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Show All Running Processes in Linux

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How do I see all running process in Linux?

You need to use the ps command. It provide information about the currently running processes, including their process identification numbers (PIDs). Both Linux and UNIX support ps command to display information about all running process. ps command gives a snapshot of the current processes. If you want a repetitive update of this status, use top command.

[1]

Task: Use ps command

Type the following ps command to display all running process

```
# ps aux | less
```

Where,

- -A: select all processes
- a: select all processes on a terminal, including those of other users
- x: select processes without controlling ttys

Task: see every process on the system

```
# ps -A
# ps -e
```

Task: See every process except those running as root

```
# ps -U root -u root -N
```

Task: See process run by user vivek

```
# ps -u vivek
```

Task: Use top command

The top program provides a dynamic real-time view of a running system. Type the top at command prompt:

```
# top
```

Output:

```
top - 17:07:00 up  2:38,  1 user,  load average: 0.45, 0.70, 0.62
Tasks: 104 total,   1 running, 102 sleeping,   0 stopped,   1 zombie
Cpu(s): 23.8% us,  3.3% sy,  0.0% ni, 72.8% id,  0.0% wa,  0.0% hi,  0.0% si
Mem:    768600k total,   691768k used,    76832k free,    37960k buffers
Swap:   979956k total,        0k used,   979956k free,   368184k cached

  PID USER      PR  NI  VIRT  RES  SHR S %CPU %MEM    TIME+  COMMAND
 4421 tv        15   0  148m  81m  18m S  9.9 10.8  13:56.36 firefox-bin
 4090 root       6 -10  173m  41m 3036 S  6.9  5.5   7:32.76 XFree86
 6109 tv        15   0 29604  14m  12m S  4.3  2.0   0:01.32 ksnapshot
 4339 tv        15   0 31440  14m  11m S  2.3  1.9   0:20.42 kicker
 4335 tv        15   0 27736  12m 9.8m S  2.0  1.6   0:13.47 kwin
 4424 tv        15   0 31380  14m  11m S  0.7  2.0   0:17.15 konsole
 6090 root      16   0  2272 1152  872 R  0.3  0.1   0:00.25 top
    1 root      16   0  1940  664  568 S  0.0  0.1   0:00.25 init
    2 root      34  19     0    0    0 S  0.0  0.0   0:00.00 ksoftirqd/0
    3 root      10  -5     0    0    0 S  0.0  0.0   0:00.35 events/0
    4 root      11  -5     0    0    0 S  0.0  0.0   0:00.01 khelper
    5 root      10  -5     0    0    0 S  0.0  0.0   0:00.00 kthread
    7 root      10  -5     0    0    0 S  0.0  0.0   0:00.08 kblockd/0
    8 root      20  -5     0    0    0 S  0.0  0.0   0:00.00 kacpid
  117 root      20   0     0    0    0 S  0.0  0.0   0:00.00 pdflush
  118 root      15   0     0    0    0 S  0.0  0.0   0:00.03 pdflush
  120 root      11  -5     0    0    0 S  0.0  0.0   0:00.00 aio/0
  119 root      25   0     0    0    0 S  0.0  0.0   0:00.00 kswapd0
  709 root      10  -5     0    0    0 S  0.0  0.0   0:00.01 kseriod
  811 root      15   0     0    0    0 S  0.0  0.0   0:00.39 kjournald
 1404 root      10  -5     0    0    0 S  0.0  0.0   0:00.00 khubd
 1906 root      11  -5     0    0    0 S  0.0  0.0   0:00.00 scsi_eh_1
 1909 root      10  -5     0    0    0 S  0.0  0.0   0:00.00 usb-storage
 3102 daemon    16   0  1712  376  280 S  0.0  0.0   0:00.00 portmap
 3353 root      16   0  1660  624  512 S  0.0  0.1   0:00.26 syslogd
 3359 root      16   0  2428 1304  380 S  0.0  0.2   0:00.08 klogd
 3367 dnsmasq   16   0  1888  732  608 S  0.0  0.1   0:00.08 dnsmasq
 3516 root      16   0  1764  696  572 S  0.0  0.1   0:00.02 automount
 3523 root      16   0  1756  680  564 S  0.0  0.1   0:00.00 automount
 3586 root      16   0  1764  696  572 S  0.0  0.1   0:00.00 automount
```

[2]

To quit press **q**, for help press **h**.

