

Operációs rendszerek BSc

4. Gyak.

2022. 02. 14.

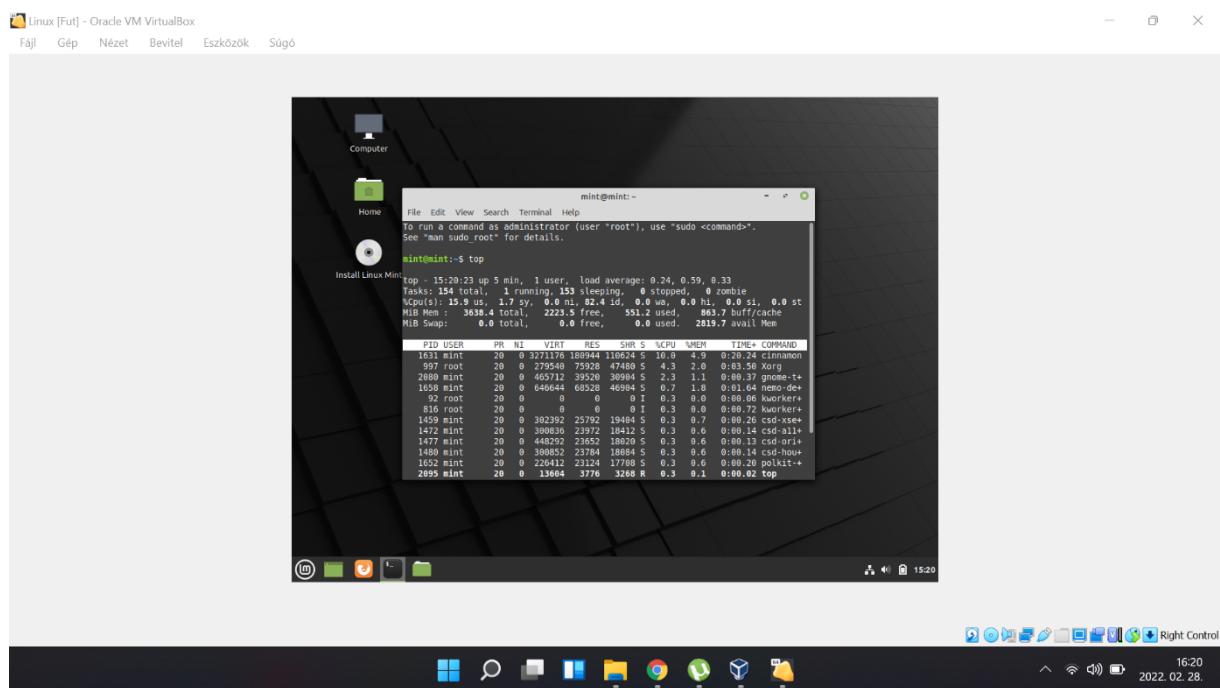
