

### To TOP or NOT to TOP

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### To TOP or NOT to TOP

Using the TOP command in Linux

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SAS Grid Platform Administrator



### **Monitoring Processes in Linux**

- By User
- By CPU
- By Size
- By Command
- By Memory
- By Status





#### The TOP command - Pro's

- Live output monitoring
- Sorting capability
- Highlighting running processes
- Single out processes by User
- Single out process by PID
- Edit refresh rate
- See processes by Command





# **Starting TOP**

- Open your PUTTY session \$>...
- Type: top
- Watch the magic happen...





### \$>top

```
top - 16:25:30 up 8 days, 22:31, 6 users, load average: 3.12, 3.13, 2.94
Tasks: 560 total, 1 running, 559 sleeping, 0 stopped, 0 zombie
Cpu(s): 35.8%us, 2.3%sy, 0.0%ni, 61.0%id, 0.8%wa, 0.0%hi, 0.0%si, 0.0%st
Mem: 65932484k total, 63058596k used, 2873888k free, 12204k buffers
Swap: 4194296k total, 101364k used, 4092932k free, 59100164k cached
 PID USER
                                SHR S %CPU %MEM
              PR NI VIRT
                           RES
                                                  TIME+ COMMAND
61983 mrekajm
              20
                   0 1429m
                           62m
                                25m S 101.4 0.1
                                                  7:40.35 sas
24484 thitchin 20
                   0 1735m 200m 12m S 99.7 0.3 15:12.48 sas
4424 mrekajm
              20
                   0 1627m 44m 11m S 94.1 0.1 51:07.90 sas
9916 daemon
              20
                   0 38956 4908 2444 S 1.7 0.0 131:51.86 vasd
65462 root 0 -20 34716 3204 1732 S 1.0
                                           0.0
                                                71:33.27 lim
3494 mrekajm
                   0 1239m 107m 368 S 0.7 0.2
              20
                                                 0:20.37 jproxy
12100 sasinst
              20
                   0 1880m 192m 5084 S 0.7 0.3 14:07.20 sas
12191 venkatm
              20
                   0 224m 8488 7440 S 0.7 0.0 0:01.53 smbd
              20
                                  0 S 0.3 0.0 1:28.74 ksoftirqd/1
   9 root
                         0
              20
                                  0 S 0.3 0.0 1:00.56 ksoftirgd/5
  25 root
2882 vandenbl
              20
                   0 27200 2056 1276 R
                                      0.3 0.0
                                                 0:01.58 top
```





# What's innit 4 me? – pt 1

- •PID Process ID
- •USER Who's dunnit?
- •PR Priority value
- •NI NICE value
- VIRT Virtual Memory used
- •RES Physical Memory used
- •SHR Shared Memory used
- •S Status (S = Sleep, Z = Zombie, R = Running etc.)





# What's innit 4 me? – pt 2

- •% CPU Percentage of CPU used
- •%MEM Percentage of the RAM used
- •TIME+ The Total Time of the activity of this PID
- •COMMAND The COMMAND executing this PID





### \$>top

```
top - 16:25:30 up 8 days, 22:31, 6 users, load average: 3.12, 3.13, 2.94
Tasks: 560 total, 1 running, 559 sleeping, 0 stopped, 0 zombie
Cpu(s): 35.8%us, 2.3%sy, 0.0%ni, 61.0%id, 0.8%wa, 0.0%hi, 0.0%si, 0.0%st
Mem: 65932484k total, 63058596k used, 2873888k free, 12204k buffers
Swap: 4194296k total, 101364k used, 4092932k free, 59100164k cached
 PID USER
                                SHR S %CPU %MEM
              PR NI VIRT
                           RES
                                                  TIME+ COMMAND
61983 mrekajm
              20
                   0 1429m
                           62m
                                25m S 101.4 0.1
                                                  7:40.35 sas
24484 thitchin 20
                   0 1735m 200m 12m S 99.7 0.3 15:12.48 sas
4424 mrekajm
              20
                   0 1627m 44m 11m S 94.1 0.1 51:07.90 sas
9916 daemon
              20
                   0 38956 4908 2444 S 1.7 0.0 131:51.86 vasd
65462 root 0 -20 34716 3204 1732 S 1.0
                                           0.0
                                                71:33.27 lim
3494 mrekajm
                   0 1239m 107m 368 S 0.7 0.2
              20
                                                 0:20.37 jproxy
12100 sasinst
              20
                   0 1880m 192m 5084 S 0.7 0.3 14:07.20 sas
12191 venkatm
              20
                   0 224m 8488 7440 S 0.7 0.0 0:01.53 smbd
              20
                                  0 S 0.3 0.0 1:28.74 ksoftirqd/1
   9 root
                         0
              20
                                  0 S 0.3 0.0 1:00.56 ksoftirgd/5
  25 root
2882 vandenbl
              20
                   0 27200 2056 1276 R
                                      0.3 0.0
                                                 0:01.58 top
```





