

# Memory Utilization on Linux

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Hello,

I would like to know how much physical memory consumed by each running applications on Linux. The ps and top are showing different outputs, I could not find it out, what amount of actual memory consumed by each running process on my system.

The scenario is :

The physical memory installed on Linux system is 1024MB

Top command output :

```
top - 02:11:57 up 18:48, 2 users, load average:
0.00, 0.00, 0.00
Tasks: 126 total, 1 running, 125 sleeping, 0
stopped, 0 zombie
Cpu(s): 0.0% us, 0.2% sy, 0.0% ni, 99.8% id, 0.0%
wa, 0.0% hi, 0.0% si
Mem: 1026328k total, 810848k used, 215480k free,
47032k buffers
Swap: 2040244k total, 0k used, 2040244k free,
316708k cached
```

Free command output :

```
Free -mt
total used free
shared buffers cached
Mem: 1002 791 210
0 45 309
-/+ buffers/cache: 436 565
Swap: 1992 0 1992
Total: 2994 791 2203
```

The free command is showing 436MB used and 565MB is free but the Top command is showing 810MB is used and

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215MB is free  
why cached is showing 309MB is it swap memory If I  
calculate it comes to  $436+309+45=791$  how cache is  
distributed with each application  
is cache and VIRT is same

could anyone tell me how do I find out exact physical  
memory occupied by each applications.

If go with ps command, is RSS is write value or  
Virtual Memory + RSS ( Resident set size) value

```
#ps -eo rss,pcpu,comm,user,pid,time |sort -nrk1|head  
-20
```

```
242896 0.1 java 501 5294 00:01:28  
27628 0.0 spamd root 3314 00:00:01  
25380 0.0 spamd root 3093 00:00:00  
23624 0.0 spamd root 3315 00:00:00  
22656 0.0 mysqld mysql 9573 00:00:00  
22656 0.0 mysqld mysql 5415 00:00:02  
22656 0.0 mysqld mysql 5340 00:00:00  
22656 0.0 mysqld mysql 5336 00:00:00  
22656 0.0 mysqld mysql 3322 00:00:00  
22656 0.0 mysqld mysql 3321 00:00:00  
22656 0.0 mysqld mysql 3320 00:00:00  
22656 0.0 mysqld mysql 3319 00:00:00  
22656 0.0 mysqld mysql 3311 00:00:00  
22656 0.0 mysqld mysql 3310 00:00:00  
22656 0.0 mysqld mysql 3309 00:00:00  
22656 0.0 mysqld mysql 3308 00:00:00  
22656 0.0 mysqld mysql 3307 00:00:00  
22656 0.0 mysqld mysql 3233 00:00:00  
22656 0.0 mysqld mysql 22854 00:00:00  
22656 0.0 mysqld mysql 22853 00:00:00
```

Thanks  
Nilesh

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