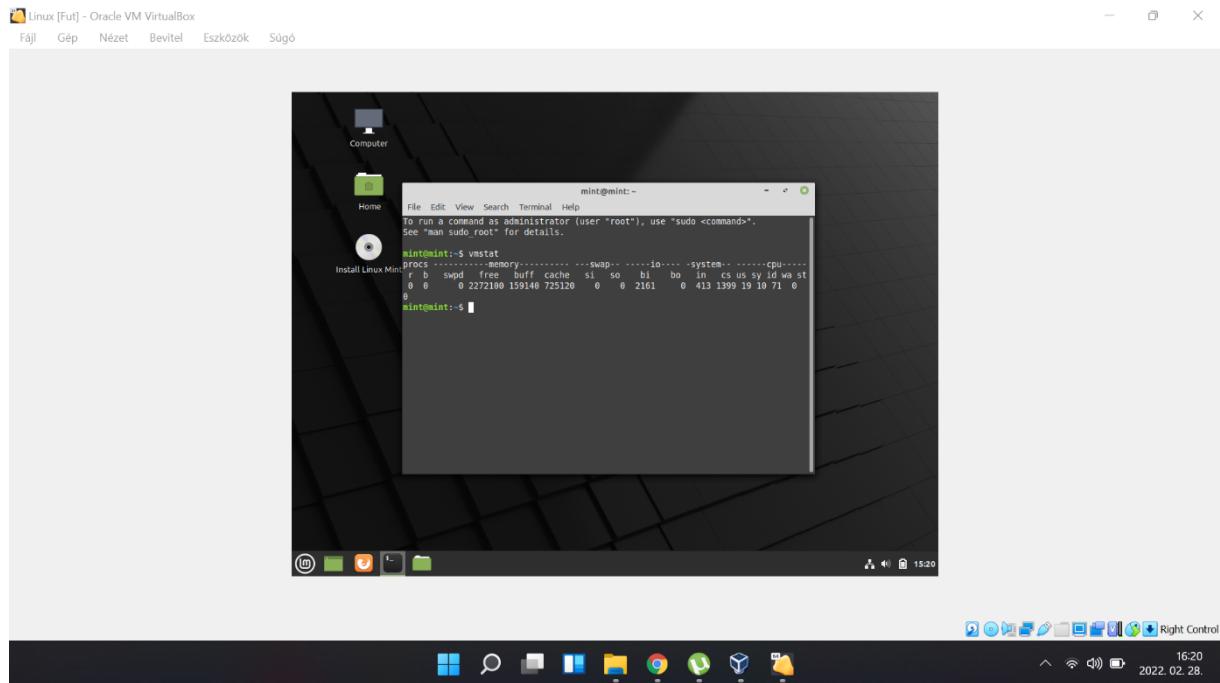
Készítette:

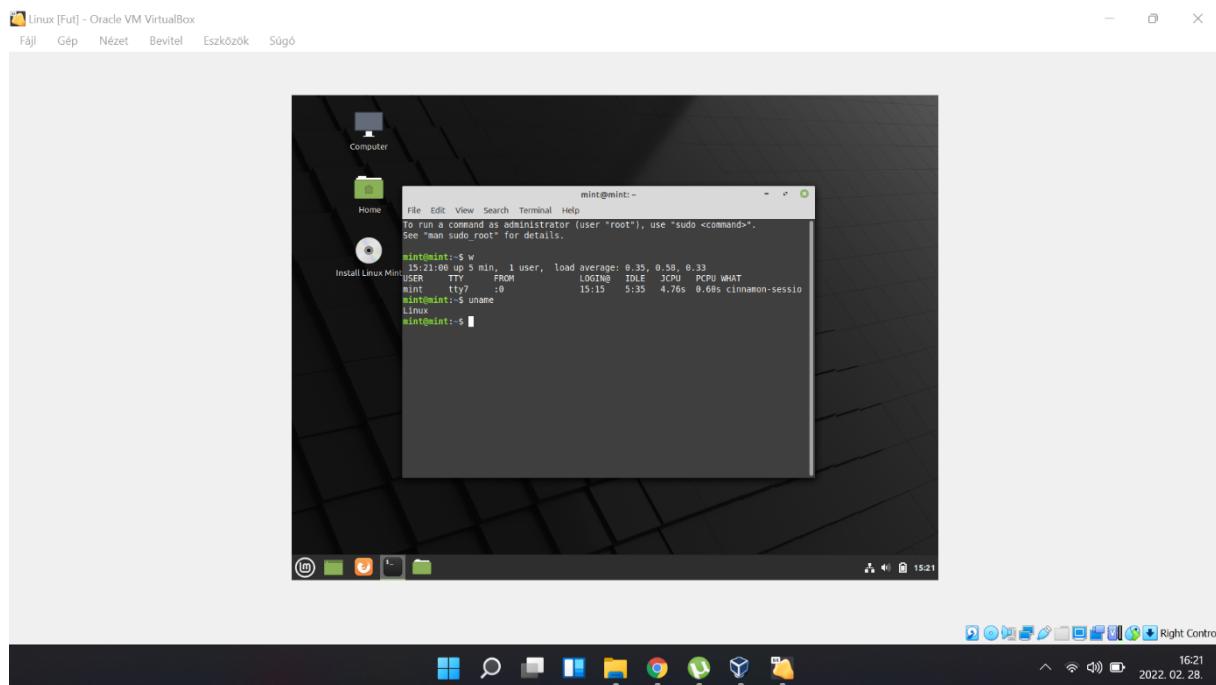
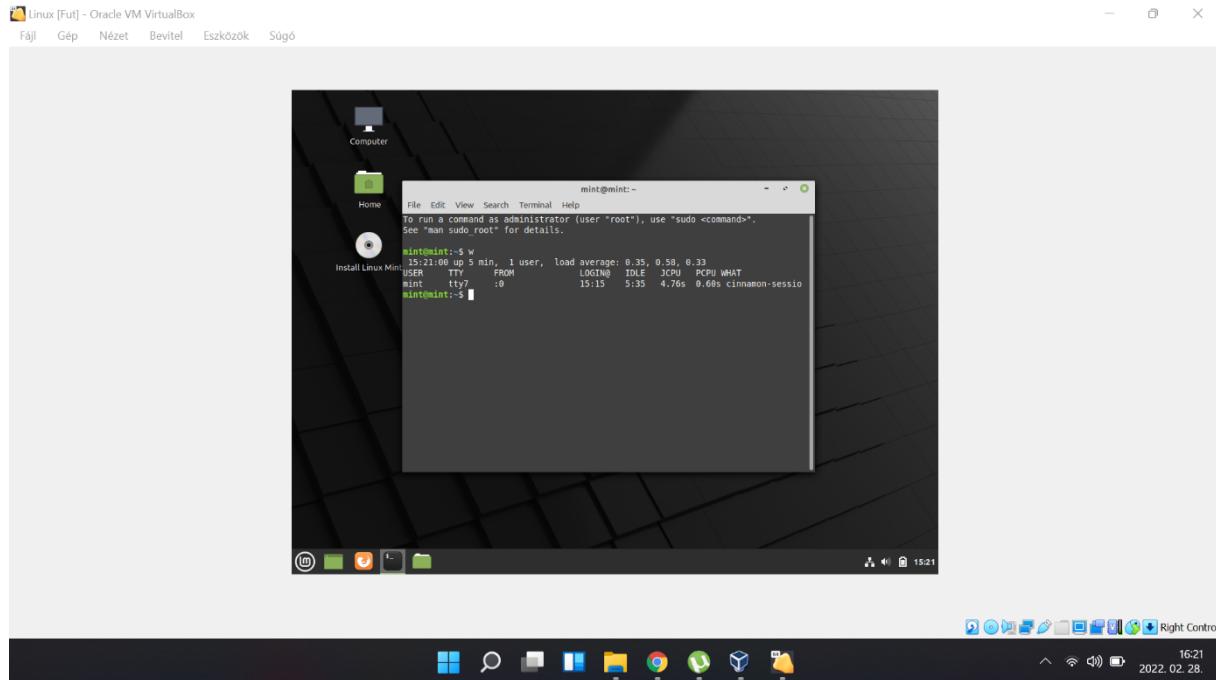
