

Operációs rendszerek BSc

2. konzultáció gyakorlat

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Készítette:

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Mérnökinformatika

YSAZ4T

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1 Top parancs használata

A 'top' parancs használatával kiírathatjuk az aktuális processeket, cpu és memória használatot

```
top - 14:26:21 up 11 min, 3 users, load average: 0.35, 0.61, 0.42
Tasks: 252 total, 1 running, 251 sleeping, 0 stopped, 0 zombie
%Cpu(s): 1.4 us, 1.0 sy, 0.0 ni, 97.4 id, 0.0 wa, 0.1 hi, 0.1 si, 0.0 st
MiB Mem : 5943.3 total, 2979.4 free, 1530.6 used, 1433.3 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used, 3902.0 avail Mem

  PID USER      PR  NI   VIRT    RES    SHR   S  %CPU  %MEM    TIME+  COMMAND
 1763 z0d14c    20   0 4503932 343808 164128 S   5.3   5.6   0:26.33 plasmashell
1652 z0d14c    20   0 4669352 179740 126368 S   4.7   3.0   0:35.98 kwin_x11
1123 root      20   0 1445184 145280 96164 S   3.3   2.4   0:36.89 Xorg
1808 z0d14c    20   0 2152512 115048 94904 S   1.3   1.9   0:03.26 yakuake
5277 z0d14c    20   0 2281032 180228 109428 S   1.3   3.0   0:04.51 okular
4270 z0d14c    20   0 4894612 144488 98112 S   0.7   2.4   0:08.76 Discord
   1 root      20   0 171176 10584 7920 S   0.3   0.2   0:00.95 systemd
  42 root      20   0 0 0 0 S   0.3   0.0   0:00.15 ksoftirqd/4
 127 root      20   0 0 0 0 I   0.3   0.0   0:01.40 kworker/u32:1-events_unbound
1607 z0d14c    20   0 281736 44144 38776 S   0.3   0.7   0:00.33 klauncher
1648 z0d14c    20   0 2591512 122420 100840 S   0.3   2.0   0:01.60 kded5
1715 z0d14c    20   0 543988 36732 32064 S   0.3   0.6   0:00.41 kactivitymanage
1770 z0d14c    20   0 228316 23136 20504 S   0.3   0.4   0:00.24 xembedsniproxy
1776 z0d14c    20   0 285808 46140 40316 S   0.3   0.8   0:00.51 kaccess
4377 z0d14c    20   0 25.1g 459196 288280 S   0.3   7.5   1:20.96 Discord
4394 z0d14c    20   0 2175236 123908 99928 S   0.3   2.0   0:03.44 dolphin
5177 z0d14c    20   0 3116248 412476 210556 S   0.3   6.8   0:14.33 soffice.bin
5459 root      20   0 13644 4008 3240 R   0.3   0.1   0:00.36 top
5479 root      20   0 0 0 0 I   0.1   0.3   0:00.02 kworker/u32:0-events_unbound
   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_gp
   6 root      0 -20 0 0 0 I   0.0   0.0   0:00.00 kworker/0:0H-kblockd
   8 root      0 -20 0 0 0 I   0.0   0.0   0:00.00 mm_percpu_wq
   9 root      20   0 0 0 0 S   0.0   0.0   0:00.15 ksoftirqd/0
  10 root      -2  0 0 0 0 S   0.0   0.0   0:00.00 rcuc/0
  11 root      -2  0 0 0 0 I   0.0   0.0   0:00.24 rcu_preempt
  12 root      -2  0 0 0 0 S   0.0   0.0   0:00.00 rcub/0
  13 root      rt  0 0 0 0 S   0.0   0.0   0:00.00 migration/0
  14 root      -51 0 0 0 0 S   0.0   0.0   0:00.00 idle_inject/0
  15 root      20   0 0 0 0 I   0.0   0.0   0:00.00 kworker/0:1-rcu_gp
  16 root      20   0 0 0 0 S   0.0   0.0   0:00.00 cpuhp/0
  17 root      20   0 0 0 0 S   0.0   0.0   0:00.00 cpuhp/1
  18 root      -51 0 0 0 0 S   0.0   0.0   0:00.00 idle_inject/1
  19 root      rt  0 0 0 0 S   0.0   0.0   0:00.19 migration/1
  20 root      -2  0 0 0 0 S   0.0   0.0   0:00.00 rcuc/1
  21 root      20   0 0 0 0 S   0.0   0.0   0:00.04 ksoftirqd/1
  23 root      0 -20 0 0 0 I   0.0   0.0   0:00.00 kworker/1:0H-kblockd
  24 root      20   0 0 0 0 S   0.0   0.0   0:00.00 cpuhp/2
  25 root      -51 0 0 0 0 S   0.0   0.0   0:00.00 idle_inject/2
  26 root      rt  0 0 0 0 S   0.0   0.0   0:00.20 migration/2
  27 root      -2  0 0 0 0 S   0.0   0.0   0:00.00 rcuc/2
  28 root      20   0 0 0 0 S   0.0   0.0   0:00.13 ksoftirqd/2
  30 root      0 -20 0 0 0 I   0.0   0.0   0:00.00 kworker/2:0H-kblockd
```

2. Feladat

A 'vmstat' parancs segítségével a rendszerről kérhetünk le információt. Kiegészítőivel pedig a rendszer egyes részeiről.

```
z0d14c-aspirea31422 z0d14c]# 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
1  0      0 3162680 1952804 393916      0      0   164    15   432   775   3    2   95    0    0
z0d14c-aspirea31422 z0d14c]# vmstat -a -m
Cache
btrfs_ordered_extent      0      0    392    41
btrfs_free_space_bitmap   0      0   12288    2
btrfs_inode               0      0   1200    27
ufs_inode_cache           0      0    816    40
hfsplus_attr_cache        0      0   3840    8
hfsplus_icache            0      0    896    36
hfs_inode_cache           0      0    832    39
minix_inode_cache         0      0    680    24
ntfs_big_inode_cache      0      0    960    34
ntfs_inode_cache          0      0    296    27
jfs_ip                    0      0   1288    25
xfs_dqtrx                 0      0    528    31
xfs_dquot                 0      0    496    33
xfs_buf                   0      0    384    42
xfs_rui_item              0      0    680    24
Cache
xfs_rud_item              0      0    168    24
xfs_icr                   0      0    176    46
xfs_illi                  0      0    192    42
xfs_inode                 0      0   1024    32
xfs_efi_item              0      0    424    38
xfs_efd_item              0      0    432    37
xfs_buf_item              0      0    264    31
xf_trans                   0      0    232    35
xfs_da_state              0      0    480    34
xfs_btree_cur             0      0    224    36
kcopyd_job                0      0   3312    9
dm_uevent                 0      0   2888   11
squashfs_inode_cache     276    276    704    46
fat_inode_cache          172    172    752    43
fat_cache                 204    204     40   102
Cache
kvm_async_pf              0      0    136    30
kvm_vcpu                  0      0   12808    2
kvm_mmu_page_header       0      0    168    24
x86_emulator              0      0   2672   12
x86_fpu                   0      0   4160    7
fuse_inode                585    585    832    39
ext4_groupinfo_4k         952    952    144    28
ext4_inode_cache         50151  50170  1104    29
ext4_allocation_context    256    256    128    32
ext4_io_end               512    512     64    64
ext4_extent_status        34272  34272     40   102
jbd2_journal_handle       584    584     56    73
jbd2_journal_head         476    476     120    34
jbd2_revoke_table_s       256    256     16   256
jbd2_revoke_record_s      896    896     32   128
Cache
Num Total Size Pages
```

