

a,

processz aktivitást mutató parancs, valós idejű módban készít jelentést a futó rendszerről.

```
oraveczaron@oraveczaron-VirtualBox: ~  
File Edit View Search Terminal Help  
top - 09:24:27 up 2 min, 1 user, load average: 3,21, 1,54, 0,58  
Tasks: 154 total, 1 running, 153 sleeping, 0 stopped, 0 zombie  
%Cpu(s): 9,2 us, 0,7 sy, 0,0 ni, 89,8 id, 0,0 wa, 0,0 hi, 0,4 si, 0,0 st  
MiB Mem : 6296,4 total, 5030,3 free, 590,3 used, 675,9 buff/cache  
MiB Swap: 1873,4 total, 1873,4 free, 0,0 used. 5462,8 avail Mem  


| PID  | USER     | PR  | NI  | VIRT    | RES    | SHR    | S | %CPU | %MEM | TIME+   | COMMAND  |
|------|----------|-----|-----|---------|--------|--------|---|------|------|---------|----------|
| 1085 | oravecz+ | 20  | 0   | 3279204 | 183988 | 107540 | S | 12,0 | 2,9  | 0:06.19 | cinnamon |
| 742  | root     | 20  | 0   | 256908  | 67660  | 42220  | S | 1,7  | 1,0  | 0:00.92 | Xorg     |
| 1    | root     | 20  | 0   | 102292  | 11712  | 8400   | S | 0,0  | 0,2  | 0:01.59 | systemd  |
| 2    | root     | 20  | 0   | 0       | 0      | 0      | S | 0,0  | 0,0  | 0:00.00 | 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+ |
| 5    | root     | 20  | 0   | 0       | 0      | 0      | I | 0,0  | 0,0  | 0:00.00 | kworker+ |
| 6    | root     | 0   | -20 | 0       | 0      | 0      | I | 0,0  | 0,0  | 0:00.00 | kworker+ |
| 7    | root     | 20  | 0   | 0       | 0      | 0      | I | 0,0  | 0,0  | 0:00.02 | kworker+ |
| 8    | root     | 0   | -20 | 0       | 0      | 0      | I | 0,0  | 0,0  | 0:00.00 | mm_perc+ |
| 9    | root     | 20  | 0   | 0       | 0      | 0      | S | 0,0  | 0,0  | 0:00.11 | ksoftir+ |
| 10   | root     | 20  | 0   | 0       | 0      | 0      | I | 0,0  | 0,0  | 0:00.22 | rcu_sch+ |
| 11   | root     | rt  | 0   | 0       | 0      | 0      | S | 0,0  | 0,0  | 0:00.00 | migrati+ |
| 12   | root     | -51 | 0   | 0       | 0      | 0      | S | 0,0  | 0,0  | 0:00.00 | idle_in+ |
| 13   | root     | 20  | 0   | 0       | 0      | 0      | I | 0,0  | 0,0  | 0:00.08 | kworker+ |
| 14   | root     | 20  | 0   | 0       | 0      | 0      | S | 0,0  | 0,0  | 0:00.00 | cpuhp/0  |
| 15   | root     | 20  | 0   | 0       | 0      | 0      | S | 0,0  | 0,0  | 0:00.00 | kdevtmp+ |


```

b,

rendszer aktivitásról, a hardverről és a rendszerről nyújt információkat.

```
oraveczaron@oraveczaron-VirtualBox: ~  
File Edit View Search Terminal Help  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
oraveczaron@oraveczaron-VirtualBox:~$ vmstat  
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 5155296 38268 653940 0 0 4597 200 347 1101 17 9 33 41  
0  
oraveczaron@oraveczaron-VirtualBox:~$
```

c, w- mutatja ki van belépve és mit csinál jelenleg.

```
oraveczaron@oraveczaron-VirtualBox:~$ w  
09:25:48 up 3 min, 1 user, load average: 0,77, 1,16, 0,53  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT  
oravecza tty7 :0 09:23 3:17 1.45s 0.47s cinnamon-sessio
```

```
oraveczaron@oraveczaron-VirtualBox:~$ who
oraveczaron tty7      2021-02-25 09:23 (:0)
```

```
oraveczaron@oraveczaron-VirtualBox:~$ whoami
oraveczaron
```