Balázs Tamás Bsc

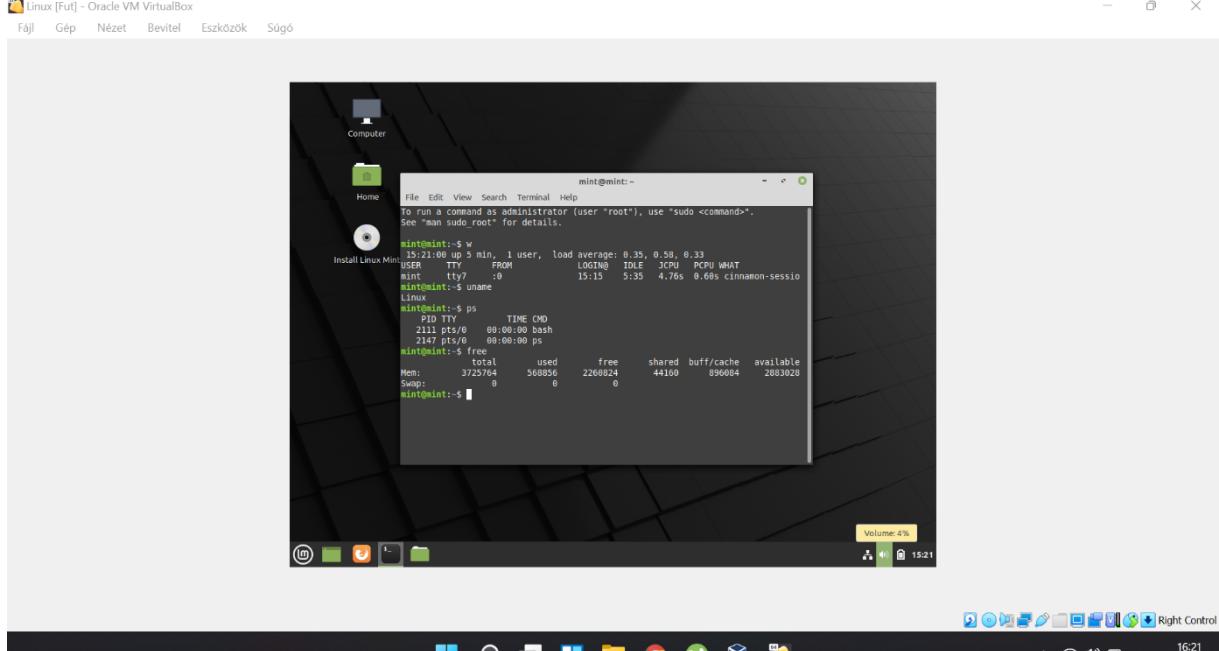
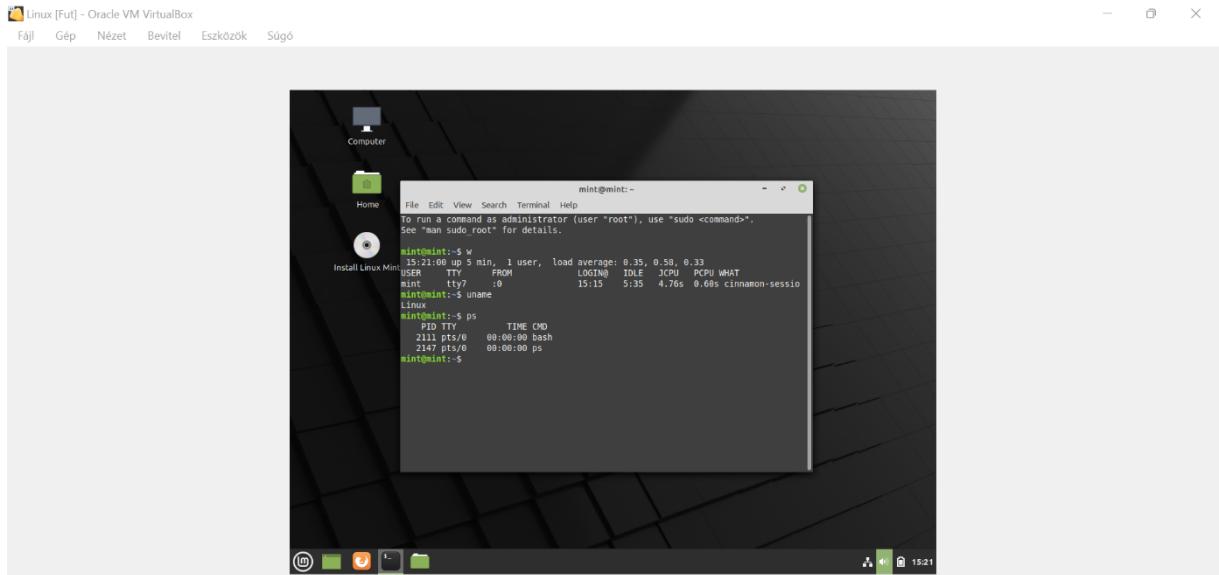