# What's innit 4 me? – pt 3



# **Quitting Top**

Easy – hit "q" anytime:

\$> q





#### **Set the Refresh Rate**

Hit "d" or "s" anytime:
The default is 3.0s
\$> d Or \$> s





### Set the Refresh rate - \$>s or \$>d

```
top - 12:29:00 up 10 days, 15:55, 2 users,
                                            load average: 1.50, 2.00, 2.83
Tasks: 597 total, 3 running, 594 sleeping,
                                              0 stopped,
                                                          0 zombie
Cpu(s): 5.6%us, 2.0%sy, 0.3%ni, 89.8%id, 2.1%wa, 0.0%hi, 0.2%si, 0.0%st
     65932264k total, 50971044k used, 14961220k free,
                                       3419420k free, 47600488k cached
Change delay
                                  SHK S %CPU %MEM
                                                     TIME+
                                                           COMMAND
 LID OPEK
                                                   0:13.24 sas
50891 webbf
16526 root
                                              0.2 140:51.21 corosync
20596 root
9855 haych
                    0 227m 6996 6016 s
                                                   0:00.95 smbd
20756 root
                    0 1961m 6544 3384 s
                                                    5:48.57 ovcd
```





# Sorting the output

- 1. Run TOP => \$>top
- 2. Hit Shift-o (Uppercase O) => \$>O





### Sorting – Select a Column

```
Current Sort Field: K for window 1:Def
Select sort field via field letter, type any other key to return
 a: PID
               = Process Id
 b: PPID
               = Parent Process Pid
 c: RUSER
               = Real user name
 d: UID
               = User Id
 e: USER
               = User Name
 f: GROUP
               = Group Name
 g: TTY
               = Controlling Tty
 h: PR
               = Priority
 i: NI
               = Nice value
               = Last used cpu (SMP)
 j: P
 K: %CPU
               = CPU usage
 1: TIME
               = CPU Time
 m: TIME+
               = CPU Time, hundredths
               = Memory usage (RES)
 n: %MEM
 o: VIRT
               = Virtual Image (kb)
               = Swapped size (kb)
 p: SWAP
 q: RES
               = Resident size (kb)
 r: CODE
               = Code size (kb)
 s: DATA
               = Data+Stack size (kb)
 t: SHR
               = Shared Mem size (kb)
 u: nFLT
               = Page Fault count
 v: nDRT
               = Dirty Pages count
               = Process Status
 w: S
 x: COMMAND
               = Command name/line
               = Sleeping in Function
 y: WCHAN
 z: Flags
               = Task Flags <sched.h>
```





