

VS8KWD Gáncsos Dániel

a, A számítógépen futó processzeket listázza ki

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~  
top - 14:58:26 up 4 min, 1 user, load average: 1,81, 0,87, 0,35  
Tasks: 171 total, 2 running, 130 sleeping, 0 stopped, 0 zombie  
%Cpu(s): 73,6 us, 2,8 sy, 0,0 ni, 18,9 id, 0,2 wa, 0,0 hi, 0,2 si, 4,3 st  
KiB Mem : 3024932 total, 454404 free, 467548 used, 2102980 buff/cache  
KiB Swap: 998396 total, 998396 free, 0 used, 2203972 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
8784	root	20	0	15392	9888	5760	S	1,7	0,3	0:00.05	py3compile
8786	root	20	0	16076	10400	5656	R	1,3	0,3	0:00.04	python3.5
1601	onworks	20	0	382208	186064	75772	S	1,0	6,2	0:12.32	compiz
8	root	20	0	0	0	0	I	0,3	0,0	0:00.50	rcu_sched
171	root	0	-20	0	0	0	I	0,3	0,0	0:01.12	kworker/1:+
196	root	20	0	0	0	0	S	0,3	0,0	0:01.68	jbd2/sda1-8
2025	root	20	0	74824	67160	40848	S	0,3	2,2	1:17.25	unattended+
2130	root	20	0	74708	60124	33672	S	0,3	2,0	0:00.28	unattended+
6802	onworks	20	0	120376	31848	27304	S	0,3	1,1	0:00.43	gnome-term+
1	root	20	0	25084	5028	3756	S	0,0	0,2	0:02.42	systemd
2	root	20	0	0	0	0	S	0,0	0,0	0:00.00	kthreadd
3	root	20	0	0	0	0	I	0,0	0,0	0:00.00	kworker/0:0
4	root	0	-20	0	0	0	I	0,0	0,0	0:00.00	kworker/0:+
5	root	20	0	0	0	0	I	0,0	0,0	0:00.34	kworker/u4+
6	root	0	-20	0	0	0	I	0,0	0,0	0:00.00	mm_percpu_+
7	root	20	0	0	0	0	S	0,0	0,0	0:00.08	ksoftirqd/0
9	root	20	0	0	0	0	I	0,0	0,0	0:00.00	rcu_bh

b, a hardwares egységekről és az op rendszerről mutat információkat

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ vmstat  
procs -----memory----- ---swap-- -----io---- -system-- -----cpu-----  
r b swpd free buff cache si so bi bo in cs us sy id wa st  
1 0 0 300288 127964 2125332 0 0 1076 3671 909 1995 41 11 40 2  
6  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ vmstat -a  
procs -----memory----- ---swap-- -----io---- -system-- -----cpu-----  
r b swpd free inact active si so bi bo in cs us sy id wa st  
4 0 0 169896 1595584 1085900 0 0 1068 3782 912 2008 40 12 40 2  
6  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ vmstat -m  
vmstat: your kernel does not support slabinfo or your permissions are insufficie  
nt  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ █
```

c, azt mutatja meg kik használják az adott rendszert és mt csinál

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ w  
15:00:46 up 6 min, 1 user, load average: 0,41, 0,75, 0,39  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT  
onworks tty7 :0 30Aug19 542days 7.03s 0.16s /sbin/upstart -  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ w USER  
15:02:10 up 8 min, 1 user, load average: 0,31, 0,62, 0,37  
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ whoami  
onworks  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ █
```

d, a felhasználónevet adja ki

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ uname  
Linux  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

e, a futó processzeket listázza ki (-A val a rejtetteket is megmutatja )

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ps  
  PID TTY          TIME CMD  
 24686 pts/1    00:00:00 bash  
 24697 pts/1    00:00:00 ps  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ ps -A  
  PID TTY          TIME CMD  
    1 ?           00:00:02 systemd  
    2 ?           00:00:00 kthreadd  
    3 ?           00:00:00 kworker/0:0  
    4 ?           00:00:00 kworker/0:0H  
    5 ?           00:00:00 kworker/u4:0  
    6 ?           00:00:00 mm_percpu_wq  
    7 ?           00:00:00 ksoftirqd/0  
    8 ?           00:00:01 rcu_sched  
    9 ?           00:00:00 rcu_bh  
   10 ?           00:00:00 migration/0  
   11 ?           00:00:00 watchdog/0  
   12 ?           00:00:00 cpuhp/0  
   13 ?           00:00:00 cpuhp/1
```

f, a memória használatot mutatja meg