3. Feladat

'who' 'whoami' 'w' parancsok használatával az épp aktuális felhasználót kérhetjük le.

```
[z0d14c-aspirea31422 z0d14c]# w
14:39:20 up 24 min,  3 users,  load average: 0,65, 0,73, 0,58
USER      TTY      LOGIN@  IDLE   JCPU   PCPU WHAT
z0d14c    tty1     14:14   24:25   1:10   0.13s /usr/bin/startplasma-x11
z0d14c    pts/0    14:15   24:20   0.00s   2.51s /usr/bin/kded5
z0d14c    pts/1    14:15   0.00s   0.05s   0.01s /bin/bash
[z0d14c-aspirea31422 z0d14c]# whoami
root
[z0d14c-aspirea31422 z0d14c]# who
z0d14c    tty1          2021-04-05 14:14 (:0)
z0d14c    pts/0         2021-04-05 14:15 (:0)
z0d14c    pts/1         2021-04-05 14:15 (:0)
[z0d14c-aspirea31422 z0d14c]#
```

'uname' parancs: rendszerinfók lekérése

```
[z0d14c-aspirea31422 z0d14c]# uname -a
Linux z0d14c-aspirea31422 5.9.16-1-MANJARO #1 SMP PREEMPT Mon Dec 21 22:00:46 UTC 2020 x86_64 GNU/Linux
[z0d14c-aspirea31422 z0d14c]# uname -r
5.9.16-1-MANJARO
[z0d14c-aspirea31422 z0d14c]# uname -s
Linux
[z0d14c-aspirea31422 z0d14c]# uname -v
#1 SMP PREEMPT Mon Dec 21 22:00:46 UTC 2020
[z0d14c-aspirea31422 z0d14c]#
```

'ps' parancs és kapcsolóinak használata

'ps' parancs kimenete

```
[z0d14c-aspirea31422 z0d14c]# ps
  PID TTY          TIME CMD
 2528 pts/1        00:00:00 sudo
 2534 pts/1        00:00:00 su
 2535 pts/1        00:00:00 bash
 7524 pts/1        00:00:00 ps
[z0d14c-aspirea31422 z0d14c]#
```

'ps -A' parancs kimenete

Processek kiírása hosszabb formában

```
[z0d14c-aspirea31422 z0d14c]# ps -A
  PID TTY          TIME CMD
    1 ?           00:00:00 systemd
    2 ?           00:00:00 kthreadd
    3 ?           00:00:00 rcu_gp
    4 ?           00:00:00 rcu_par_gp
    6 ?           00:00:00 kworker/0:0H-kblockd
    8 ?           00:00:00 mm_percpu_wq
    9 ?           00:00:00 ksoftirqd/0
   10 ?           00:00:00 rcuc/0
   11 ?           00:00:00 rcu_preempt
   12 ?           00:00:00 rcub/0
   13 ?           00:00:00 migration/0
   14 ?           00:00:00 idle_inject/0
   15 ?           00:00:00 kworker/0:1-rcu_gp
   16 ?           00:00:00 cpuhp/0
   17 ?           00:00:00 cpuhp/1
   18 ?           00:00:00 idle_inject/1
   19 ?           00:00:00 migration/1
   20 ?           00:00:00 rcuc/1
   21 ?           00:00:00 ksoftirqd/1
   23 ?           00:00:00 kworker/1:0H-kblockd
   24 ?           00:00:00 cpuhp/2
   25 ?           00:00:00 idle_inject/2
   26 ?           00:00:00 migration/2
   27 ?           00:00:00 rcuc/2
   28 ?           00:00:00 ksoftirqd/2
   30 ?           00:00:00 kworker/2:0H-kblockd
   31 ?           00:00:00 cpuhp/3
   32 ?           00:00:00 idle_inject/3
   33 ?           00:00:00 migration/3
   34 ?           00:00:00 rcuc/3
   35 ?           00:00:00 ksoftirqd/3
   37 ?           00:00:00 kworker/3:0H-kblockd
   38 ?           00:00:00 cpuhp/4
   39 ?           00:00:00 idle_inject/4
   40 ?           00:00:00 migration/4
   41 ?           00:00:00 rcuc/4
   42 ?           00:00:00 ksoftirqd/4
   44 ?           00:00:00 kworker/4:0H-kblockd
   45 ?           00:00:00 cpuhp/5
   46 ?           00:00:00 idle_inject/5
   47 ?           00:00:00 migration/5
   48 ?           00:00:00 rcuc/5
   49 ?           00:00:00 ksoftirqd/5
   51 ?           00:00:00 kworker/5:0H-kblockd
   52 ?           00:00:00 cpuhp/6
   53 ?           00:00:00 idle_inject/6
   54 ?           00:00:00 migration/6
   55 ?           00:00:00 rcuc/6
   56 ?           00:00:00 ksoftirqd/6
   58 ?           00:00:00 kworker/6:0H-kblockd
   59 ?           00:00:00 cpuhp/7
   60 ?           00:00:00 idle_inject/7
```

'ps -Al' parancs kimenete

Ezzel a paranccsal az összes processről infót kapunk

```
[z0d14c-aspirea31422 z0d14c]# ps -Al
```

F	S	UID	PID	PPID	C	PRI	NI	ADDR	SZ	WCHAN	TTY	TIME	CMD
4	S	0	1	0	0	80	0	-	42794	-	?	00:00:00	systemd
1	S	0	2	0	0	80	0	-	0	-	?	00:00:00	kthreadd
1	I	0	3	2	0	60	-20	-	0	-	?	00:00:00	rcu_gp
1	I	0	4	2	0	60	-20	-	0	-	?	00:00:00	rcu_par_gp
1	I	0	6	2	0	60	-20	-	0	-	?	00:00:00	kworker/0:0H-kblockd
1	I	0	8	2	0	60	-20	-	0	-	?	00:00:00	mm_percpu_wq
1	S	0	9	2	0	80	0	-	0	-	?	00:00:00	ksoftirqd/0
1	S	0	10	2	0	58	-	-	0	-	?	00:00:00	rcuc/0
1	I	0	11	2	0	58	-	-	0	-	?	00:00:00	rcu_preempt
1	S	0	12	2	0	58	-	-	0	-	?	00:00:00	rcub/0
1	S	0	13	2	0	-40	-	-	0	-	?	00:00:00	migration/0
1	S	0	14	2	0	9	-	-	0	-	?	00:00:00	idle_inject/0
1	I	0	15	2	0	80	0	-	0	-	?	00:00:00	kworker/0:1-rcu_gp
1	S	0	16	2	0	80	0	-	0	-	?	00:00:00	cpuhp/0
5	S	0	17	2	0	80	0	-	0	-	?	00:00:00	cpuhp/1
1	S	0	18	2	0	9	-	-	0	-	?	00:00:00	idle_inject/1
1	S	0	19	2	0	-40	-	-	0	-	?	00:00:00	migration/1
1	S	0	20	2	0	58	-	-	0	-	?	00:00:00	rcuc/1
1	S	0	21	2	0	80	0	-	0	-	?	00:00:00	ksoftirqd/1
1	I	0	23	2	0	60	-20	-	0	-	?	00:00:00	kworker/1:0H-kblockd
5	S	0	24	2	0	80	0	-	0	-	?	00:00:00	cpuhp/2
1	S	0	25	2	0	9	-	-	0	-	?	00:00:00	idle_inject/2
1	S	0	26	2	0	-40	-	-	0	-	?	00:00:00	migration/2
1	S	0	27	2	0	58	-	-	0	-	?	00:00:00	rcuc/2
1	S	0	28	2	0	80	0	-	0	-	?	00:00:00	ksoftirqd/2
1	I	0	30	2	0	60	-20	-	0	-	?	00:00:00	kworker/2:0H-kblockd
5	S	0	31	2	0	80	0	-	0	-	?	00:00:00	cpuhp/3
1	S	0	32	2	0	9	-	-	0	-	?	00:00:00	idle_inject/3
1	S	0	33	2	0	-40	-	-	0	-	?	00:00:00	migration/3
1	S	0	34	2	0	58	-	-	0	-	?	00:00:00	rcuc/3
1	S	0	35	2	0	80	0	-	0	-	?	00:00:00	ksoftirqd/3
1	I	0	37	2	0	60	-20	-	0	-	?	00:00:00	kworker/3:0H-kblockd
5	S	0	38	2	0	80	0	-	0	-	?	00:00:00	cpuhp/4
1	S	0	39	2	0	9	-	-	0	-	?	00:00:00	idle_inject/4
1	S	0	40	2	0	-40	-	-	0	-	?	00:00:00	migration/4
1	S	0	41	2	0	58	-	-	0	-	?	00:00:00	rcuc/4
1	S	0	42	2	0	80	0	-	0	-	?	00:00:00	ksoftirqd/4
1	I	0	44	2	0	60	-20	-	0	-	?	00:00:00	kworker/4:0H-kblockd
5	S	0	45	2	0	80	0	-	0	-	?	00:00:00	cpuhp/5
1	S	0	46	2	0	9	-	-	0	-	?	00:00:00	idle_inject/5
1	S	0	47	2	0	-40	-	-	0	-	?	00:00:00	migration/5
1	S	0	48	2	0	58	-	-	0	-	?	00:00:00	rcuc/5
1	S	0	49	2	0	80	0	-	0	-	?	00:00:00	ksoftirqd/5
1	I	0	51	2	0	60	-20	-	0	-	?	00:00:00	kworker/5:0H-kblockd
5	S	0	52	2	0	80	0	-	0	-	?	00:00:00	cpuhp/6
1	S	0	53	2	0	9	-	-	0	-	?	00:00:00	idle_inject/6
1	S	0	54	2	0	-40	-	-	0	-	?	00:00:00	migration/6
1	S	0	55	2	0	58	-	-	0	-	?	00:00:00	rcuc/6
1	S	0	56	2	0	80	0	-	0	-	?	00:00:00	ksoftirqd/6
1	I	0	58	2	0	60	-20	-	0	-	?	00:00:00	kworker/6:0H-kblockd
5	S	0	59	2	0	80	0	-	0	-	?	00:00:00	cpuhp/7
1	S	0	60	2	0	9	-	-	0	-	?	00:00:00	idle_inject/7
1	S	0	61	2	0	-40	-	-	0	-	?	00:00:00	migration/7
1	S	0	62	2	0	58	-	-	0	-	?	00:00:00	rcuc/7
1	S	0	63	2	0	80	0	-	0	-	?	00:00:00	ksoftirqd/7

