

## Assignment – Process Management

- 1) List out highest priority process in the system
- 2) 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.
- 3) Find the process which is sleeping in "wait" state.

```
[root@himanshu /]# ps -eo pid,comm,pri,ni --sort=pri
PID COMMAND      PRI  NI
74  khugepaged      0    19
1058 alsactl        0    -
18  migration/0     139  -
22  migration/1     139  -
27  migration/2     139  -
32  migration/3     139  -
37  migration/4     139  -
42  migration/5     139  -
47  migration/6     139  -
52  migration/7     139  -
73  ksm              14    5
1003 rtkit-daemon    18    1
1  systemd         19    0
2  kthreadd        19    0
13  rcu_tasks_kthre 19    0
14  rcu_tasks_rude_ 19    0
15  rcu_tasks_trace 19    0
16  ksoftirqd/0     19    0
17  rcu_preempt     19    0
20  cpuhp/0         19    0
21  cpuhp/1         19    0
23  ksoftirqd/1     19    0
26  cpuhp/2         19    0
28  ksoftirqd/2     19    0
31  cpuhp/3         19    0
33  ksoftirqd/3     19    0
36  cpuhp/4         19    0
38  ksoftirqd/4     19    0
41  cpuhp/5         19    0
43  ksoftirqd/5     19    0

top - 17:32:03 up 1:16, 2 users, load average: 0.37, 0.32, 0.48
Tasks: 385 total, 2 running, 383 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.3 us, 0.3 sy, 0.0 ni, 98.5 id, 0.0 wa, 0.8 hi, 0.0 si, 0.0 st
MiB Mem : 6144.5 total, 1651.6 free, 3112.8 used, 1731.3 buff/cache
MiB Swap: 3936.0 total, 3936.0 free, 0.0 used, 3031.7 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM    TIME+  COMMAND
 2885 root       20   0 4783844 250856 140436 S   2.0   4.0   2:35.46 gnome-shell
 3431 root       20   0 769880 60832 42544 S   1.0   1.0   0:32.64 gnome-terminal-
29440 root       20   0 226156 4264 3384 R   1.0   0.1   0:00.18 top
 52  root       rt    0      0      0      0 S   0.3   0.0   0:05.50 migration/7
2561 root       20   0 23372 14860 10680 S   0.3   0.2   0:03.17 systemd
2611 root       20   0 6968 4656 2352 S   0.3   0.1   0:01.42 dbus-broker
2996 root       20   0 448228 8292 5644 S   0.3   0.1   0:00.11 gvfs-mtp-volume
3082 root       20   0 949060 32796 24528 S   0.3   0.5   0:00.89 gsd-media-keys
4223 root       20   0 3459476 474296 204700 S   0.3   7.5  11:58.80 firefox
4276 root       20   0 836296 17464 11308 S   0.3   0.3   0:00.49 xdg-desktop-por
4290 root       20   0 680356 31088 24072 S   0.3   0.5   0:00.80 xdg-desktop-por
4419 root       20   0 3672428 663112 114120 S   0.3  10.5  26:21.13 Isolated Web Co
28636 root       20   0      0      0      0 I   0.3   0.0   0:02.96 kworker/4:0-mm_percpu_wq
28641 root       20   0      0      0      0 I   0.3   0.0   0:01.41 kworker/u256:1-events_unbound
 1  root       20   0 172912 17116 10744 S   0.0   0.3   0:10.49 systemd