d, os neve

```
oraveczaron@oraveczaron-VirtualBox:~$ uname
Linux
```

e, A jelenleg futó processzeket tudjuk kilistázni

```
oraveczaron@oraveczaron-VirtualBox:~$ ps
  PID TTY          TIME CMD
 1366 pts/0    00:00:00 bash
 1524 pts/0    00:00:00 ps
```

```
oraveczaron@oraveczaron-VirtualBox:~$ ps-
Command 'ps-' not found, did you mean:

  command 'psl' from deb psl (0.21.0-1ubuntu1)
  command 'ps' from deb procps (2:3.3.16-1ubuntu2)
  command 'psi' from deb psi (1.3-5build1)
  command 'psw' from deb wise (2.4.1-21)
  command 'psf' from deb tcm (2.20+TSQD-5build1)
  command 'psd' from deb profile-sync-daemon (6.34-1)
  command 'psc' from deb sc (7.16-4ubuntu3)

Try: sudo apt install <deb name>
```

```
oraveczaron@oraveczaron-VirtualBox:~$ ps- A
Command 'ps-' not found, did you mean:

  command 'psc' from deb sc (7.16-4ubuntu3)
  command 'ps' from deb procps (2:3.3.16-1ubuntu2)
  command 'psw' from deb wise (2.4.1-21)
  command 'psf' from deb tcm (2.20+TSQD-5build1)
  command 'psd' from deb profile-sync-daemon (6.34-1)
  command 'psi' from deb psi (1.3-5build1)
  command 'psl' from deb psl (0.21.0-1ubuntu1)

Try: sudo apt install <deb name>
```

```
oraveczaron@oraveczaron-VirtualBox:~$ ps - Al
```

```
Command 'ps-' not found, did you mean:
```

```
command 'psc' from deb sc (7.16-4ubuntu3)
command 'ps' from deb procps (2:3.3.16-1ubuntu2)
command 'psd' from deb profile-sync-daemon (6.34-1)
command 'psw' from deb wise (2.4.1-21)
command 'psl' from deb psl (0.21.0-1ubuntu1)
command 'psi' from deb psi (1.3-5build1)
command 'psf' from deb tcm (2.20+TSQD-5build1)
```

```
Try: sudo apt install <deb name>
```

```
oraveczaron@oraveczaron-VirtualBox:~$ ps -AlF
```

F	S	UID	PID	PPID	C	PRI	NI	ADDR	SZ	WCHAN	RSS	PSR	STIME	TTY
			TIME											
4	S	root		1	0	80	0	-	25573	-	11712	0	09:22	?
00:00:01			/sbin/init splash											
1	S	root		2	0	80	0	-	0	-	0	0	09:22	?
00:00:00			[kthreadd]											
1	I	root		3	2	60	-20	-	0	-	0	0	09:22	?
00:00:00			[rcu_gp]											
1	I	root		4	2	60	-20	-	0	-	0	0	09:22	?
00:00:00			[rcu_par_gp]											
1	I	root		6	2	60	-20	-	0	-	0	0	09:22	?
00:00:00			[kworker/0:0H-kblockd]											
1	I	root		7	2	80	0	-	0	-	0	0	09:22	?
00:00:00			[kworker/u2:0-events_power_efficient]											
1	I	root		8	2	60	-20	-	0	-	0	0	09:22	?
00:00:00			[mm_percpu_wq]											
1	S	root		9	2	80	0	-	0	-	0	0	09:22	?
00:00:00			[ksoftirqd/0]											
1	I	root		10	2	80	0	-	0	-	0	0	09:22	?

```

oraveczaron@oraveczaron-VirtualBox:~$ ps -ALFH
F S UID          PID     PPID  C PRI  NI ADDR SZ WCHAN    RSS PSR STIME TTY
  TIME CMD
1 S root           2         0  0  80   0 -    0 -        0  0 09:22 ?
00:00:00 [kthreadd]
1 I root           3         2  0  60  -20 -    0 -        0  0 09:22 ?
00:00:00 [rcu_gp]
1 I root           4         2  0  60  -20 -    0 -        0  0 09:22 ?
00:00:00 [rcu_par_gp]
1 I root           6         2  0  60  -20 -    0 -        0  0 09:22 ?
00:00:00 [kworker/0:0H-kblockd]
1 I root           7         2  0  80   0 -    0 -        0  0 09:22 ?
00:00:00 [kworker/u2:0-events_power_efficient]
1 I root           8         2  0  60  -20 -    0 -        0  0 09:22 ?
00:00:00 [mm_percpu_wq]
1 S root           9         2  0  80   0 -    0 -        0  0 09:22 ?
00:00:00 [ksoftirqd/0]
1 I root          10         2  0  80   0 -    0 -        0  0 09:22 ?
00:00:00 [rcu_sched]
1 S root          11         2  0 -40   - -    0 -        0  0 09:22 ?
00:00:00 [migration/0]
5 S root          12         2  0   9   - -    0 -        0  0 09:22 ?