'ps -AlF' kimenete:

Részletesebb kiírása a processeknek.

1	S	root	857	2	0	58	-	-	0	-	0	4	14:14	?	00:00:00	[vcn_enc0]
1	S	root	858	2	0	58	-	-	0	-	0	4	14:14	?	00:00:00	[vcn_enc1]
1	S	root	859	2	0	58	-	-	0	-	0	6	14:14	?	00:00:00	[jpeg_dec]
1	S	root	1071	2	0	9	-	-	0	-	0	4	14:14	?	00:00:00	[card0-crtc0]
1	S	root	1073	2	0	9	-	-	0	-	0	2	14:14	?	00:00:00	[card0-crtc1]
1	S	root	1074	2	0	9	-	-	0	-	0	6	14:14	?	00:00:00	[card0-crtc2]
1	S	root	1075	2	0	9	-	-	0	-	0	6	14:14	?	00:00:00	[card0-crtc3]
4	S	root	1123	774	5	80	0	-	364244	-	172036	6	14:14	tty1	00:01:50	/usr/lib/Xorg -nolisten tcp -background none -seat seat0 vt1 -auth /var/run/sddm/{b46014b4-0687-44
4	S	root	1142	1	0	80	0	-	2909	-	5700	4	14:14	?	00:00:00	/usr/lib/bluetooth/bluetoothd
1	I	root	1148	2	0	80	0	-	0	-	0	7	14:14	?	00:00:00	[kworker/7:2-events]
4	S	root	1231	1	0	80	0	-	3783	-	9224	3	14:14	?	00:00:00	/usr/bin/wpa_supplicant -u -s -O /run/wpa_supplicant
4	S	root	1446	774	0	80	0	-	16870	-	18552	4	14:14	?	00:00:00	/usr/lib/sddm/sddm-helper --socket /tmp/sddm-authda0be2bb-46d4-40f4-a8dd-6a61a09227df --id 1 --sta
4	S	zsd14c	1455	1	0	80	0	-	4024	-	9464	2	14:14	?	00:00:00	/usr/lib/systemd/systemd --user
0	S	zsd14c	1457	1455	0	80	0	-	27338	-	3044	5	14:14	?	00:00:00	(sd-pam)
0	S	zsd14c	1504	1	0	80	0	-	70961	-	45496	5	14:14	?	00:00:00	/usr/bin/kwalletd5 --pam-login 7 8
4	S	zsd14c	1505	1446	0	80	0	-	36318	-	18828	2	14:14	?	00:00:00	/usr/bin/startplasma-x11
0	S	zsd14c	1522	1455	0	80	0	-	3215	-	6608	1	14:14	?	00:00:00	/usr/bin/dbus-daemon --session --address=systemd: --nofork --nopidfile --systemd-activation --sysl
1	S	zsd14c	1580	1	0	80	0	-	571	-	92	0	14:15	?	00:00:00	/usr/lib/kf5/start_kdeinit
1	S	zsd14c	1583	1	0	80	0	-	27555	-	25248	6	14:15	?	00:00:00	kdeinit5: Running...
0	S	zsd14c	1607	1583	0	80	0	-	70735	-	44868	6	14:15	?	00:00:00	/usr/lib/kf5/klauncher --fd=9
0	S	zsd14c	1648	1	0	80	0	-	647878	-	122420	2	14:15	?	00:00:03	/usr/bin/kded5
0	S	zsd14c	1652	1	4	80	0	-	1206936	-	184452	6	14:15	?	00:01:31	/usr/bin/kwin_x11
0	S	zsd14c	1675	1455	0	80	0	-	70659	-	44752	4	14:15	?	00:00:01	/usr/bin/kglobalaccel5
0	S	zsd14c	1709	1455	0	80	0	-	38757	-	3820	1	14:15	?	00:00:00	/usr/lib/dconf-service
0	S	zsd14c	1715	1455	0	80	0	-	136017	-	36888	0	14:15	?	00:00:01	/usr/lib/kactivitymanagerd
0	S	zsd14c	1737	1	0	80	0	-	71231	-	48132	7	14:15	?	00:00:01	/usr/bin/kmserver
0	S	zsd14c	1761	1	0	99	19	-	67186790	-	33504	0	14:15	?	00:00:00	/usr/bin/haloo_file
0	S	zsd14c	1763	1	1	80	0	-	1129100	-	345556	5	14:15	?	00:00:37	/usr/bin/plasmashell
0	S	zsd14c	1765	1	0	80	0	-	135497	-	43848	3	14:15	?	00:00:01	/usr/lib/org_kde_powerdevil
0	S	zsd14c	1770	1	0	80	0	-	57079	-	23136	4	14:15	?	00:00:00	/usr/bin/kembedsniproxy
0	S	zsd14c	1776	1	0	80	0	-	71452	-	46260	7	14:15	?	00:00:01	/usr/bin/kaccess
0	S	zsd14c	1780	1	0	80	0	-	108354	-	47488	1	14:15	?	00:00:00	/usr/lib/polkit-kde-authentication-agent-1
4	S	root	1784	1	0	80	0	-	98961	-	13972	0	14:15	?	00:00:01	/usr/lib/udisks2/udisksd
0	S	zsd14c	1788	1455	0	80	0	-	55308	-	20376	0	14:15	?	00:00:00	/usr/lib/kf5/kiscreen.backend_launcher
0	S	zsd14c	1789	1455	0	80	0	-	11437	-	6872	6	14:15	?	00:00:00	/usr/lib/bluetooth/obexd
0	S	zsd14c	1791	1	0	80	0	-	57242	-	23596	6	14:15	?	00:00:00	/usr/bin/gmenudbusmenuproxy
0	S	zsd14c	1796	1	0	80	0	-	92595	-	57060	6	14:15	?	00:00:01	/usr/lib/kdeconnectd
0	S	zsd14c	1808	1	0	80	0	-	538128	-	115272	4	14:15	?	00:00:09	/usr/bin/yakuake
0	S	zsd14c	1812	1	0	80	0	-	118347	-	54640	6	14:15	?	00:00:01	/usr/bin/ksm-kde_notifier
0	S	zsd14c	1813	1455	0	69	-11	-	387549	-	14752	0	14:15	?	00:00:03	/usr/bin/pulseaudio --daemonize=no --log-target=journal
0	S	zsd14c	1818	1	0	80	0	-	59023	-	5052	3	14:15	?	00:00:00	/usr/lib/geoclue-2.0/demos/agent
0	S	root	1825	2	0	70	-10	-	0	-	0	0	14:15	?	00:00:00	[krfcommd]
0	S	zsd14c	1830	1	0	80	0	-	111191	-	52296	3	14:15	?	00:00:01	/usr/bin/pamac-tray-plasma
4	S	rktkt	1842	1	0	81	1	-	38454	-	3892	6	14:15	?	00:00:00	/usr/lib/rktkt-daemon
4	S	root	1845	1	0	80	0	-	63423	-	10212	6	14:15	?	00:00:00	/usr/lib/upowerd
0	S	zsd14c	1896	1455	0	80	0	-	59831	-	7724	2	14:15	?	00:00:00	/usr/lib/gvfsd
0	S	zsd14c	1899	1813	0	80	0	-	59202	-	7228	2	14:15	?	00:00:00	/usr/lib/pulse/gsettings-helper
0	S	zsd14c	1934	1455	0	80	0	-	132144	-	6140	6	14:15	?	00:00:00	/usr/lib/gvfsd-fuse /run/user/1000/gvfs -f
1	S	zsd14c	2433	1583	0	80	0	-	27843	-	21124	6	14:15	?	00:00:00	file.so [kdeinit5] file local:/run/user/1000/klancheryEqsNa.1.slave-socket local:/run/user/1000/p
1	I	root	2497	2	0	80	0	-	0	-	0	7	14:15	?	00:00:00	[kworker/7:3-mm_percpu_wq]
0	S	zsd14c	2522	1808	0	80	0	-	2623	-	4416	6	14:15	pts/1	00:00:00	/bin/bash
1	S	zsd14c	2527	1583	0	80	0	-	27648	-	19220	2	14:16	?	00:00:00	file.so [kdeinit5] file local:/run/user/1000/klancheryEqsNa.1.slave-socket local:/run/user/1000/k
4	S	root	2528	2522	0	80	0	-	5020	-	7392	3	14:16	pts/1	00:00:00	sudo su
4	S	root	2534	2528	0	80	0	-	3982	-	5324	4	14:16	pts/1	00:00:00	su
4	S	root	2535	2534	0	80	0	-	2623	-	4432	0	14:16	pts/1	00:00:00	bash
1	I	root	3440	2	0	60	-20	-	0	-	0	0	14:17	?	00:00:00	[xfsalloc]
1	I	root	3441	2	0	60	-20	-	0	-	0	5	14:17	?	00:00:00	[xfs_mru_cache]