### Sorting – by CPU

```
top - 16:25:30 up 8 days, 22:31, 6 users, load average: 3.12, 3.13, 2.94
Tasks: 560 total,   1 running, 559 sleeping,   0 stopped,   0 zombie
Cpu(s): 35.8%us, 2.3%sy, 0.0%ni, 61.0%id, 0.8%wa, 0.0%hi, 0.0%si, 0.0%st
Mem: 65932484k total, 63058596k used, 2873888k free, 12204k buffers
Swap: 4194296k total, 101364k used, 4092932k free, 59100164k cached
                                SHR S %CPU %MEM
 PID USER
               PR NI VIRT
                            RES
                                                   TIME+ COMMAND
                                25m S 101.4 0.1
61983 mrekajm
                   0 1429m
                            62m
                                                  7:40.35 sas
24484 thitchin 20
                   0 1735m 200m 12m S 99.7 0.3 15:12.48 sas
4424 mrekajm
                   0 1627m 44m
                                11m S 94.1 0.1 51:07.90 sas
9916 daemon
                   0 38956 4908 2444 S 1.7 0.0 131:51.86 yasd
65462 root
               0 -20 34716 3204 1732 S
                                       1.0 0.0 71:33.27 lim
3494 mrekaim
                                       0.7 0.2
                                                  0:20.37 jproxy
              20
                   0 1239m 107m 368 S
12100 sasinst
                   0 1880m 192m 5084 S
                                       0.7 0.3 14:07.20 sas
                                       0.7 0.0
12191 venkatm
              20
                   0 224m 8488 7440 S
                                                0:01.53 smbd
   9 root
              20
                                       0.3 0.0 1:28.74 ksoftirgd/1
                                                 1:00.56 ksoftirgd/5
  25 root
              20
                                       0.3 0.0
2882 vandenbl
              20
                   0 27200 2056 1276 R
                                                  0:01.58 top
                                       0.3 0.0
```





# Reversing the output

Hit Shift – r (Uppercase r) \$>R

This will reverse the sort output.





### Sorting – by CPU: Reversing - ©

```
doj 82,10:0
                                       0 57200 2056 1276
                                                               2882 vandenbl
     1:00.56 ksoftirqd/5
                           0.0
                                                                   75 root
                                       0
     1:28.74 ksoftirqd/1
                           0.0
                                     S 0
                                                           97
                                                                   9 root
            pdms &2.10:0
                           0.0 T.0
                                     224m 8488 7440 S
                                                                12191 venkatm
             14:07.20 sas
                           8.0
                                     S 18805 MZ6I M088I 0
                                                                12100 sasinst
          0:20.37 jproxy
                           7.0
                                                                3494 mrekajm
                                     S 89E
                                            M701 M8521 0
             Mil 72.88:17
                           0.0
                               0.T
                                     S 2871 4028 31748 02- 0
                                                                   1007 462 root
                                                                 aomash a169
            bssv 88.12:151 0.0
                                     S 7444 S
             ses 06.70:12
                               1.46
                                                 M7291 0
                                                                4424 mrekajm
                                     S MII
                                            \mathbb{U}_{1}
             ses 84.51:21 E.0 7.99
                                     ZZm S
                                            M002 M2571 0
                                                               uidolidi 48442
                               25m S 101.4
                                                                61983 mrekajm
             \:40.35 sas
                          1.0
                                            WZ9
                                                 M6241 0
                                                                   PID USER
                           SHR S %CPU KMEM
                                                 VIRT
          COMMAND
                  TIME+
                                            RES
                                                      IN
                                                           ЫK
       4194296k total, 101364k used, 4092932k free, 59100164k cached
                      65932484k total, 63058596k used, 2873888k free,
     12204k butters
                .id%0.0 .ew%8.0 .bi%0.10 .in%0.0 .ye%£.2 .eu%8.25 :(e)uqጋ
J2%0.0 ,i2%0.0
                    Tasks: 560 total, 1 running, 559 sleeping, 0 stopped,
   top - 16:22:30 up 8 days, 22:31, 6 users, Load average: 3.12, 2.94
```





