

## Process Management

List out highest priority process in the system

**top -b -n 1 | head -n 12 | tail -n 1**

```
ubuntu@ip-172-31-8-251:~$ top -b -n 1 | head -n 12 | tail -n 1
  3 root    20   0      0      0      0 S  0.0  0.0  0:00.00 pool_wo-
```

Or by htop

```

CPU 0.0% Tasks: 53, 97 thr, 79 kthrs: 1 running
Mem 0.0% [260K/957M] Load average: 0.07 0.08 0.07
OK/OK Uptime: 11:09:12

Main [ 777 ]

PID USER PRI NI VIRT RES SHR S CPU% MEM% TIME+ Command
4511 ubuntu 20 0 2592 136p 3456 r 0.5 0.5 0:00.01s /usr/bin/nc
1 root 20 0 2748 1160 8416 r 0.0 1.4 0:04.55s /sbin/init
130 root 19 -1 44764 10684 9404 s 0.0 1.1 3:27.97 /usr/lib/systemd/systemd-journald
189 root RT 0 2826 2136 8704 s 0.0 2.8 0:00.33 /sbin/multipathd -d -s
193 root RT 0 28476 4348 8948 s 0.0 0.8 0:00.46 /usr/lib/systemd/systemd-udev
197 root 0 2826 2136 8704 s 0.0 2.8 0:00.00 /sbin/multipathd -d -s
198 root RT 0 2826 2136 8704 s 0.0 2.8 0:00.00 /sbin/multipathd -d -s
199 root RT 0 2826 2136 8704 s 0.0 2.8 0:00.00 /sbin/multipathd -d -s
200 root RT 0 2826 2136 8704 s 0.0 2.8 0:00.00 /sbin/multipathd -d -s
201 root RT 0 2826 2136 8704 s 0.0 2.8 0:02.07 /sbin/multipathd -d -s
202 root root 2136 8704 s 0.0 2.8 0:00.00 /sbin/multipathd -d -s
333 rpc 0 7968 968 3584 s 0.0 0.4 0:00.04 /sbin/rpcbind -f -w
339 systemd-re 0 21584 1928 10624 s 0.0 1.3 0:00.15 /usr/lib/systemd/systemd-resolved
493 systemd-ne 0 22396 188 1076 s 0.0 1.0 0:00.07 /usr/lib/systemd/systemd-networkd
536 root 0 2720 1920 1792 s 0.0 0.2 0:00.00 /usr/sbin/acpid
541 messages-u 0 9916 1504 4608 s 0.0 0.6 0:00.26 dbus-daemon -system --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only
551 root 0 3512 20736 10496 s 0.2 1.0 0:00.09 /usr/bin/python3 /usr/bin/networkd-dispatcher --run=startup-triggers
552 ubuntu 0 8668 8684 41600 s 0.0 9.0 0:08.31 /usr/bin/node server.js
553 polkitd 0 3748 8880 7424 s 0.0 1.0 0:00.06 /usr/lib/polkit-1/polkitd --no-debug
556 root 0 16456 19340 11008 s 0.0 2.0 0:00.35 /snap/amazon-sm-agent/9881/amazon-sm-agent
573 ubuntu 0 8668 8684 41600 s 0.0 9.0 0:00.14 /usr/lib/systemd/systemd-logind
581 root 0 457M 13440 11392 s 0.0 1.4 0:00.06 /usr/libexec/udisks2/udisksd
603 root 0 457M 13440 11392 s 0.0 1.4 0:00.56 /usr/libexec/udisks2/udisksd
617 root 0 457M 13440 11392 s 0.0 1.4 0:00.00 /usr/libexec/udisks2/udisksd
618 root 0 457M 13440 11392 s 0.0 1.4 0:00.00 /usr/libexec/udisks2/udisksd
681 root 0 107M 2656 13312 s 0.0 2.3 0:00.06 /usr/bin/python3 /usr/share/unattended-upgrades/unattended-upgrade-shutdown --wait-for-signal
683 chrony 60 10388 584 2944 s 0.0 0.4 0:00.69 /usr/sbin/chronyd -F 1
691 chrony 60 11060 2196 1664 s 0.0 0.2 0:00.00 /usr/sbin/chronyd -F 1
706 syslog 0 217M 7536 4608 s 0.0 0.8 0:21.85 /usr/sbin/rsyslogd -n -iNONE
725 polkitd 0 3748 8880 7424 s 0.0 1.0 0:00.00 /usr/lib/polkit-1/polkitd --no-debug
731 polkitd 0 3748 8880 7424 s 0.0 1.0 0:00.01 /usr/lib/polkit-1/polkitd --no-debug
734 ubuntu 0 8668 8684 41600 s 0.0 9.0 0:00.00 /usr/bin/node server.js
735 ubuntu 0 8668 8684 41600 s 0.0 9.0 0:00.00 /usr/bin/node server.js
736 ubuntu 0 8668 8684 41600 s 0.0 9.0 0:00.00 /usr/bin/node server.js
737 ubuntu 0 8668 8684 41600 s 0.0 9.0 0:00.28 /usr/bin/node server.js
738 ubuntu 0 8668 8684 41600 s 0.0 9.0 0:00.30 /usr/bin/node server.js
739 ubuntu 0 8668 8684 41600 s 0.0 9.0 0:00.36 /usr/bin/node server.js
740 ubuntu 0 8668 8684 41600 s 0.0 9.0 0:00.35 /usr/bin/node server.js
752 ubuntu 0 8668 8684 41600 s 0.0 9.0 0:00.00 /usr/bin/node server.js
756 root 0 457M 13440 11392 s 0.0 1.4 0:00.00 /usr/libexec/udisks2/udisksd
772 root 0 457M 13440 11392 s 0.0 1.4 0:00.00 /usr/libexec/udisks2/udisksd
774 root 0 8668 8684 41600 s 0.0 1.3 0:00.05 /usr/sbin/NetworkManager
785 ubuntu 0 8668 8684 41600 s 0.0 9.0 0:00.00 /usr/bin/node server.js
789 root 0 7224 2560 2432 s 0.0 0.3 0:00.06 /usr/sbin/cron -f -P
795 root 0 187M 12344 10752 s 0.0 1.3 0:00.00 /usr/sbin/NetworkManager
799 syslog 0 217M 7536 4608 s 0.0 0.8 0:25.67 /usr/sbin/rsyslogd -n -iNONE
800 syslog 0 217M 7536 4608 s 0.0 0.8 0:00.00 /usr/sbin/rsyslogd -n -iNONE
801 syslog 0 217M 7536 4608 s 0.0 0.8 1:05.47 /usr/sbin/rsyslogd -n -iNONE
804 root 0 187M 12344 10752 s 0.0 1.3 0:00.00 /usr/sbin/NetworkManager

Help [ 267up 5 Search 5 Filter 3 Three 6 SortBy 7 Nice 8 Since 49 9 Still 11 Timeout

