poll_s S ? 0:00 /usr/sbin/w  
4 0 1452 1 20 0 8360 3764 poll_s S ? 0:00 /usr/sbin/n  
5 0 1460 1 20 0 3680 1676 poll_s Ss ? 0:00 /usr/sbin/b  
5 0 1495 1 20 0 7632 1100 poll_s Ss ? 0:00 /usr/sbin/s  
5 0 1513 1 20 0 10284 1772 poll_s Ss ? 0:00 sendmail: a
```

Some System command:



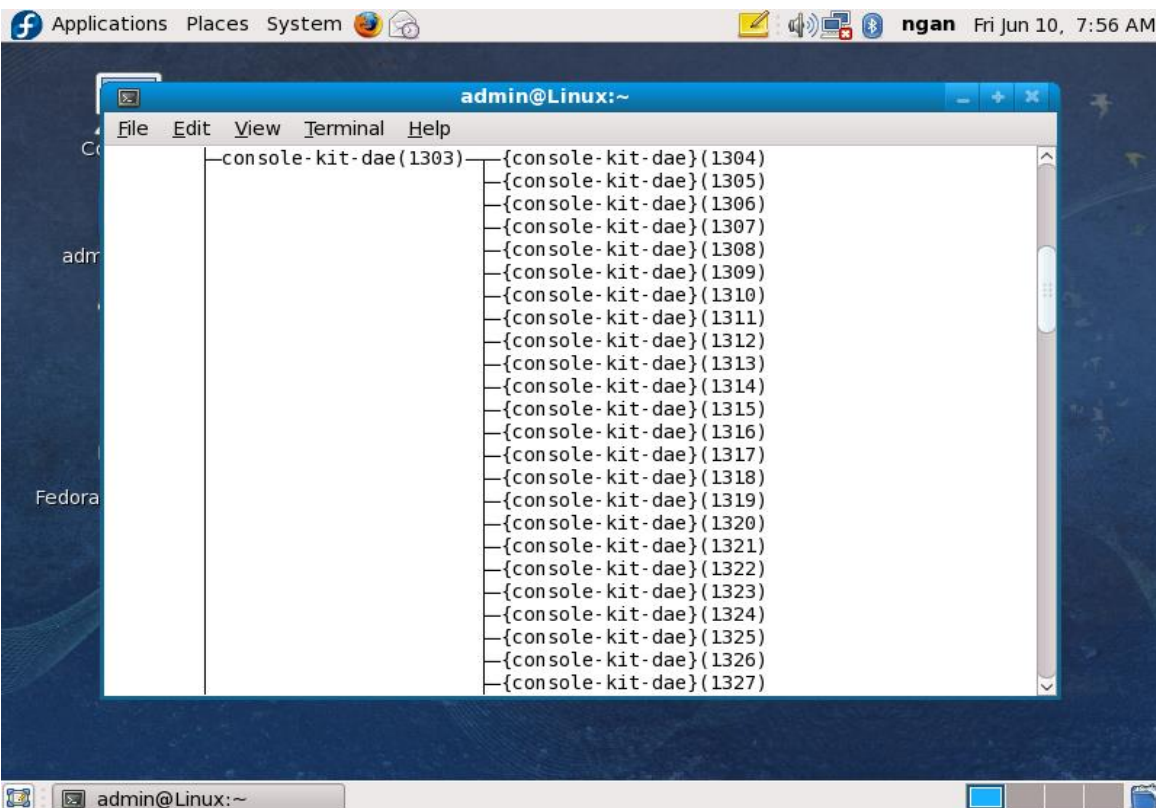
## vmstat, pstree -np



The terminal window displays the output of the `vmstat` and `pstree -np` commands. The `vmstat` output shows system statistics for memory, swap, IO, system, and CPU. The `pstree -np` output shows a hierarchical tree of processes, starting from `init(1)` and including various system daemons and user processes.