# Sorting – by CPU: Reversing - ©

```
top - 14:54:58 up 15 days, 21:00, 5 users, load average: 3.29, 3.33, 3.21
Tasks: 551 total, 2 running, 549 sleeping, 0 stopped,
                                                          O zombie
Cpu(s): 16.5%us, 5.9%sy, 0.0%ni, 64.1%id, 12.0%wa, 0.0%hi, 1.5%si, 0.0%st
Mem: 65932484k total, 65684756k used, 247728k free,
                                                        16360k buffers
Swap: 4194296k total, 98844k used, 4095452k free, 62029724k cached
  PID USER
                       VIRT
                             RES
                                 SHR S %CPU %MEM
                                                    TIME+ COMMAND
   1 root
               20
                    0 33176 1648 1436 S 0.0
                                             0.0
                                                   0:10.81 init
                                                   0:06.32 kthreadd
   2 root
               20
                                   0 S
                                        0.0
                                             0.0
   5 root
               RT
                    0
                                   0 S
                                        0.0
                                             0.0
                                                   0:00.00 migration/0
               RT
                                   0 S
                                        0.0
                                             0.0
                                                   0:08.32 watchdog/0
   6 root
                                        0.0 0.0
                                                   0:33.56 migration/1
   7 root
               RT
                                   0 S
   8 root
               RT
                                   0 S | 0.0 | 0.0
                                                   0:00.00 migration/1
                                   0 S 0.0 0.0
   9 root
                    0
                                                   2:39.44 ksoftirgd/1
               20
   10 root
               RT
                    0
                                   0 S | 0.0 | 0.0
                                                   0:04.95 watchdog/1
  11 root
               RT
                    0
                                   0 S 0.0 0.0
                                                   0:17.23 migration/2
   12 root
               RT
                              0
                                   0 S 0.0 0.0
                                                   0:00.00 migration/2
   13 root
               20
                                   0 S 0.0
                                             0.0
                                                   2:37.32 ksoftirgd/2
                    0
```





# See processing on ALL CPU's

Hit 1 \$>1

This will display all CPU's on the Node





#### See all CPU's

```
top - 15:01:54 up 15 days, 21:07, 5 users, load average: 2.16, 2.32, 2.79
Tasks: 549 total, 1 running, 547 sleeping, 0 stopped, 1 zombie
CpuO : 2.3%us, 8.7%sy, 0.0%ni, 83.9%id, 4.7%wa, 0.0%hi, 0.3%si,
                                                                   0.0%st
    : 3.7%us, 6.5%sy, 0.0%ni, 87.1%id, 2.0%wa, 0.0%hi, 0.7%si,
Cpu1
                                                                   0.0%st
Cpu2
     : 2.3%us, 7.3%sy, 0.0%ni, 89.7%id, 0.7%wa, 0.0%hi, 0.0%si,
                                                                   0.0%st
Cpu3
     : 0.7%us, 0.7%sy, 0.0%ni, 95.0%id, 3.4%wa, 0.0%hi, 0.3%si,
                                                                   0.0%st
     : 43.6%us, 7.4%sy, 0.0%ni, 2.7%id, 29.7%wa, 0.0%hi, 16.6%si,
                                                                   0.0%st
Cpu4
Cpu5
     : 24.1%us, 3.7%sy, 0.0%ni, 24.8%id, 47.3%wa, 0.0%hi, 0.0%si,
                                                                   0.0%st
     : 1.4%us, 11.1%sy, 0.0%ni, 69.3%id, 18.2%wa, 0.0%hi, 0.0%si,
Cpu6
                                                                   0.0%st
     : 2.4%us, 2.0%sy, 0.0%ni, 87.0%id, 8.2%wa, 0.0%hi, 0.3%si, 0.0%st
Cpu7
     65932484k total, 65680548k used, 251936k free, 18200k buffers
Swap: 4194296k total, 98844k used, 4095452k free, 62154696k cached
 PID USER
              PR
                  NI
                     VIRT
                            RES
                                SHR S %CPU %MEM
                                                  TIME+
                                                         COMMAND
24699 thitchin
              20
                   0 1570m
                           31m 8832 S 62.8 0.0
                                                 5:11.85 sas
48311 stokessi
                   0 1879m 297m 8308 S 48.9 0.5 130:32.61 sas
              20
6833 root
               20
                                  0 S 10.6 0.0 87:46.60 ibd2/dm-7-8
```





# Toggle with All CPU view...

Hit 1again....

\$>1

Switch to standard view.