```

```

oraveczaron@oraveczaron-VirtualBox:~$ ps ax
  PID TTY          STAT TIME COMMAND
    1 ?           Ss    0:01 /sbin/init splash
    2 ?           S      0:00 [kthreadd]
    3 ?           I<     0:00 [rcu_gp]
    4 ?           I<     0:00 [rcu_par_gp]
    6 ?           I<     0:00 [kworker/0:0H-kblockd]
    7 ?           I      0:00 [kworker/u2:0-events_power_efficient]
    8 ?           I<     0:00 [mm_percpu_wq]
    9 ?           S      0:00 [ksoftirqd/0]
   10 ?           I      0:00 [rcu_sched]
   11 ?           S      0:00 [migration/0]
   12 ?           S      0:00 [idle_inject/0]
   13 ?           I      0:00 [kworker/0:1-events]
   14 ?           S      0:00 [cpuhp/0]
   15 ?           S      0:00 [kdevtmpfs]
   16 ?           I<     0:00 [netns]
   17 ?           S      0:00 [rcu_tasks_kthre]
   18 ?           S      0:00 [kauditd]
   19 ?           S      0:00 [khungtaskd]

```

```

oraveczaron@oraveczaron-VirtualBox:~$ ps axu
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.2  0.1 102292 11712 ?        Ss   09:22   0:01 /sbin/init sp
root         2  0.0  0.0      0     0 ?        S    09:22   0:00 [kthreadd]
root         3  0.0  0.0      0     0 ?        I<   09:22   0:00 [rcu_gp]
root         4  0.0  0.0      0     0 ?        I<   09:22   0:00 [rcu_par_gp]
root         6  0.0  0.0      0     0 ?        I<   09:22   0:00 [kworker/0:0H
root         7  0.0  0.0      0     0 ?        I    09:22   0:00 [kworker/u2:0
root         8  0.0  0.0      0     0 ?        I<   09:22   0:00 [mm_percpu_wq
root         9  0.0  0.0      0     0 ?        S    09:22   0:00 [ksoftirqd/0]
root        10  0.0  0.0      0     0 ?        I    09:22   0:00 [rcu_sched]
root        11  0.0  0.0      0     0 ?        S    09:22   0:00 [migration/0]
root        12  0.0  0.0      0     0 ?        S    09:22   0:00 [idle_inject/
root        13  0.0  0.0      0     0 ?        I    09:22   0:00 [kworker/0:1-
root        14  0.0  0.0      0     0 ?        S    09:22   0:00 [cpuhp/0]
root        15  0.0  0.0      0     0 ?        S    09:22   0:00 [kdevtmpfs]
root        16  0.0  0.0      0     0 ?        I<   09:22   0:00 [netns]
root        17  0.0  0.0      0     0 ?        S    09:22   0:00 [rcu_tasks_kt
root        18  0.0  0.0      0     0 ?        S    09:22   0:00 [kauditd]
root        19  0.0  0.0      0     0 ?        S    09:22   0:00 [khungtaskd]
root        20  0.0  0.0      0     0 ?        S    09:22   0:00 [oom_reaper]
root        21  0.0  0.0      0     0 ?        I<   09:22   0:00 [writeback]