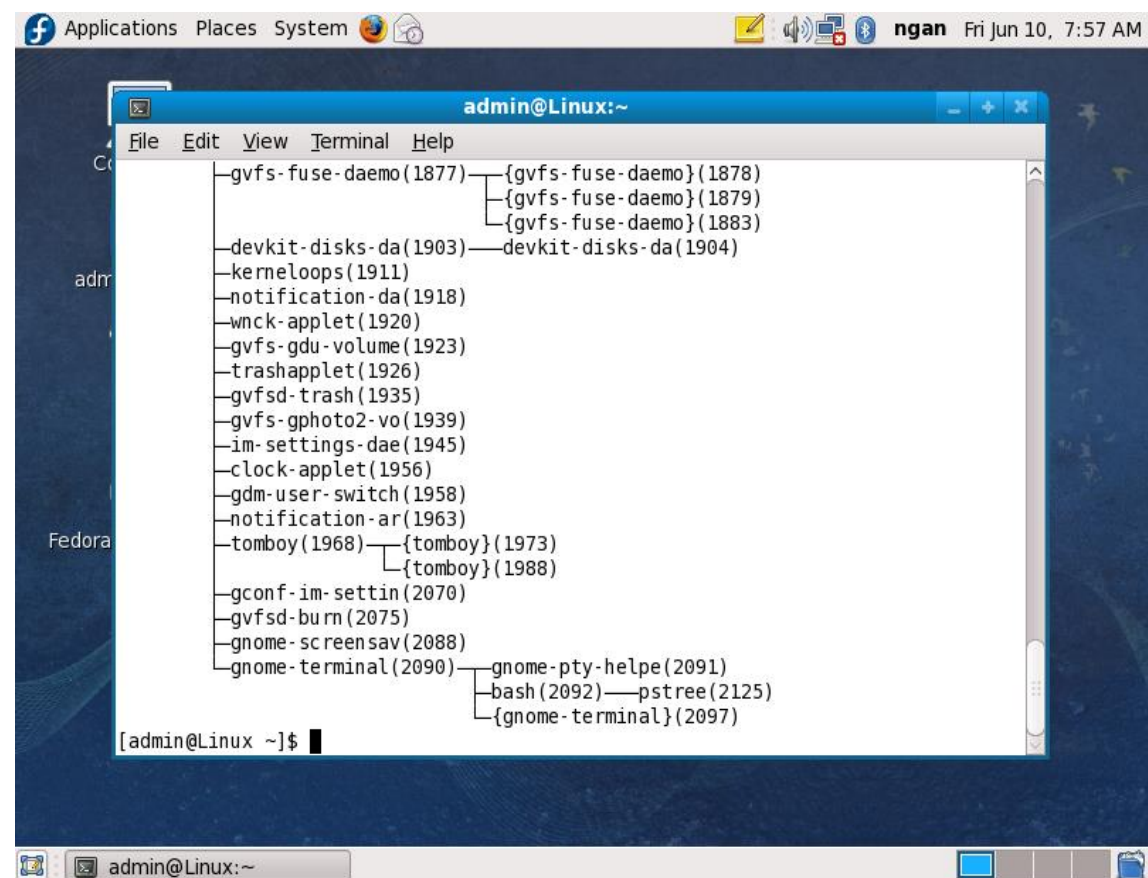
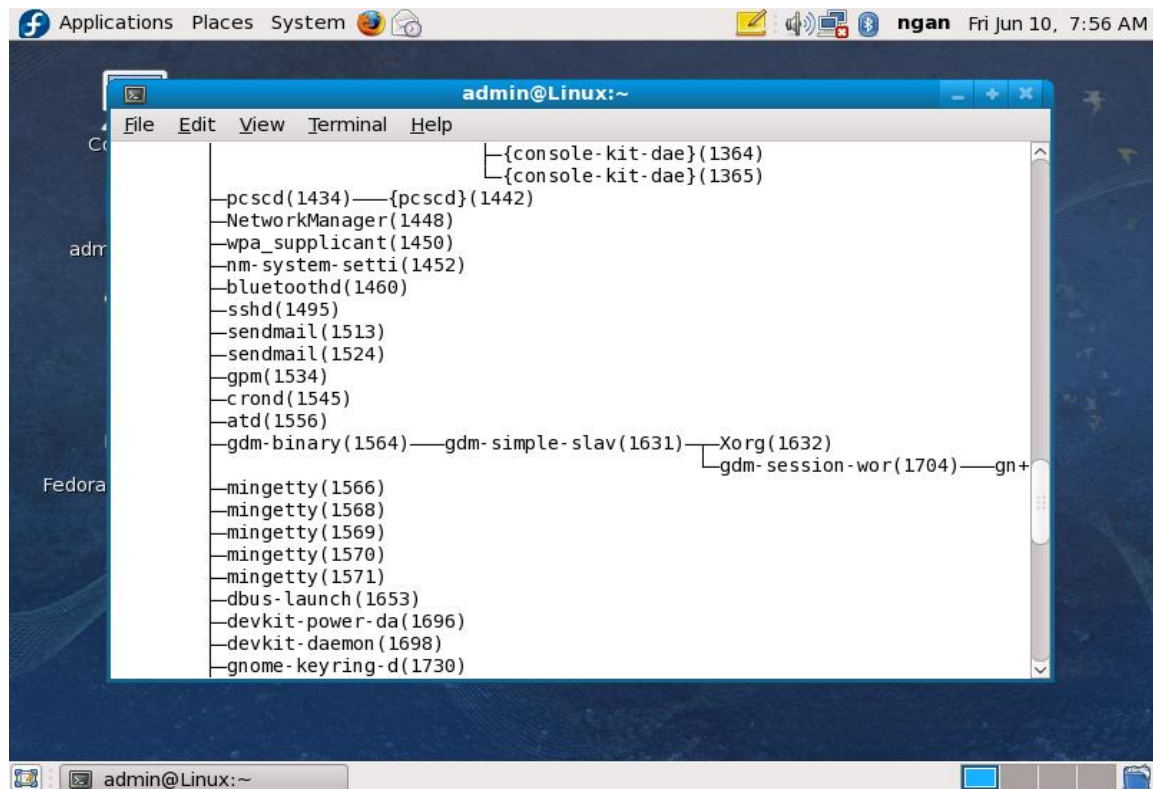
```
[admin@Linux ~]$ vmstat
procs -----memory-----swap-----io-----system-----cpu-----
r b swpd free buff cache si so bi bo in cs us sy id wa st
1 0 0 232940 17188 129256 0 0 217 13 52 148 1 1 98 0 0

[admin@Linux ~]$ pstree -np
init(1)---udev(115)
          |---auditd(1143)---{auditd}(1144)
          |                   |---audispd(1145)---sedisp(1146)
          |                   |                   |---audispd(1147)
          |---rsyslogd(1170)---{rsyslogd}(1172)
          |                   |---{rsyslogd}(1173)
          |---rpcbind(1188)
          |---rpc.statd(1201)
          |---rpc.idmapd(1238)
          |---dbus-daemon(1251)---{dbus-daemon}(1252)
          |---avahi-daemon(1261)---avahi-daemon(1262)
          |---cupsd(1271)
          |---acpid(1292)
          |---hald(1300)---hald-runner(1366)---hald-addon-inpu(1395)
          |                   |---hald-addon-stor(1416)
          |                   |---hald-addon-acpi(1421)
          |---console-kit-dae(1303)---{console-kit-dae}(1304)
          |                           |---{console-kit-dae}(1305)
```



This terminal window shows a detailed view of the `console-kit-daemon` process tree. It lists multiple instances of the daemon, each with a unique PID, showing how the process has forked multiple times.