#### Hide all CPU's

```
top - 14:54:58 up 15 days, 21:00, 5 users, load average: 3.29, 3.33, 3.21
Tasks: 551 total, 2 running, 549 sleeping,
                                             O stopped,
                                                          O zombie
Cpu(s): 16.5%us, 5.9%sy, 0.0%ni, 64.1%id, 12.0%wa, 0.0%hi, 1.5%si, 0.0%st
Mem: 65932484k total, 65684756k used, 247728k free,
                                                        16360k buffers
Swap: 4194296k total, 98844k used, 4095452k free, 62029724k cached
  PID USER
                       VIRT
                             RES
                                 SHR S %CPU %MEM
                                                    TIME+ COMMAND
   1 root
               20
                    0 33176 1648 1436 S 0.0
                                             0.0
                                                   0:10.81 init
                                                   0:06.32 kthreadd
   2 root
               20
                                   0 S
                                        0.0
                                             0.0
                          0
   5 root
               RT
                                   0 S
                                        0.0
                                             0.0
                                                   0:00.00 migration/0
                    0
   6 root
               RT
                                   0 S
                                        0.0
                                             0.0
                                                   0:08.32 watchdog/0
                                        0.0
                                                   0:33.56 migration/1
   7 root
               RT
                                   0 S
                                             0.0
   8 root
               RT
                                   0 S
                                        0.0 0.0
                                                   0:00.00 migration/1
                                   0 S 0.0 0.0
   9 root
                                                   2:39.44 ksoftirgd/1
               20
                    0
   10 root
               RT
                                   0 S | 0.0 | 0.0
                                                   0:04.95 watchdog/1
                    0
  11 root
               RT
                    0
                                   0 S 0.0 0.0
                                                   0:17.23 migration/2
   12 root
               RT
                               0
                                   0 S 0.0 0.0
                                                   0:00.00 migration/2
   13 root
               20
                                   0 S
                                        0.0
                                             0.0
                                                   2:37.32 ksoftirgd/2
                    0
```





# Toggle with All CPU view...

Hit 1again....

\$>1

And when you get bored, Hit 1 again...
And again...
And again...





# **OOPS!!!**









# **Highlight RUNNING processes...**

Hit b or z

\$>b Or \$>z





### Running processes: (b)

```
top - 15:53:24 up 15 days, 21:59, 5 users, load average: 2.34, 2.23, 1.98
Tasks: 543 total, 3 running, 539 sleeping, 0 stopped, 1 zombie
Cpu(s): 20.2%us. 5.7%sv. 0.0%ni. 73.6%id. 0.5%wa. 0.0%hi. 0.0%si. 0.0%st
Mem: 65932484k total, 65619144k used, 313340k free,
                                                       25916k buffers
Swap: 4194296k total. 98736k used, 4095560k free, 62116492k cached
  PID USER
                      VTRT
                            RES SHR S %CPU %MEM
                                                   TIME+ COMMAND
24699 thitchin
                            33m 8908 S 99.8 0.1 28:14.87 sas
              20
                   0 1580m
48311 stokessi 20
                   0 1559m 36m 8640 S 96.5 0.1 172:04.18 sas
21702 thitchin
                           10m 9184 S 4.0 0.0
              20
                   0 226m
                                                  0:48.51 smbd
 9916 daemon
                   0 38956 4880 2400 S 1.0 0.0 202:15.13 vasd
               20
 7122 root
                0 -20 34724 3196 1716 R
                                       0.3
                                            0.0
                                                  1:58.25 lim
                                       0.3
 8901 root
                    0 126m 38m 3940 S
                                            0.1
                                                 46:25.20 gdiskd
12912 root
                   0 204m 5608 4464 S 0.3 0.0 17:59.21 opcle
               20
53151 vandenbl
               20
                   0 27200 2048 1276 R 0.3
                                            0.0
                                                  0:25.11 top
                    0 33176 1648 1436 S 0.0
                                                  0:10.81 init
    1 root
                                            0.0
```





# Running processes: (z) in Technicolor!!

```
top - 15:56:35 up 15 days, 22:02, 5 users, load average: 2.38, 2.36, 2.07
      538 total, 1 running, 537 sleeping,
                                            O stopped.
                         0.0%ni. 66.7%id.
       16.9%us. 13.3%sv.
                                           0.2%wa.
                                                   0.0%hi.
                                                            2.9%si
     65932484k total, 65665580k used,
                                      266904k free.
                                                       25632k buffers
      4194296k total,
                        98736k used.
                                     4095560k free, 61668220k cached
 PID USER
                                            0.0 11:07.48 glock workqueue
 9467 root
                                            0.0 31:10.64 ksoftirgd/4
                                           0.2 362:11.46 corosync
                                                  0:26.21 top
```