 2  root       20   0      0      0      0 S   0.0   0.0   0:00.21 kthreadd
 3  root       0 -20      0      0      0 I   0.0   0.0   0:00.00 rcu_gp
 4  root       0 -20      0      0      0 I   0.0   0.0   0:00.00 rcu_par_gp
 5  root       0 -20      0      0      0 I   0.0   0.0   0:00.00 slub_flushwq
 6  root       0 -20      0      0      0 I   0.0   0.0   0:00.00 netns
 8  root       0 -20      0      0      0 I   0.0   0.0   0:00.00 kworker/0:0H-events_highpri
10  root       0 -20      0      0      0 I   0.0   0.0   0:07.18 kworker/0:1H-events_highpri
11  root       0 -20      0      0      0 I   0.0   0.0   0:00.00 mm_percpu_wq
13  root       20   0      0      0      0 I   0.0   0.0   0:00.00 rcu_tasks_kthre
```

```
Activities Terminal Sep 15 17:32 root@server:/
[root@himanshu /]# ps -eo pid,comm,pri --sort=-pri | head -n 6
PID COMMAND PRI
 88 watchdogd 90
103 irq/24-pcihp 90
104 irq/25-pcihp 90
105 irq/26-pcihp 90
106 irq/27-pcihp 90
[root@himanshu /]#
```

```
Activities Terminal Sep 15 17:34 root@server:/
root@server:/ x root@server:/
0 0 0 1683436 7196 1765920 0 0 0 0 397 471 0 1 99 0 0
0 0 0 1683436 7196 1765920 0 0 0 0 293 374 0 1 99 0 0
0 0 0 1683436 7196 1765920 0 0 0 0 260 327 0 1 99 0 0
0 0 0 1683436 7196 1765920 0 0 0 0 267 343 0 1 99 0 0
0 0 0 1683436 7196 1765920 0 0 0 0 242 322 0 1 99 0 0
0 0 0 1683436 7196 1765920 0 0 0 0 307 396 0 1 99 0 0
0 0 0 1683436 7196 1765920 0 0 0 0 280 360 0 1 99 0 0
0 0 0 1683436 7196 1765920 0 0 0 0 233 316 0 1 99 0 0
procs -----memory-----swap-----io-----system-----cpu-----
r b swpd free buff cache si so bi bo in cs us sy id wa st
0 0 0 1683436 7196 1765920 0 0 0 0 326 409 0 1 99 0 0
0 0 0 1683436 7196 1765920 0 0 0 0 344 419 0 1 99 0 0
1 0 0 1683436 7196 1765920 0 0 0 0 265 330 0 1 99 0 0
0 0 0 1683436 7196 1765920 0 0 0 0 301 361 0 1 99 0 0
0 0 0 1683436 7196 1765920 0 0 0 0 554 612 0 1 98 0 0
0 0 0 1683436 7196 1765920 0 0 0 0 539 683 0 1 98 0 0
0 0 0 1683436 7196 1765904 0 0 0 0 380 489 0 1 99 0 0
1 0 0 1683436 7196 1765904 0 0 0 0 852 1009 1 2 97 0 0
0 0 0 1674924 7196 1766100 0 0 348 42 3891 5158 7 9 84 0 0
1 0 0 1666608 7196 1768224 0 0 1092 47 2875 2767 6 7 86 1 0
1 0 0 1658796 7196 1773112 0 0 5144 208 2688 2034 2 9 85 4 0
1 0 0 1631608 7196 1774948 0 0 1364 16 2100 1453 8 6 85 1 0
0 0 0 1617776 7196 1775016 0 0 12 6111 1728 1330 5 5 89 0 0
0 0 0 1617776 7196 1775016 0 0 0 0 441 475 0 1 99 0 0
0 0 0 1617972 7196 1774120 0 0 0 1843 532 569 0 2 97 0 0
0 0 0 1617972 7196 1774120 0 0 0 0 372 476 1 1 99 0 0
0 0 0 1617972 7196 1774120 0 0 0 8 410 536 0 1 99 0 0
[1]+ Stopped vmstat 1
[root@himanshu /]#
```

```
Activities Terminal Sep 15 17:34 root@server:/
root@server:/ x root@server:/
[root@himanshu /]# pgrep vmstat
29634
[root@himanshu /]# kill -SIGSTOP 29634
[root@himanshu /]#
```