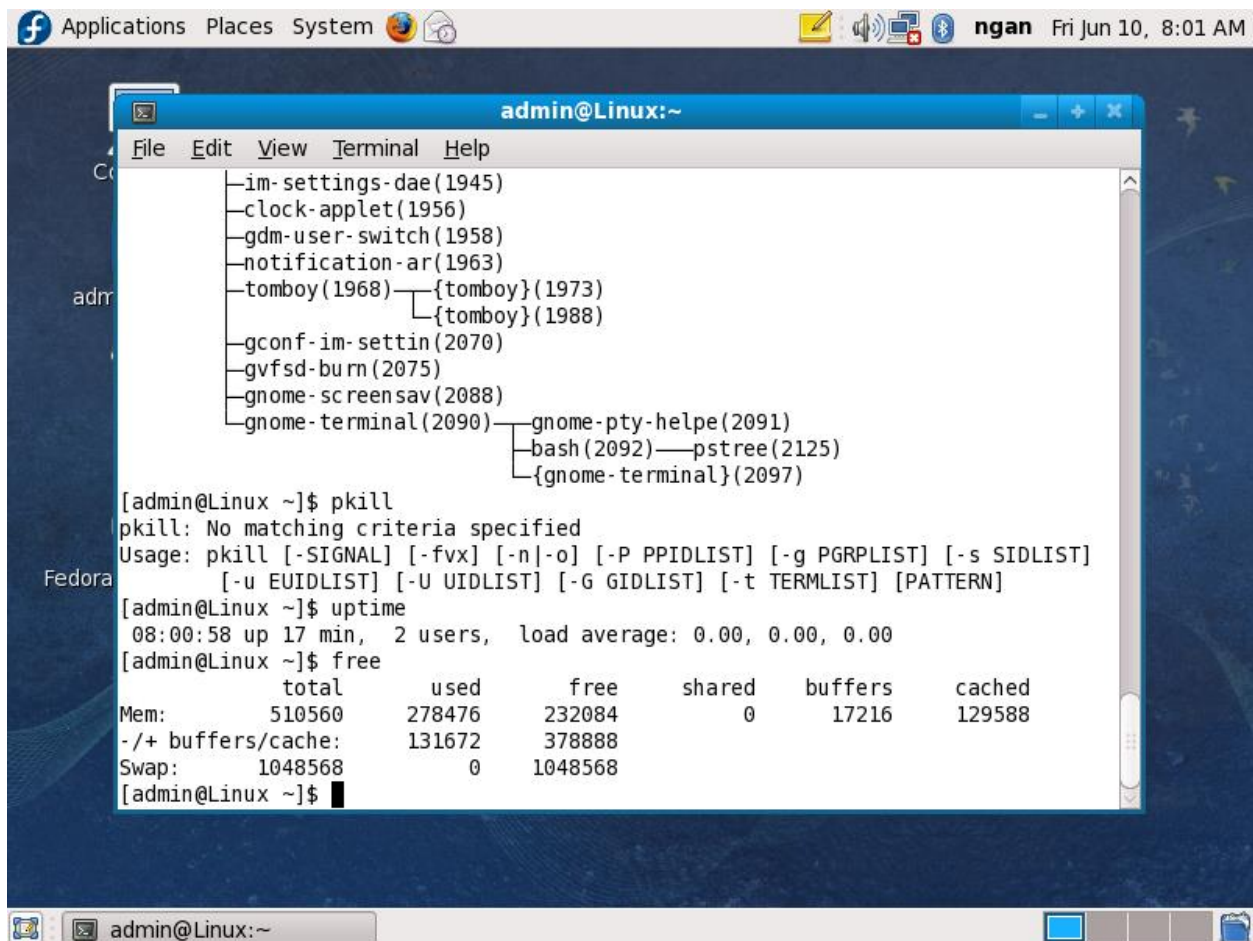
```
console-kit-dae(1303)---{console-kit-dae}(1304)
                      |---{console-kit-dae}(1305)
                      |---{console-kit-dae}(1306)
                      |---{console-kit-dae}(1307)
                      |---{console-kit-dae}(1308)
                      |---{console-kit-dae}(1309)
                      |---{console-kit-dae}(1310)
                      |---{console-kit-dae}(1311)
                      |---{console-kit-dae}(1312)
                      |---{console-kit-dae}(1313)
                      |---{console-kit-dae}(1314)
                      |---{console-kit-dae}(1315)
                      |---{console-kit-dae}(1316)
                      |---{console-kit-dae}(1317)
                      |---{console-kit-dae}(1318)
                      |---{console-kit-dae}(1319)
                      |---{console-kit-dae}(1320)
                      |---{console-kit-dae}(1321)
                      |---{console-kit-dae}(1322)
                      |---{console-kit-dae}(1323)
                      |---{console-kit-dae}(1324)
                      |---{console-kit-dae}(1325)
                      |---{console-kit-dae}(1326)
                      |---{console-kit-dae}(1327)
```