# To view SAS (and related) processes

\$> top -c sas





# List SAS (and related) processes \$> top -c sas

```
top - 16:00:23 up 15 days, 22:06, 5 users, load average: 3.95, 3.18, 2.44
Tasks: 543 total, 1 running, 542 sleeping, 0 stopped,
Cpu(s): 20.0%us, 6.7%sy, 0.0%ni, 72.4%id, 0.3%wa, 0.0%hi, 0.5%si, 0.0%st
Mem: 65932484k total, 58627576k used, 7304908k free,
                                                     24208k buffers
Swap: 4194296k total, 97112k used, 4097184k free, 54090884k cached
  PID USER
                                                        COMMAND
                      VIRT
                           RES SHR S %CPU %MEM
                                                  TIME+
12100 sasinst
                   0 2016m 260m 5416 S 0.0 0.4 23:57.96 sas
8661 root
                  0 772m 129m 98m S 0.3 0.2 362:16.56 corosync
11379 sasinst
                   0 1746m
                           60m 1576 S 0.0 0.1
                                                 1:17.84 sas
32624 halilh
                 0 1227m 57m 224 S 0.0 0.1
                                                 0:20.52 jproxy
30045 haych
                   0 1863m
                           46m 1604 S 0.0 0.1 256:54.81 sas
34385 nannaman 20
                  0 1601m 42m 10m S 0.0 0.1
                                                 0:41.79 sas
13356 stokessi 20
                   0 1693m
                           38m 2204 S 0.0 0.1 292:51.47 sas
8901 root
                   0 126m 38m 3940 S 0.0 0.1 46:26.21 qdiskd
53712 konfortj
                   0 1634m 37m 1608 S 0.0 0.1
                                                 3:38.79 sas
              20
9356 root
                                                 0:25.14 clvmd
                  0 180m
                           36m 3284 S 0.0 0.1
              20
27069 stokessi 20
                   0 1511m
                           34m 2228 S 0.0 0.1
                                                 9:37.69 sas
23459 stokessi 20
                   0 1336m
                           34m 1552 S 0.0 0.1
                                                 0:26.47 sas
48311 stokessi 20
                   0 1559m
                           33m 5172 S 98.1 0.1 178:32.11 sas
49746 rapuanov 20
                   0 1493m 32m 1540 S 0.0 0.1 13:11.94 sas
32173 halilh
                   0 1545m 32m 1572 S 0.0 0.1
                                                 9:45.01 sas
```





# To view the FULL command path

While TOP is running:

Hit c

\$> C

Toggle on and off by hitting c...





# List SAS (and related) processes \$> top -c sas

```
top - 16:15:22 up 15 days, 22:21,  5 users,  load average: 1.04, 1.64, 2.03
Tasks: 533 total, 1 running, 532 sleeping, 0 stopped,
Cpu(s): 11.2%us, 7.0%sy, 0.0%ni, 81.6%id, 0.1%wa, 0.0%hi, 0.1%si, 0.0%st
                                                        5884k buffers
     65932484k total, 65676416k used,
                                       256068k free.
Swap: 4194296k total.
                        97104k used, 4097192k free, 61260044k cached
 PID USER
                  NI VIRT
                            RES
                                 SHR S %CPU %MEM
                                                    TIME+ COMMAND
48311 stokessi 20
                   0 2137m 552m 6304 S 130.6 0.9 188:00.46 /SASbin/prod/software/SASFoundation/9.3/sasexe/sas -noterm
  99 root
                                       3.6 0.0 66:38.60 [kswapd1]
  98 root
                                       3.3 0.0 66:28.22 [kswapd0]
                   0 38956 4876 2396 S 2.0 0.0 202:34.35 /opt/quest/sbin/vasd -p /var/opt/quest/vas/vasd.pid
9916 daemon
7122 root
                0 -20 34724 3148 1668 $ 1.3 0.0
                                                 2:07.42 /SASbin/thirdparty/lsf/7.0/linux2.6-glibc2.3-x86 64/etc/lim
                   0 38980 5360 2776 S 1.0 0.0 19:28.85 /opt/quest/sbin/vasd -p /var/opt/quest/vas/vasd/.vasd.pid
9917 daemon
                                       0.7 0.4 23:59.11 /SASbin/prod/software/SASFoundation/9.3/sasexe/sas
12100 sasinst
                   0 2015m 259m 4136 S
```