'ps -AlFH'

kimenete:

Process paraméterek kiírása

```
[z0d14c-aspirea31422 z0d14c]# 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	2	14:14 ?		00:00:00	[kthreadd]
1	I	root	3	2	0	60	-20	-	0	-	0	0	14:14 ?		00:00:00	[rcu_gp]
1	I	root	4	2	0	60	-20	-	0	-	0	0	14:14 ?		00:00:00	[rcu_par_gp]
1	I	root	6	2	0	60	-20	-	0	-	0	0	14:14 ?		00:00:00	[kworker/0:0H-kblockd]
1	I	root	8	2	0	60	-20	-	0	-	0	0	14:14 ?		00:00:00	[mm_percpu_wq]
1	S	root	9	2	0	80	0	-	0	-	0	0	14:14 ?		00:00:00	[ksoftirqd/0]
1	S	root	10	2	0	58	-	-	0	-	0	0	14:14 ?		00:00:00	[rcuc/0]
1	I	root	11	2	0	58	-	-	0	-	0	0	14:14 ?		00:00:00	[rcu_preempt]
1	S	root	12	2	0	58	-	-	0	-	0	0	14:14 ?		00:00:00	[rcub/0]
1	S	root	13	2	0	-40	-	-	0	-	0	0	14:14 ?		00:00:00	[migration/0]
1	S	root	14	2	0	9	-	-	0	-	0	0	14:14 ?		00:00:00	[idle_inject/0]
1	I	root	15	2	0	80	0	-	0	-	0	0	14:14 ?		00:00:00	[kworker/0:1-rcu_gp]
1	S	root	16	2	0	80	0	-	0	-	0	0	14:14 ?		00:00:00	[cpuhp/0]
5	S	root	17	2	0	80	0	-	0	-	0	1	14:14 ?		00:00:00	[cpuhp/1]
1	S	root	18	2	0	9	-	-	0	-	0	1	14:14 ?		00:00:00	[idle_inject/1]
1	S	root	19	2	0	-40	-	-	0	-	0	1	14:14 ?		00:00:00	[migration/1]
1	S	root	20	2	0	58	-	-	0	-	0	1	14:14 ?		00:00:00	[rcuc/1]
1	S	root	21	2	0	80	0	-	0	-	0	1	14:14 ?		00:00:00	[ksoftirqd/1]
1	I	root	23	2	0	60	-20	-	0	-	0	1	14:14 ?		00:00:00	[kworker/1:0H-kblockd]
5	S	root	24	2	0	80	0	-	0	-	0	2	14:14 ?		00:00:00	[cpuhp/2]
1	S	root	25	2	0	9	-	-	0	-	0	2	14:14 ?		00:00:00	[idle_inject/2]
1	S	root	26	2	0	-40	-	-	0	-	0	2	14:14 ?		00:00:00	[migration/2]
1	S	root	27	2	0	58	-	-	0	-	0	2	14:14 ?		00:00:00	[rcuc/2]
1	S	root	28	2	0	80	0	-	0	-	0	2	14:14 ?		00:00:00	[ksoftirqd/2]
1	I	root	30	2	0	60	-20	-	0	-	0	2	14:14 ?		00:00:00	[kworker/2:0H-kblockd]
5	S	root	31	2	0	80	0	-	0	-	0	3	14:14 ?		00:00:00	[cpuhp/3]
1	S	root	32	2	0	9	-	-	0	-	0	3	14:14 ?		00:00:00	[idle_inject/3]
1	S	root	33	2	0	-40	-	-	0	-	0	3	14:14 ?		00:00:00	[migration/3]
1	S	root	34	2	0	58	-	-	0	-	0	3	14:14 ?		00:00:00	[rcuc/3]
1	S	root	35	2	0	80	0	-	0	-	0	3	14:14 ?		00:00:00	[ksoftirqd/3]
1	I	root	37	2	0	60	-20	-	0	-	0	3	14:14 ?		00:00:00	[kworker/3:0H-kblockd]
5	S	root	38	2	0	80	0	-	0	-	0	4	14:14 ?		00:00:00	[cpuhp/4]
1	S	root	39	2	0	9	-	-	0	-	0	4	14:14 ?		00:00:00	[idle_inject/4]
1	S	root	40	2	0	-40	-	-	0	-	0	4	14:14 ?		00:00:00	[migration/4]
1	S	root	41	2	0	58	-	-	0	-	0	4	14:14 ?		00:00:00	[rcuc/4]
1	S	root	42	2	0	80	0	-	0	-	0	4	14:14 ?		00:00:00	[ksoftirqd/4]
1	I	root	44	2	0	60	-20	-	0	-	0	4	14:14 ?		00:00:00	[kworker/4:0H-kblockd]
5	S	root	45	2	0	80	0	-	0	-	0	5	14:14 ?		00:00:00	[cpuhp/5]
1	S	root	46	2	0	9	-	-	0	-	0	5	14:14 ?		00:00:00	[idle_inject/5]
1	S	root	47	2	0	-40	-	-	0	-	0	5	14:14 ?		00:00:00	[migration/5]
1	S	root	48	2	0	58	-	-	0	-	0	5	14:14 ?		00:00:00	[rcuc/5]
1	S	root	49	2	0	80	0	-	0	-	0	5	14:14 ?		00:00:00	[ksoftirqd/5]
1	I	root	51	2	0	60	-20	-	0	-	0	5	14:14 ?		00:00:00	[kworker/5:0H-kblockd]
5	S	root	52	2	0	80	0	-	0	-	0	6	14:14 ?		00:00:00	[cpuhp/6]
1	S	root	53	2	0	9	-	-	0	-	0	6	14:14 ?		00:00:00	[idle_inject/6]
1	S	root	54	2	0	-40	-	-	0	-	0	6	14:14 ?		00:00:00	[migration/6]
1	S	root	55	2	0	58	-	-	0	-	0	6	14:14 ?		00:00:00	[rcuc/6]
1	S	root	56	2	0	80	0	-	0	-	0	6	14:14 ?		00:00:00	[ksoftirqd/6]
1	I	root	58	2	0	60	-20	-	0	-	0	6	14:14 ?		00:00:00	[kworker/6:0H-kblockd]
5	S	root	59	2	0	80	0	-	0	-	0	7	14:14 ?		00:00:00	[cpuhp/7]
1	S	root	60	2	0	9	-	-	0	-	0	7	14:14 ?		00:00:00	[idle_inject/7]
1	S	root	61	2	0	-40	-	-	0	-	0	7	14:14 ?		00:00:00	[migration/7]
1	S	root	62	2	0	58	-	-	0	-	0	7	14:14 ?		00:00:00	[rcuc/7]
1	S	root	63	2	0	80	0	-	0	-	0	7	14:14 ?		00:00:00	[ksoftirqd/7]

'ps -ax' kimenete:

A rendszer összes processét kiíráthatjuk.