Gazdaságinformatikus

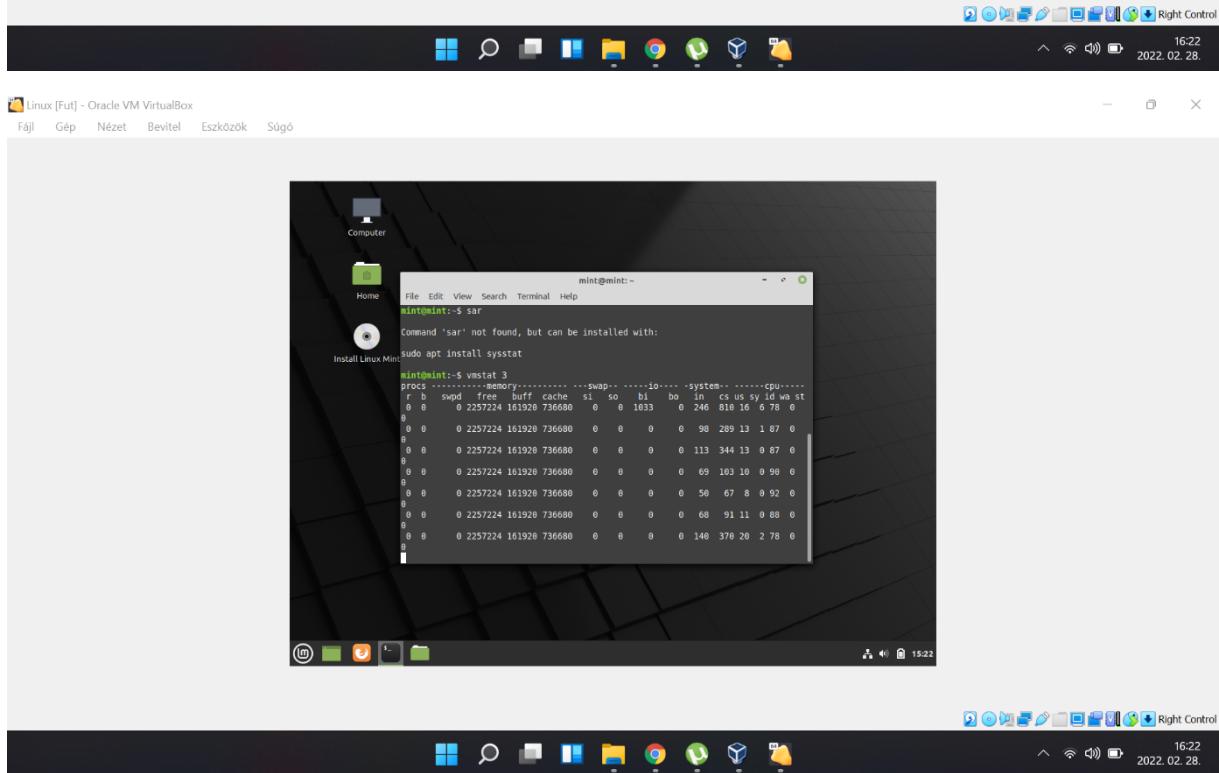
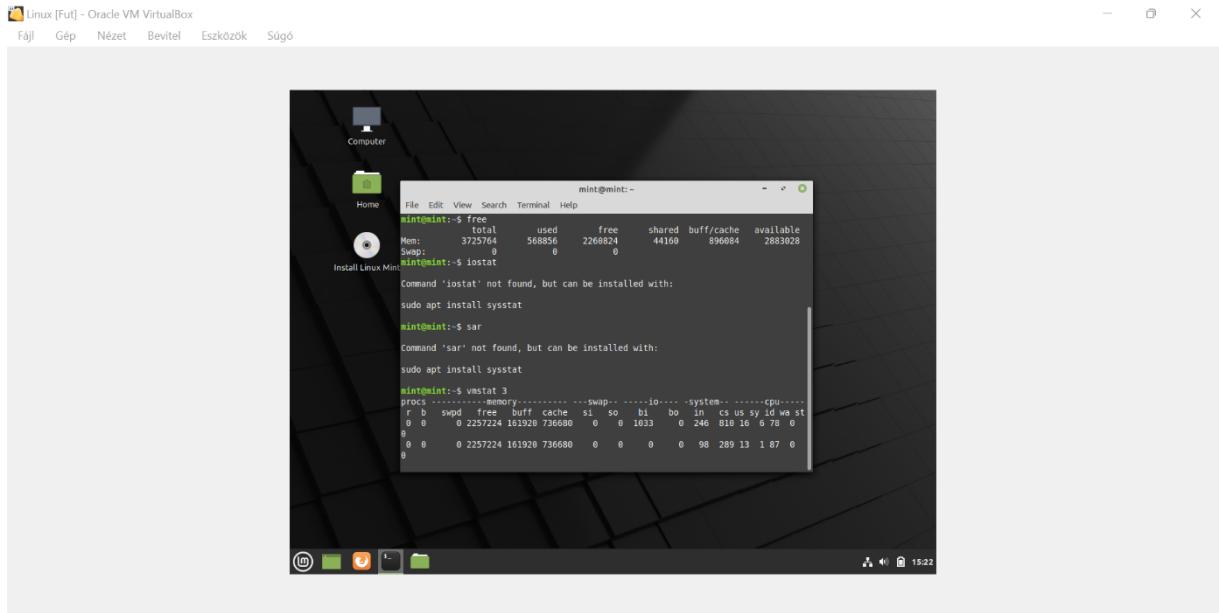