# To watch a single user

Hit top –u naughtyboy

\$> top -u naughtyboy





### List PIDs by single user \$> top -u username

```
top - 16:23:59 up 15 days, 22:29, 5 users, load average: 3.47, 2.99, 2.48
Tasks: 526 total, 1 running, 525 sleeping, 0 stopped, 0 zombie
Cpu(s): 21.5%us, 4.4%sy, 0.0%ni, 73.7%id, 0.1%wa, 0.0%hi, 0.2%si, 0.0%st
Mem: 65932484k total, 48492152k used, 17440332k free, 8564k buffers
Swap: 4194296k total, 97104k used, 4097192k free, 44619688k cached
 PID USER
                               SHR S %CPU %MEM
                  NI VIRT
                            RES
                                                   TIME+ COMMAND
48311 stokessi
              20
                   0 1564m
                            35m 3080 $ 99.4 0.1 196:29.86 sas
13356 stokessi
              20
                   0 1693m 38m 2204 S 0.0 0.1 292:51.52 sas
23459 stokessi
              20
                   0 1336m 34m 1552 S 0.0 0.1 0:26.52 sas
27069 stokessi
              20
                  <u>0 1511m 34m 2228 $ 0.0 0.1 9:37.75 sas</u>
41387 stokessi
               20
                   0 1277m 19m 1552 S 0.0 0.0 0:01.18 sas
```





# To watch a single Process

Hit top –p Process ID

\$> top -p 48311





# List single PIDs \$> top -p 48311

```
top - 16:41:16 up 15 days, 22:46, 4 users, load average: 2.86, 3.20, 2.90
Tasks: 1 total, 0 running, 1 sleeping, 0 stopped, 0 zombie
Cpu(s): 11.9%us, 7.5%sy, 0.0%ni, 62.6%id, 14.6%wa, 0.0%hi, 3.5%si, 0.0%st
Mem: 65932484k total, 65682952k used, 249532k free, 12252k buffers
Swap: 4194296k total, 97104k used, 4097192k free, 61381308k cached
 PID USER
                   VIRT RES SHR S %CPU %MEM
                                           TIME+ COMMAND
```





### To kill a Process

While top is running – Hit k

\$>k

Prompt: PID to Kill:

Type a PID: PID to Kill: 48311

Prompt: Kill PID 48311 with signal [15]?

Type: y or n: y





Kill a single PIDs \$> k Cpu5 0.0%ni,100.0%id, 0.0%wa, 0.0%sy. 0.0%sy, 0.0%ni,100.0%id. 0.0%wa, Cpu7 65932264k total, 31976792k used, 33955472k free, 8296k buffer 779112k used, 3415188k free, 28796144k cached RES TIME+ COMMAND PK 34296 warrd 20 36:40.20 sas vandenb1 20 26828 2068 1260 0:00.97 top 20 0:38.01 events/5root 20 6:17.50 dlm\_astd root 0.0%sy, 0.0%ni,100.0%id, 0.0%wa, 65932264k total, 31976792k used, 33955472k free, 8296k 779112k used. 3415188k free. 28796144k cach TIME+ COMMAND 20 36:40.20 warrd sas 23554 vandenbl 20 26828 2068 1260 0:00.97 top

### Kill PID 23554 with signal [15]? y





# You can save your top!

- Run top
- Set your preferred view ( >top -c sas)
- Decide all CPUs or not (Hit 1)
- •Hit Uppercase w => \$> W





# To see all processes except ROOT

- Check your TOP version => top -version
- •Requires Top version 3.2.9 and higher.
- •Hit top –u!root
- •\$>top -u!root







# To TOP or NOT to TOP Len van den Berg

**Questions and Answers?** 