Task: display a tree of processes

pstree shows running processes as a tree. The tree is rooted at either pid or init if pid is omitted. If a user name is specified, all process trees rooted at processes owned by that user are shown.

```
$ pstree
```

Output:

Task: Print a process tree using ps

```
# ps -ejH
# ps axjf
```

Task: Get info about threads

```
# ps -eLf
# ps axms
```

Task: Get security info

```
# ps -eo euser,ruser,suser,fuser,f,comm,label
# ps axZ
# ps -eM
```

Task: Save Process Snapshot to a file

```
# top -b -n1 > /tmp/process.log
```

Or you can email it to yourself:

```
# top -b -n1 | mail -s 'Process snapshot' you@example.com
```


[3]

Task: Lookup process

Use pgrep command. pgrep looks through the currently running processes and lists the process IDs which matches the selection criteria to screen. For example display firefox process id:

```
$ pgrep firefox
```

Following command will list the process called sshd which is owned by root user.

```
$ pgrep -u root sshd
```

Say hello to htop

htop is interactive process viewer just like top, but allows to scroll the list vertically and horizontally to see all processes and their full command lines. Tasks related to processes (killing, renicing) can be done without entering their PIDs. To install htop type command:

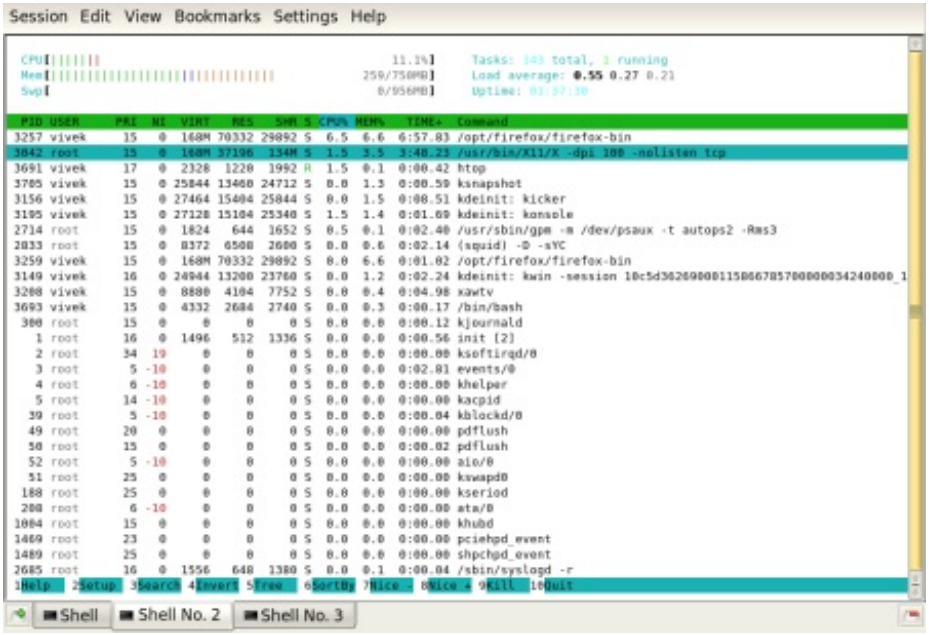
```
# apt-get install htop
```

or

```
# yum install htop
```

Now type htop to run the command:

```
# htop
```



[4]
(click to enlarge)

See also:

- Kill process in Linux or terminate a process in UNIX or Linux systems [5]

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