```
[z0d14c-aspirea31422 z0d14c]# ps -ax
  PID TTY          STAT TIME   COMMAND
    1 ?           Ss    0:00   /sbin/init
    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]
    8 ?           I<    0:00   [mm_percpu_wq]
    9 ?           S      0:00   [ksoftirqd/0]
   10 ?           S      0:00   [rcuc/0]
   11 ?           I      0:00   [rcu_preempt]
   12 ?           S      0:00   [rcub/0]
   13 ?           S      0:00   [migration/0]
   14 ?           S      0:00   [idle_inject/0]
   15 ?           I      0:00   [kworker/0:1-rcu_gp]
   16 ?           S      0:00   [cpuhp/0]
   17 ?           S      0:00   [cpuhp/1]
   18 ?           S      0:00   [idle_inject/1]
   19 ?           S      0:00   [migration/1]
   20 ?           S      0:00   [rcuc/1]
   21 ?           S      0:00   [ksoftirqd/1]
   23 ?           I<    0:00   [kworker/1:0H-kblockd]
   24 ?           S      0:00   [cpuhp/2]
   25 ?           S      0:00   [idle_inject/2]
   26 ?           S      0:00   [migration/2]
   27 ?           S      0:00   [rcuc/2]
   28 ?           S      0:00   [ksoftirqd/2]
   30 ?           I<    0:00   [kworker/2:0H-kblockd]
   31 ?           S      0:00   [cpuhp/3]
   32 ?           S      0:00   [idle_inject/3]
   33 ?           S      0:00   [migration/3]
   34 ?           S      0:00   [rcuc/3]
   35 ?           S      0:00   [ksoftirqd/3]
   37 ?           I<    0:00   [kworker/3:0H-kblockd]
   38 ?           S      0:00   [cpuhp/4]
   39 ?           S      0:00   [idle_inject/4]
   40 ?           S      0:00   [migration/4]
   41 ?           S      0:00   [rcuc/4]
   42 ?           S      0:00   [ksoftirqd/4]
   44 ?           I<    0:00   [kworker/4:0H-kblockd]
   45 ?           S      0:00   [cpuhp/5]
   46 ?           S      0:00   [idle_inject/5]
   47 ?           S      0:00   [migration/5]
   48 ?           S      0:00   [rcuc/5]
   49 ?           S      0:00   [ksoftirqd/5]
   51 ?           I<    0:00   [kworker/5:0H-kblockd]
   52 ?           S      0:00   [cpuhp/6]
   53 ?           S      0:00   [idle_inject/6]
   54 ?           S      0:00   [migration/6]
   55 ?           S      0:00   [rcuc/6]
   56 ?           S      0:00   [ksoftirqd/6]
   58 ?           I<    0:00   [kworker/6:0H-kblockd]
   59 ?           S      0:00   [cpuhp/7]
   60 ?           S      0:00   [idle_inject/7]
   61 ?           S      0:00   [migration/7]
   62 ?           S      0:00   [rcuc/7]
   63 ?           S      0:00   [ksoftirqd/7]
```

'ps -axu' kimenete: minden user processét kijelzi