```

```

oraveczaron@oraveczaron-VirtualBox:~$ ps -ejH
  PID   PGID   SID TTY      TIME CMD
    2     0     0 ?      00:00:00 kthreadd
    3     0     0 ?      00:00:00 rcu_gp
    4     0     0 ?      00:00:00 rcu_par_gp
    6     0     0 ?      00:00:00 kworker/0:0H-kblockd
    7     0     0 ?      00:00:00 kworker/u2:0-events_power_efficient
    8     0     0 ?      00:00:00 mm_percpu_wq
    9     0     0 ?      00:00:00 ksoftirqd/0
   10     0     0 ?      00:00:00 rcu_sched
   11     0     0 ?      00:00:00 migration/0
   12     0     0 ?      00:00:00 idle_inject/0
   13     0     0 ?      00:00:00 kworker/0:1-events
   14     0     0 ?      00:00:00 cpuhp/0
   15     0     0 ?      00:00:00 kdevtmpfs
   16     0     0 ?      00:00:00 netns
   17     0     0 ?      00:00:00 rcu_tasks_kthre
   18     0     0 ?      00:00:00 kauditd
   19     0     0 ?      00:00:00 khungtaskd
   20     0     0 ?      00:00:00 oom_reaper
   21     0     0 ?      00:00:00 writeback
   22     0     0 ?      00:00:00 kcompactd0
   23     0     0 ?      00:00:00 kcmd

```

```
oraveczaron@oraveczaron-VirtualBox:~$ ps axjf
```

PPID	PID	PGID	SID	TTY	TPGID	STAT	UID	TIME	COMMAND
0	2	0	0	?	-1	S	0	0:00	[kthreadd]
2	3	0	0	?	-1	I<	0	0:00	_ [rcu_gp]
2	4	0	0	?	-1	I<	0	0:00	_ [rcu_par_
2	6	0	0	?	-1	I<	0	0:00	_ [kworker/
2	8	0	0	?	-1	I<	0	0:00	_ [mm_percp
2	9	0	0	?	-1	S	0	0:00	_ [ksoftirq
2	10	0	0	?	-1	I	0	0:00	_ [rcu_sche
2	11	0	0	?	-1	S	0	0:00	_ [migratio
2	12	0	0	?	-1	S	0	0:00	_ [idle_inj
2	13	0	0	?	-1	I	0	0:00	_ [kworker/
2	14	0	0	?	-1	S	0	0:00	_ [cpuhp/0]
2	15	0	0	?	-1	S	0	0:00	_ [kdevtmpf
2	16	0	0	?	-1	I<	0	0:00	_ [netns]
2	17	0	0	?	-1	S	0	0:00	_ [rcu_task
2	18	0	0	?	-1	S	0	0:00	_ [kauditd]
2	19	0	0	?	-1	S	0	0:00	_ [khungtas
2	20	0	0	?	-1	S	0	0:00	_ [oom_reap
2	21	0	0	?	-1	I<	0	0:00	_ [writebac
2	22	0	0	?	-1	S	0	0:00	_ [kcompact
2	23	0	0	?	-1	SN	0	0:00	_ [kcmdl

```
oraveczaron@oraveczaron-VirtualBox:~$ pstree
```

```

systemd--ModemManager--2*[{ModemManager}]
         --NetworkManager--2*[{NetworkManager}]
         --accounts-daemon--2*[{accounts-daemon}]
         --acpid
         --agetty
         --anacron
         --avahi-daemon--avahi-daemon
         --colord--2*[{colord}]
         --cron
         --csd-printer--2*[{csd-printer}]
         --cups-browsed--2*[{cups-browsed}]
         --cupsd
         --dbus-daemon
         --gnome-keyring-d--3*[{gnome-keyring-d}]
         --2*[{kerneloops}]
         --lightdm--Xorg--{Xorg}
                --lightdm--cinnamon-sessio--agent--2*[{agent}]
                --lightdm--cinnamon-sessio--applet.py
                --lightdm--cinnamon-sessio--blueberry-obex--3*[{blueberry+
                --lightdm--cinnamon-sessio--cinnamon-killer--3*[{cinnamon-+