```

## Open terminal with 2 tabs or sessions

a) run command "vmstat 1"

b) switch to another tab, pause running vmstat command for few seconds and resume it again use appropriate SIGNALS to do this activity.

**vmstat 1**

```

ubuntu@ip-172-31-8-251:~$ vmstat 1
procs -----memory----- --swap-- -----io----- -system-- -----cpu-----
---
 r b   swpd   free   buff   cache   si   so    bi    bo    in    cs us sy id wa st
gu
0 0     0 107040 124048 503480    0    0   14    19   111    4  0  1 93  0  5
0
0 0     0 107040 124048 503480    0    0    0     0   184   99  0  0 100  0
0
0 0     0 107040 124048 503480    0    0    0     0    76   60  1  0 98  0  1
0
0 0     0 107040 124048 503480    0    0    0     0    50   40  0  0 100  0
0
0 0     0 107040 124048 503480    0    0    0     0    52   46  0  0 94  0  6
0
0 0     0 107040 124048 503480    0    0    0     0    55   50  0  0 96  0  4
0
0 0     0 107040 124048 503480    0    0    0     0    66   55  0  0 99  0  1
0
0 0     0 107040 124048 503480    0    0    0     0    38   29  0  0 100  0
0
0 0     0 107040 124048 503480    0    0    0     0    42   33  0  0 94  0  6
0
0 0     0 107040 124048 503480    0    0    0     0    54   43  0  0 97  0  3
0
0 0     0 107040 124048 503480    0    0    0     0    40   33  0  0 83  0 17
0
0 0     0 107040 124048 503480    0    0    0     0    36   28  0  0 100  0
0
0 0     0 107040 124048 503480    0    0    0     0    60   51  0  1 92  0  7
0
0 0     0 107040 124048 503480    0    0    0     0    34   29  0  0 90  0 10
0
0 0     0 107040 124048 503480    0    0    0     0    58   48  0  0 100  0
0
0 0     0 107040 124048 503480    0    0    0     0    50   44  0  0 95  0  5
0
0 0     0 107040 124048 503480    0    0    0     0    44   34  0  0 86  0 14
0
0 0     0 107040 124048 503480    0    0    0     0    50   40  0  0 99  0  1
0
0 0     0 107040 124048 503480    0    0    0     0    54   40  0  0 100  0
0
0 0     0 107040 124048 503480    0    0    0     0    38   33  0  0 100  0
0
0 0

```

In the second tab

**pgrep vmstat**

**kill -SIGSTOP 4329**

**kill -SIGCONT 4329**

```

ubuntu@ip-172-31-8-251: ~
ubuntu@ip-172-31-8-251:~$ pgrep vmstat
4329
ubuntu@ip-172-31-8-251:~$ kill -SIGSTOP 4329
ubuntu@ip-172-31-8-251:~$ kill -SIGCONT 4329
ubuntu@ip-172-31-8-251:~$ kill -SIGSTOP 4329

```

Find the process which is sleeping in "wait" state.

**top -b -n 1 | grep " D "**