```

root      1825  0.0  0.0      0      0 ?      S<   14:15  0:00 [krfcomm]
z0d14c    1830  0.0  0.8 444764 52296 ?      S1   14:15  0:01 /usr/bin/pamac-tray-plasma
rtkit     1842  0.0  0.0 153816 3092 ?      Sns1  14:15  0:00 /usr/lib/rtkit-daemon
root      1845  0.0  0.1 253692 10212 ?      Ss1   14:15  0:00 /usr/lib/upowerd
z0d14c    1896  0.0  0.1 239324 7724 ?      Ss1   14:15  0:00 /usr/lib/gvfsd
z0d14c    1899  0.0  0.1 236808 7228 ?      S1   14:15  0:00 /usr/lib/pulse/gsettings-helper
z0d14c    1934  0.0  0.1 528576 6140 ?      S1   14:15  0:00 /usr/lib/gvfsd-fuse /run/user/1000/gvfs -f
z0d14c    2433  0.0  0.3 111372 21124 ?      S     14:15  0:00 file.so [kdeinit5] file local:/run/user/1000/klauncheryEqsNa.1.slave-socket local:/run/user/1000/plasmashellKqbHMa.9.sla
root      2497  0.0  0.0      0      0 ?      I     14:15  0:00 [kworker/7:3-mm_percpu_wq]
z0d14c    2522  0.0  0.0 10492 4416 pts/1 Ss    14:15  0:00 /bin/bash
z0d14c    2527  0.0  0.3 110592 19220 ?      S     14:16  0:00 file.so [kdeinit5] file local:/run/user/1000/klauncheryEqsNa.1.slave-socket local:/run/user/1000/kded5qMitvL.1.slave-soc
root      2528  0.0  0.1 20080 7392 pts/1 S     14:16  0:00 sudo su
root      2534  0.0  0.0 15928 5324 pts/1 S     14:16  0:00 su
root      2535  0.0  0.0 10492 4432 pts/1 S     14:16  0:00 bash
root      3440  0.0  0.0      0      0 ?      I<    14:17  0:00 [xfsalloc]
root      3441  0.0  0.0      0      0 ?      I<    14:17  0:00 [xfs_mru_cache]
root      3444  0.0  0.0      0      0 ?      S     14:17  0:00 [jfsIO]
root      3445  0.0  0.0      0      0 ?      S     14:17  0:00 [jfsCommit]
root      3446  0.0  0.0      0      0 ?      S     14:17  0:00 [jfsCommit]
root      3447  0.0  0.0      0      0 ?      S     14:17  0:00 [jfsCommit]
root      3448  0.0  0.0      0      0 ?      S     14:17  0:00 [jfsCommit]
root      3449  0.0  0.0      0      0 ?      S     14:17  0:00 [jfsCommit]
root      3450  0.0  0.0      0      0 ?      S     14:17  0:00 [jfsCommit]
root      3451  0.0  0.0      0      0 ?      S     14:17  0:00 [jfsCommit]
root      3452  0.0  0.0      0      0 ?      S     14:17  0:00 [jfsCommit]
root      3453  0.0  0.0      0      0 ?      S     14:17  0:00 [jfsSync]
z0d14c    4270  0.8  2.4 4793728 146752 ?      S1   14:18  0:19 /opt/discord/Discord
z0d14c    4273  0.0  0.7 198600 43844 ?      S     14:18  0:00 /opt/discord/Discord --type=zygote --no-zygote-sandbox
z0d14c    4274  0.0  0.7 198600 43588 ?      S     14:18  0:00 /opt/discord/Discord --type=zygote
z0d14c    4276  0.0  0.1 198600 9704 ?      S     14:18  0:00 /opt/discord/Discord --type=zygote
z0d14c    4306  0.6  2.3 682460 141516 ?      S1   14:18  0:15 /opt/discord/Discord --type=gpu-process --field-trial-handle=5466952766645298375,7775487319779443931,131072 --enable-fea
z0d14c    4313  0.0  1.2 289480 74852 ?      S1   14:18  0:01 /opt/discord/Discord --type=utility --field-trial-handle=5466952766645298375,7775487319779443931,131072 --enable-feature
z0d14c    4377  4.5  5.7 26207432 352728 ?      S1   14:18  1:41 /opt/discord/Discord --type=renderer --autoplay-policy=no-user-gesture-required --field-trial-handle=5466952766645298375
z0d14c    4426  0.0  0.8 514108 52028 ?      S1   14:18  0:00 /opt/discord/Discord --type=utility --field-trial-handle=5466952766645298375,7775487319779443931,131072 --enable-feature
root      4495  0.0  0.0 9752 2188 ?      Ss    14:19  0:00 /usr/bin/mount.ntfs /dev/sda1 /run/media/z0d14c/Mindenés -o rw,nodew,nosuid,uid=1000,gid=1001,windows_names,uhelp=udis
root      4503  0.0  0.0 9596 1972 ?      Ss    14:19  0:00 /usr/bin/mount.ntfs /dev/nvme0n1p3 /run/media/z0d14c/1AD02E72D02E5473 -o rw,nodew,nosuid,uid=1000,gid=1001,windows_names
z0d14c    5162  0.0  0.0 96648 5932 ?      S1   14:20  0:00 /usr/lib/libreoffice/program/ooplash --writer /run/media/z0d14c/Mindenés/YSAZ41_segedprog.docx
z0d14c    5177  2.0  6.8 3251028 415292 ?      S1   14:20  0:43 /usr/lib/libreoffice/program/soffice.bin --writer /run/media/z0d14c/Mindenés/YSAZ41_segedprog.docx --splash-pipe=5
z0d14c    5277  0.4  2.9 2281032 180248 ?      S1   14:21  0:09 /usr/bin/okular /run/media/z0d14c/Mindenés/Desktop/3B. Gyak.pdf
z0d14c    5733  4.2  5.7 3433920 351436 ?      Ss1   14:32  1:00 /usr/lib/firefox/firefox
z0d14c    5788  0.0  0.1 304332 6548 ?      Ss1   14:32  0:00 /usr/lib/at-spi-bus-launcher
z0d14c    5794  0.0  0.0 12164 5372 ?      S     14:32  0:00 /usr/bin/dbus-daemon --config-file=/usr/share/defaults/at-spi2/accessibility.conf --nofork --print-address 3
z0d14c    5796  0.0  0.1 160984 6640 ?      S1   14:32  0:00 /usr/lib/at-spi2-registryd -use-gnome-session
z0d14c    5821  7.8  6.0 3403792 368044 ?      S1   14:32  1:50 /usr/lib/firefox/firefox -contentproc -childID 1 -isForBrowser -prefsLen 1 -prefMapSize 232450 -parentBuildID 2021032505
z0d14c    5873  0.1  1.9 2489932 116020 ?      S1   14:32  0:01 /usr/lib/firefox/firefox -contentproc -childID 2 -isForBrowser -prefsLen 6171 -prefMapSize 232450 -parentBuildID 2021032
z0d14c    5952  0.1  2.5 2526080 152936 ?      S1   14:32  0:02 /usr/lib/firefox/firefox -contentproc -childID 3 -isForBrowser -prefsLen 7030 -prefMapSize 232450 -parentBuildID 2021032
z0d14c    6042  0.0  0.8 201484 52048 ?      S1   14:32  0:00 /usr/lib/firefox/firefox -contentproc -parentBuildID 20210325054945 -prefsLen 9113 -prefMapSize 232450 -appdir /usr/lib/
z0d14c    6589  0.3  2.5 2565748 153068 ?      S1   14:37  0:03 /usr/lib/firefox/firefox -contentproc -childID 5 -isForBrowser -prefsLen 9416 -prefMapSize 232450 -parentBuildID 2021032
root      6731  0.0  0.0      0      0 ?      I     14:38  0:00 [kworker/2:0-events]
root      7115  0.0  0.0      0      0 ?      I     14:42  0:00 [kworker/2:3-events]
z0d14c    7158  4.3  6.4 2977760 394060 ?      S1   14:42  0:34 /usr/lib/firefox/firefox -contentproc -childID 6 -isForBrowser -prefsLen 9855 -prefMapSize 232450 -parentBuildID 2021032
z0d14c    7729  0.0  1.5 2465424 91700 ?      S1   14:46  0:00 /usr/lib/firefox/firefox -contentproc -childID 7 -isForBrowser -prefsLen 10056 -prefMapSize 232450 -parentBuildID 202103
root      8142  0.0  0.0      0      0 ?      I     14:49  0:00 [kworker/u32:2-phy0]
z0d14c    8919  0.0  0.3 110992 20804 ?      S     14:55  0:00 file.so [kdeinit5] file local:/run/user/1000/klauncheryEqsNa.1.slave-socket local:/run/user/1000/dolphindatap.13.slave-
root      8991  0.0  0.0      0      0 ?      I     14:55  0:00 [kworker/u32:0]
root      9000  0.0  0.0 12864 3460 pts/1 R+    14:55  0:00 ps -axu
[z0d14c-aspirea31422 z0d14c]#

```

'ps -ejH'

Process fa kiíratása:
processen 'belüli'

```

[z0d14c-aspirea31422 z0d14c]# 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
8         0        0 ?        00:00:00 mm_percpu_wq
9         0        0 ?        00:00:00 ksoftirqd/0
10        0        0 ?        00:00:00 rcuc/0
11        0        0 ?        00:00:00 rcu_preempt
12        0        0 ?        00:00:00 rcub/0
13        0        0 ?        00:00:00 migration/0
14        0        0 ?        00:00:00 idle_inject/0
15        0        0 ?        00:00:00 kworker/0:1-rcu_gp
16        0        0 ?        00:00:00 cpuhp/0
17        0        0 ?        00:00:00 cpuhp/1
18        0        0 ?        00:00:00 idle_inject/1
19        0        0 ?        00:00:00 migration/1
20        0        0 ?        00:00:00 rcuc/1
21        0        0 ?        00:00:00 ksoftirqd/1
23        0        0 ?        00:00:00 kworker/1:0H-kblockd
24        0        0 ?        00:00:00 cpuhp/2
25        0        0 ?        00:00:00 idle_inject/2
26        0        0 ?        00:00:00 migration/2
27        0        0 ?        00:00:00 rcuc/2
28        0        0 ?        00:00:00 ksoftirqd/2
30        0        0 ?        00:00:00 kworker/2:0H-kblockd
31        0        0 ?        00:00:00 cpuhp/3
32        0        0 ?        00:00:00 idle_inject/3
33        0        0 ?        00:00:00 migration/3
34        0        0 ?        00:00:00 rcuc/3
35        0        0 ?        00:00:00 ksoftirqd/3
37        0        0 ?        00:00:00 kworker/3:0H-kblockd
38        0        0 ?        00:00:00 cpuhp/4
39        0        0 ?        00:00:00 idle_inject/4
40        0        0 ?        00:00:00 migration/4
41        0        0 ?        00:00:00 rcuc/4
42        0        0 ?        00:00:00 ksoftirqd/4
44        0        0 ?        00:00:00 kworker/4:0H-kblockd
45        0        0 ?        00:00:00 cpuhp/5
46        0        0 ?        00:00:00 idle_inject/5
47        0        0 ?        00:00:00 migration/5
48        0        0 ?        00:00:00 rcuc/5
49        0        0 ?        00:00:00 ksoftirqd/5
51        0        0 ?        00:00:00 kworker/5:0H-kblockd
52        0        0 ?        00:00:00 cpuhp/6
53        0        0 ?        00:00:00 idle_inject/6
54        0        0 ?        00:00:00 migration/6
55        0        0 ?        00:00:00 rcuc/6
56        0        0 ?        00:00:00 ksoftirqd/6
58        0        0 ?        00:00:00 kworker/6:0H-kblockd
59        0        0 ?        00:00:00 cpuhp/7
60        0        0 ?        00:00:00 idle_inject/7
61        0        0 ?        00:00:00 migration/7
62        0        0 ?        00:00:00 rcuc/7
63        0        0 ?        00:00:00 ksoftirqd/7
65        0        0 ?        00:00:00 kworker/7:0H-kblockd

```

megmutatja a
processeket.

'ps -ajxf' parancs: minden process kiírása a terminálon nem csatlakozó processek kiírásával.

