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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	khubb
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

ps tree 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.

```
$ ps tree
```

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
```

```

$ ps aux
root      11  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      12  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      13  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      14  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      15  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      16  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      17  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      18  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      19  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      20  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      21  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      22  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      23  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      24  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      25  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      26  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      27  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      28  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      29  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      30  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      31  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      32  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      33  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      34  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      35  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      36  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      37  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      38  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      39  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      40  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      41  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      42  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      43  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      44  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      45  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      46  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      47  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      48  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      49  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      50  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      51  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      52  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      53  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      54  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      55  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      56  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      57  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      58  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      59  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      60  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      61  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      62  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      63  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      64  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      65  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      66  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      67  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      68  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      69  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      70  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      71  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      72  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      73  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      74  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      75  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      76  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      77  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      78  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      79  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      80  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      81  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      82  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      83  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      84  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      85  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      86  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      87  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      88  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      89  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      90  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      91  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      92  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      93  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      94  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      95  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      96  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      97  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      98  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root      99  0.0 0.0 1124 1024 S 0:00.00 sshd: [root]
root     100 0.0 0.0 1124 1024 S 0:00.00 sshd: [root]

```

[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:

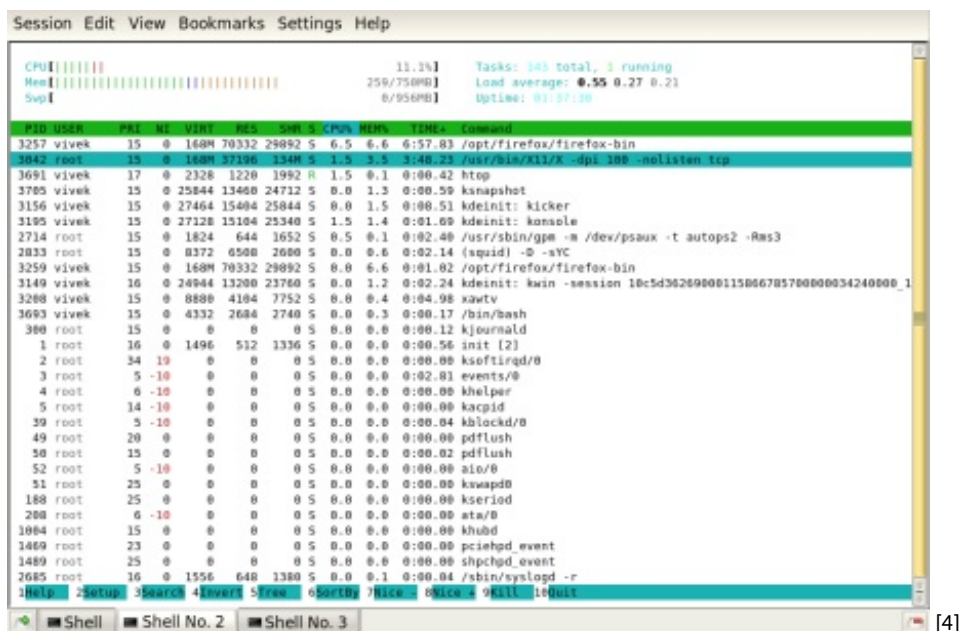
```
# apt-get install htop
```

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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