**pskill**

**uptime**

**free**



The screenshot shows a Linux desktop environment with a terminal window titled "admin@Linux:~". The terminal displays the following output:

```
admin@Linux:~$ pskill
im-settings-dae(1945)
clock-applet(1956)
gdm-user-switch(1958)
notification-ar(1963)
tomboy(1968)
  {tomboy}(1973)
  {tomboy}(1988)
gconf-im-settin(2070)
gvfsd-burn(2075)
gnome-screensav(2088)
gnome-terminal(2090)
  gnome-pty-helpe(2091)
  bash(2092)
    pstree(2125)
    {gnome-terminal}(2097)

[admin@Linux ~]$ pskill
pskill: No matching criteria specified
Usage: pskill [-SIGNAL] [-fvx] [-n|-o] [-P PPIDLIST] [-g PGRPLIST] [-s SIDLIST]
        [-u EUIDLIST] [-U UIDLIST] [-G GIDLIST] [-t TERMLIST] [PATTERN]

[admin@Linux ~]$ uptime
08:00:58 up 17 min,  2 users,  load average: 0.00, 0.00, 0.00

[admin@Linux ~]$ free
              total        used        free      shared    buffers     cached
Mem:      510560        278476        232084          0        17216        129588
-/+ buffers/cache:      131672        378888
Swap:      1048568            0        1048568

[admin@Linux ~]$
```

The terminal window has a menu bar with "File", "Edit", "View", "Terminal", and "Help". The desktop background is a dark blue pattern. The top panel shows system icons and the date/time "Fri Jun 10, 8:01 AM". The bottom panel shows the terminal window icon and the text "admin@Linux:~".

Editor program: vi