```

1455 1896 1896 1896 ? -1 Ss1 1000 0:00 \_ /usr/lib/gvfsd
1455 1934 1896 1896 ? -1 S1 1000 0:00 \_ /usr/lib/gvfsd-fuse /run/user/1000/gvfs -f
1455 5788 5788 5788 ? -1 Ss1 1000 0:00 \_ /usr/lib/at-spi-bus-launcher
5788 5794 5788 5788 ? -1 S 1000 0:00 | \_ /usr/bin/dbus-daemon --config-file=/usr/share/defaults/at-spi2/accessibility.conf --nofork --print-address 3
1455 5796 5788 5788 ? -1 S1 1000 0:00 \_ /usr/lib/at-spi2-registrd --use-gnome-session
1 1504 1503 1503 ? -1 S1 1000 0:01 /usr/bin/kwalletd5 --pam-login 7 8
1 1580 774 774 ? -1 S 1000 0:00 /usr/lib/kf5/start_kdeinit
1 1583 1583 1583 ? -1 Ss 1000 0:00 kdeinit5: Running...
1583 1607 1583 1583 ? -1 S1 1000 0:01 \_ /usr/lib/kf5/klauncher --fd=9
1583 2433 1583 1583 ? -1 S 1000 0:00 \_ file.so [kdeinit5] file local:/run/user/1000/klancheryEqsNa.1.slave-socket local:/run/user/1000/plasmashellKqbHMa.9
1583 2527 1583 1583 ? -1 S 1000 0:00 \_ file.so [kdeinit5] file local:/run/user/1000/klancheryEqsNa.1.slave-socket local:/run/user/1000/kdedSqMitvL.1.slave
1583 9313 1583 1583 ? -1 S 1000 0:00 \_ file.so [kdeinit5] file local:/run/user/1000/klancheryEqsNa.1.slave-socket local:/run/user/1000/dolphinoHkbDj.7.sla
1 1648 1647 1647 ? -1 S1 1000 0:03 /usr/bin/kded5
1 1652 1651 1651 ? -1 S1 1000 1:48 /usr/bin/kwin_x11
1 1737 1736 1736 ? -1 S1 1000 0:01 /usr/bin/kssmserver
1 1761 1760 1760 ? -1 Ss1 1000 0:00 /usr/bin/baloo_file
1 1763 1762 1762 ? -1 S1 1000 0:40 /usr/bin/plasmashell
1763 4270 1762 1762 ? -1 S1 1000 0:20 \_ /opt/discord/Discord
4270 4273 1762 1762 ? -1 S 1000 0:00 | \_ /opt/discord/Discord --type=zygote --no-zygote-sandbox
4273 4306 1762 1762 ? -1 S1 1000 0:15 | | \_ /opt/discord/Discord --type=gpu-process --field-trial-handle=5466952766645298375,7775487319779443931,131072
4270 4274 1762 1762 ? -1 S 1000 0:00 | \_ /opt/discord/Discord --type=zygote
4274 4276 1762 1762 ? -1 S 1000 0:00 | | \_ /opt/discord/Discord --type=zygote
4270 4313 1762 1762 ? -1 S1 1000 0:01 | \_ /opt/discord/Discord --type=utility --field-trial-handle=5466952766645298375,7775487319779443931,131072 --enable
4270 4377 1762 1762 ? -1 S1 1000 1:43 | \_ /opt/discord/Discord --type=renderer --autoplay-policy=no-user-gesture-required --field-trial-handle=54669527666
4270 4426 1762 1762 ? -1 S1 1000 0:00 | \_ /opt/discord/Discord --type=utility --field-trial-handle=5466952766645298375,7775487319779443931,131072 --enable
1763 5733 1762 1762 ? -1 S1 1000 1:00 \_ /usr/lib/firefox/firefox
5733 5821 1762 1762 ? -1 S1 1000 1:50 \_ /usr/lib/firefox/firefox -contentproc -childID 1 -isForBrowser -prefsLen 1 -prefMapSize 232450 -parentBuildID 20
5733 5873 1762 1762 ? -1 S1 1000 0:01 \_ /usr/lib/firefox/firefox -contentproc -childID 2 -isForBrowser -prefsLen 6171 -prefMapSize 232450 -parentBuildID
5733 5952 1762 1762 ? -1 S1 1000 0:02 \_ /usr/lib/firefox/firefox -contentproc -childID 3 -isForBrowser -prefsLen 7030 -prefMapSize 232450 -parentBuildID
5733 6042 1762 1762 ? -1 S1 1000 0:00 \_ /usr/lib/firefox/firefox -contentproc -parentBuildID 20210325054945 -prefsLen 9113 -prefMapSize 232450 -appdir /
5733 6589 1762 1762 ? -1 S1 1000 0:03 \_ /usr/lib/firefox/firefox -contentproc -childID 5 -isForBrowser -prefsLen 9416 -prefMapSize 232450 -parentBuildID
5733 7158 1762 1762 ? -1 S1 1000 0:35 \_ /usr/lib/firefox/firefox -contentproc -childID 6 -isForBrowser -prefsLen 9855 -prefMapSize 232450 -parentBuildID
5733 7729 1762 1762 ? -1 S1 1000 0:00 \_ /usr/lib/firefox/firefox -contentproc -childID 7 -isForBrowser -prefsLen 10056 -prefMapSize 232450 -parentBuildID
1 1765 1764 1764 ? -1 S1 1000 0:01 /usr/lib/org.kde.powerdevil
1 1770 1769 1769 ? -1 S1 1000 0:00 /usr/bin/xembedsniproxy
1 1776 1773 1773 ? -1 S1 1000 0:01 /usr/bin/kaccess
1 1780 1778 1778 ? -1 S1 1000 0:01 /usr/lib/polkit-kde-authentication-agent-1
1 1784 1784 1784 ? -1 Ss1 0 0:02 /usr/lib/udisks2/udisksd
1 1791 1790 1790 ? -1 S1 1000 0:00 /usr/bin/gmenudbusmenuproxy
1 1796 1794 1794 ? -1 Ss1 1000 0:01 /usr/lib/kdeconnectd
1 1808 1807 1807 ? -1 S1 1000 0:12 /usr/bin/yakuake
1808 2522 2522 2522 pts/1 9426 Ss 1000 0:00 \_ /bin/bash
2522 2528 2528 2522 pts/1 9426 S 0 0:00 \_ sudo su
2528 2534 2528 2522 pts/1 9426 S 0 0:00 \_ su
2534 2535 2535 2522 pts/1 9426 S 0 0:00 \_ bash
2535 9426 9426 2522 pts/1 9426 R+ 0 0:00 \_ ps -axjf
1 1812 1810 1810 ? -1 S1 1000 0:01 /usr/bin/msm_kde_notifier
1 1818 1815 1815 ? -1 S1 1000 0:00 /usr/lib/geoclue-2.0/demos/agent
1 1830 1829 1829 ? -1 S1 1000 0:01 /usr/bin/pamac-tray-plasma
1 1842 1842 1842 ? -1 Ss1 133 0:00 /usr/lib/rtkit-daemon
1 1845 1845 1845 ? -1 Ss1 0 0:00 /usr/lib/upowerd
1 4495 4495 4495 ? -1 Ss 0 0:00 /usr/bin/mount.ntfs /dev/sda1 /run/media/z0d14c/Mindenes -o rw,nodew,nosuid,uid=1000,gid=1001,windows_names,uhelper=udis
1 4503 4503 4503 ? -1 Ss 0 0:00 /usr/bin/mount.ntfs /dev/nvme0n1p3 /run/media/z0d14c/1A002E72D02E5473 -o rw,nodew,nosuid,uid=1000,gid=1001,windows_names
1 5162 1762 1762 ? -1 S1 1000 0:00 /usr/lib/libreoffice/program/oosplash --writer /run/media/z0d14c/Mindenes/YSAZ4T_seggedprog.docx
5162 5177 1762 1762 ? -1 S1 1000 0:44 \_ /usr/lib/libreoffice/program/soffice.bin --writer /run/media/z0d14c/Mindenes/YSAZ4T_seggedprog.docx --splash-pipe=5
1 5277 1762 1762 ? -1 S1 1000 0:09 /usr/bin/okular /run/media/z0d14c/Mindenes/Desktop/3B. Gyak.pdf

```

[z0d14c-aspirea31422 z0d14c]#

'pstree' process kiíratás