```

```
oraveczaron@oraveczaron-VirtualBox:~$ ps -p 1286 -o comn= -8
error: unknown user-defined format specifier "comn"
```

Usage:

ps [options]

Try 'ps --help <simple|list|output|threads|misc|all>'
or 'ps --help <s|l|o|t|m|a>'
for additional help text.

For more details see ps(1).


```

oraveczaron@oraveczaron-VirtualBox:~$ ps -auf | sort -nr -k 3 | head -5
root      742  0.7  1.0 258020 68776 tty7      Ssl+ 09:23   0:06 /usr/lib/xorg
/Xorg -core :0 -seat seat0 -auth /var/run/lightdm/root/:0 -nolisten tcp vt7 -nov
tswitch
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root      744  0.0  0.0  11304   1820 tty1      Ss+  09:23   0:00 /sbin/agetty
-o -p -- \u --noclear tty1 linux
oravecz+ 1678  0.0  0.0  13492   1384 pts/0    D+   09:37   0:00 \_ bash
oravecz+ 1677  0.0  0.0  17460    820 pts/0    S+   09:37   0:00 \_ sort -nr
-k 3
oraveczaron@oraveczaron-VirtualBox:~$

```

f, fizikai memória és a swap által használt és szabad terület, ezek összege, pufferek, szabad pufferek száma.

```

oraveczaron@oraveczaron-VirtualBox:~$ free
              total        used        free      shared  buff/cache   available
Mem:           6447556        602716       4937160         13276        907680       5575984
Swap:          1918356           0         1918356

```

g, CPU statisztika és a számítógép I/O eszközei, a hálózati fájlrendszerek és a partíciókat kijelzi.

```

oraveczaron@oraveczaron-VirtualBox:~$ iostat
Linux 5.4.0-58-generic (oraveczaron-VirtualBox)          02/25/2021      _x86_64_
(1 CPU)

avg-cpu:  %user   %nice %system %iowait  %steal   %idle
           12,20    0,02    2,89    6,90    0,00   77,99

Device            tps    kB_read/s    kB_wrtn/s    kB_dscd/s    kB_read    kB_w
rtn    kB_dscd
sda             37,65       825,87       251,67         0,00     997079     303
849              0

```

h, aktivitási adatok jelzése és összegyűjtése, mentés.

```

oraveczaron@oraveczaron-VirtualBox:~$ sar
Cannot open /var/log/sysstat/sa25: No such file or directory
Please check if data collecting is enabled

```

i, több processzoros számítógép esetén használják.

```

oraveczaron@oraveczaron-VirtualBox:~$ mpstat
Linux 5.4.0-58-generic (oraveczaron-VirtualBox)          02/25/2021      _x86_64_
(1 CPU)

09:43:40 AM  CPU      %usr   %nice    %sys %iowait    %irq   %soft  %steal  %guest
 %gnice   %idle
09:43:40 AM  all      12,04    0,02    2,72    6,54    0,00    0,12    0,00    0,00
          0,00   78,56

```

j, processz memória használatát jelzi.

```
oraveczaron@oraveczaron-VirtualBox:~$ pmap

Usage:
pmap [options] PID [PID ...]

Options:
-x, --extended          show details
-X                      show even more details
                        WARNING: format changes according to /proc/PID/smaps
-XX                     show everything the kernel provides
-c, --read-rc           read the default rc
-C, --read-rc-from=<file> read the rc from file
-n, --create-rc         create new default rc
-N, --create-rc-to=<file> create new rc to file
                        NOTE: pid arguments are not allowed with -n, -N
-d, --device           show the device format
-q, --quiet            do not display header and footer
-p, --show-path        show path in the mapping
-A, --range=<low>[,<high>] limit results to the given range

-h, --help            display this help and exit
-V, --version         output version information and exit
```