```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ free  
              total        used        free       shared    buff/cache   available  
Mem:           3024932      489504      519480         12672       2015948       2171052  
Swap:          998396           0       998396  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$
```

g, CPU információkat és a ki és bemeneti egységeket mutatja

```
localhost:~# iostat
Linux 4.12.0-rc6-g48ec1f0-dirty (localhost)      02/23/21      _i586_ (1 CPU)

avg-cpu:  %user   %nice %system %iowait  %steal   %idle
           17.45    0.00   39.32    0.00    0.00   43.23

Device:            tps    Blk_read/s    Blk_wrtn/s    Blk_read    Blk_wrtn
```

h, az oprendszer futási idejét gyűjti össze

```
08:37:40 EST      LINUX RESTART

08:40:01 EST      IFACE    rxpck/s    txpck/s    rxkB/s    txkB/s    rxcmp/s    txcmp/s    rxmcst/s
08:50:01 EST      enp0s3      0.42      0.26      0.04      0.09      0.00      0.00      0.00
08:50:01 EST        lo      0.00      0.00      0.00      0.00      0.00      0.00      0.00
09:00:02 EST      enp0s3      0.07      0.04      0.01      0.01      0.00      0.00      0.01
09:00:02 EST        lo      0.00      0.00      0.00      0.00      0.00      0.00      0.00
Average:      enp0s3      0.25      0.15      0.02      0.05      0.00      0.00      0.01
Average:        lo      0.00      0.00      0.00      0.00      0.00      0.00      0.00
```

i, processzorok magjait és futását mutatja

```
localhost:~# mpstat
Linux 4.12.0-rc6-g48ec1f0-dirty (localhost)      02/23/21      _i586_ (1 CPU)

15:10:11      CPU    %usr   %nice    %sys %iowait    %irq   %soft  %steal  %guest
 %idle
15:10:11      all    4.39    0.00    7.78    0.00    0.00    8.37    0.00    0.00
79.46
```

j, a processzek memória használatát jelzi



```
onworks@onworks-Standard-PC-i440FX-PIIX-1996: ~  
onworks@onworks-Standard-PC-i440FX-PIIX-1996:~$ 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  
  
For more details see pmap(1).
```

2-es feladat:

Processzor sebességét méri, részletes leírást mutat a CPU-ról

▼ Processor					
Processor #0 ▼					
Name	AMD Ryzen 5 3600			Cores	6
Specification	AMD Ryzen 5 3600 6-Core Processor			Threads	12
Package	Socket AM4	Microcode	0x8701013	Bogomips	7189.03
Family	23 (17h)	Model	113 (71h)	Stepping	0 (0h)
Flags	MMX, (+), SSE(1, 2, 3, 3S, 4.1, 4.2, 4A), AVX(1, 2), AES, CLMUL, RdRand, SHA, AMD-V, x86-64				More...
Bugs	Spec Store Bypass, Spectre V1, Spectre V2, Sysret Ss Attrs				More...

A gyorsítótárról mutat részletes leírást, mennyi tárhelye van stb

▼ Cache			
L1 Data	6 x 32 KiB (192 KiB)	8-way	64 sets
L1 Inst.	6 x 32 KiB (192 KiB)	8-way	64 sets
Level 2	6 x 512 KiB (3 MiB)	8-way	1024 sets
Level 3	2 x 16 MiB (32 MiB)	16-way	16384 sets

Az alaplap fajtájáról modelljét, a BIOS felépítését mutatja

BIOS			
Vendor	ASUSTeK COMPUTER INC.	Vendor	American Megatrends Inc.
Model	TUF GAMING X570-PLUS	Version	1405
Revision	Rev X.0x	Date	11/19/2019

Memória méretét, sebességét, típusát, és adatait mutatja

▼ Memory

DIMM\_A2 (BANK 1) ▼

Size8192 MB

Speed3600 MT/s

Rank1

TypeDDR4

Type DetailSynchronous Unbuffered (Unregistered)

ManufacturerCorsair

Part NumberCMK16GX4M2Z3600C18

Memory section updated

CPU kihasználtságot mutatja

▼ CPU usage

1

2

3

4

5

6

7

8

9

10

11

12

User

Nice

System

IO Wait

IRQ

Soft IRQ

Steal

Guest

Guest Nice

LoadAvg

0.48 (4.0%)

0.61 (5.1%)

1.33 (11.1%)