```

[z0d14c-aspirea31422 z0d14c]# pstree
systemd--ModemManager--2*[{ModemManager}]
--NetworkManager--2*[{NetworkManager}]
--agent--2*[{agent}]
--avahi-daemon--avahi-daemon
--baloo_file--3*[{baloo_file}]
--bluetoothd
--crond
--cupsd
--dbus-daemon
--gmenudbusmenupr--2*[{gmenudbusmenupr}]
--kaccess--2*[{kaccess}]
--kdeconnectd--3*[{kdeconnectd}]
--kded5--21*[{kded5}]
--kdeinit5--3*[{file.so}]
--klauncher--2*[{klauncher}]
--ksmserver--2*[{ksmserver}]
--kwalletd5--2*[{kwalletd5}]
--kwin_x11--22*[{kwin_x11}]
--2*[{mount.ntfs}]
--msm_kde_notifie--2*[{msm_kde_notifie}]
--okular--18*[{okular}]
--oosplash--soffice.bin--21*[{soffice.bin}]
--oosplash
--org_kde_powerde--6*[{org_kde_powerde}]
--pamac-tray-plas--4*[{pamac-tray-plas}]
--plasmashell--Discord--Discord--26*[{Discord}]
--Discord--Discord
--2*[{Discord--5*[{Discord}]]
--Discord--28*[{Discord}]
--31*[{Discord}]
--firefox--Privileged Cont--37*[{Privileged Cont}]
--RDD Process--2*[{RDD Process}]
--Web Content--54*[{Web Content}]
--Web Content--37*[{Web Content}]
--Web Content--40*[{Web Content}]
--Web Content--22*[{Web Content}]
--WebExtensions--30*[{WebExtensions}]
--80*[{firefox}]
--37*[{plasmashell}]
--polkit-kde-auth--4*[{polkit-kde-auth}]
--polkitd--11*[{polkitd}]
--rtkit-daemon--2*[{rtkit-daemon}]
--sddm--Xorg--16*[{Xorg}]
--sddm-helper--startplasma-x11--startplasma-x11
--sddm
--snapd--14*[{snapd}]
--start_kdeinit
--systemd--(sd-pam)
--at-spi-bus-laun--dbus-daemon
--3*[{at-spi-bus-laun}]
--at-spi2-registr--2*[{at-spi2-registr}]
--dbus-daemon
--dconf-service--2*[{dconf-service}]
--gvfsd--2*[{gvfsd}]
--gvfsd-fuse--7*[{gvfsd-fuse}]
--kactivitymanage--5*[{kactivitymanage}]

```

'ps -auxf' az 5 legtöbb CPU memóriát fogyasztó process kiírítása

```
graph TD
    sddm-helper --- startplasma-x11 --- startplasma-x11
    sddm --- sddm
    snapd --- 14*[{snapd}]
    start_kdeinit --- start_kdeinit
    systemd --- sd-pam
    sd-pam --- at-spi-bus-laun --- dbus-daemon
    at-spi-bus-laun --- 3*[{at-spi-bus-laun}]
    at-spi2-registr --- 2*[{at-spi2-registr}]
    dbus-daemon --- dbus-daemon
    dconf-service --- 2*[{dconf-service}]
    gvfsd --- 2*[{gvfsd}]
    gvfsd-fuse --- 7*[{gvfsd-fuse}]
    kactivitymanage --- 5*[{kactivitymanage}]
    kglobalaccel5 --- 2*[{kglobalaccel5}]
    kscreen_backend --- 2*[{kscreen_backend}]
    obexd --- obexd
    pulseaudio --- gsettings-helpe --- 3*[{gsettings-helpe}]
    gsettings-helpe --- 2*[{pulseaudio}]
    systemd-journal --- systemd-journal
    systemd-logind --- systemd-logind
    systemd-udev --- systemd-udev
    udisksd --- 4*[{udisksd}]
    upowerd --- 2*[{upowerd}]
    wpa_supplicant --- wpa_supplicant
    xembedsniproxy --- 2*[{xembedsniproxy}]
    yakuake --- bash --- sudo --- su --- bash --- pstree
    bash --- 17*[{yakuake}]

[z0d14c-aspirea31422 z0d14c]# ps -p 1286 -o comm=
[z0d14c-aspirea31422 z0d14c]# ps -auxf | sort -nr -k 3 | head -5
z0d14c  5821  6.5  6.0 3403792 368276 ?        S1   14:32   1:51   \_ /usr/lib/firefox/firefox -contentproc -childID 1 -isForBrowser -prefsLen 1 -prefMapSize 232450 -parentBuildID 20
210325054945 -appdir /usr/lib/firefox/browser 5733 true tab
root      1129   5.2  2.7 1451004 168420 tty1     Ssl+  14:14   2:22   \_ /usr/lib/Xorg -nolisten tcp -background none -seat seat0 vt1 -auth /var/run/sddm/{b46014b4-0687-4416-b45e-a57d07f878
6f} -noreset -displayfd 17
z0d14c  4377  4.2  5.8 26207508 356796 ?        S1   14:18   1:44   | \_ /opt/discord/Discord --type=renderer --autoplay-policy=no-user-gesture-required --field-trial-handle=54669527666
45298375,7775487319779443931,131072 --enable-features=WebComponentsV0Enabled --disable-features=SpareRendererForSitePerProcess --lang=hu --enable-crash-reporter=62315060-f4e6-4944-81dc-26
8366b42e7a,no_channel --global-crash-keys=62315060-f4e6-4944-81dc-268366b42e7a,no_channel,_companyName=Discord Inc.,_productName=Discord,_version=0.0.14 --app-path=/opt/discord/resources/
app.asar --no-sandbox --no-zygote --native-window-open --preload=/home/z0d14c/.config/discord/0.0.14/modules/discord_desktop_core/core.asar/app/mainScreenPreload.js --context-isolation --
background-color=#202225 --enable-spellcheck --enable-websql --num-raster-threads=4 --enable-main-frame-before-activation --renderer-client-id=7 --no-v8-untrusted-code-mitigations --share
d-files-v8_snapshot_data:100 --enable-node-leakage-in-renderers
z0d14c  1652  4.2  3.0 4825776 184920 ?        S1   14:15   1:55   /usr/bin/kwin_x11
z0d14c  5733  3.6  5.8 3433832 354472 ?        S1   14:32   1:00   \_ /usr/lib/firefox/firefox
[z0d14c-aspirea31422 z0d14c]#
```