HM23GB

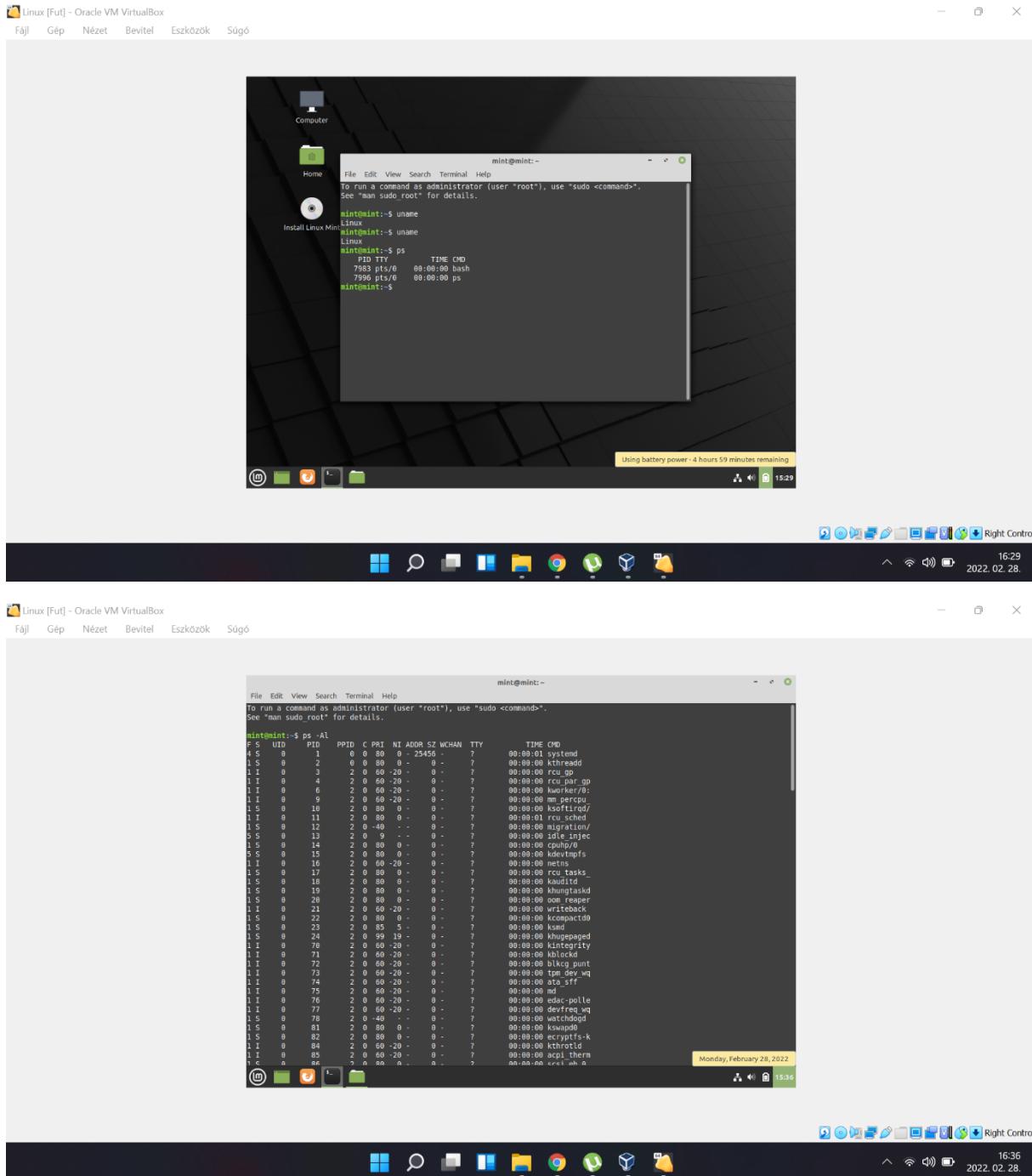
Miskolc, 2022











Linux [Fut] - Oracle VM VirtualBox

Fájl Gép Nézet Bevitel Eszközök Súgó

```
mint@mint:~
```

```
File Edit View Search Terminal Help
```

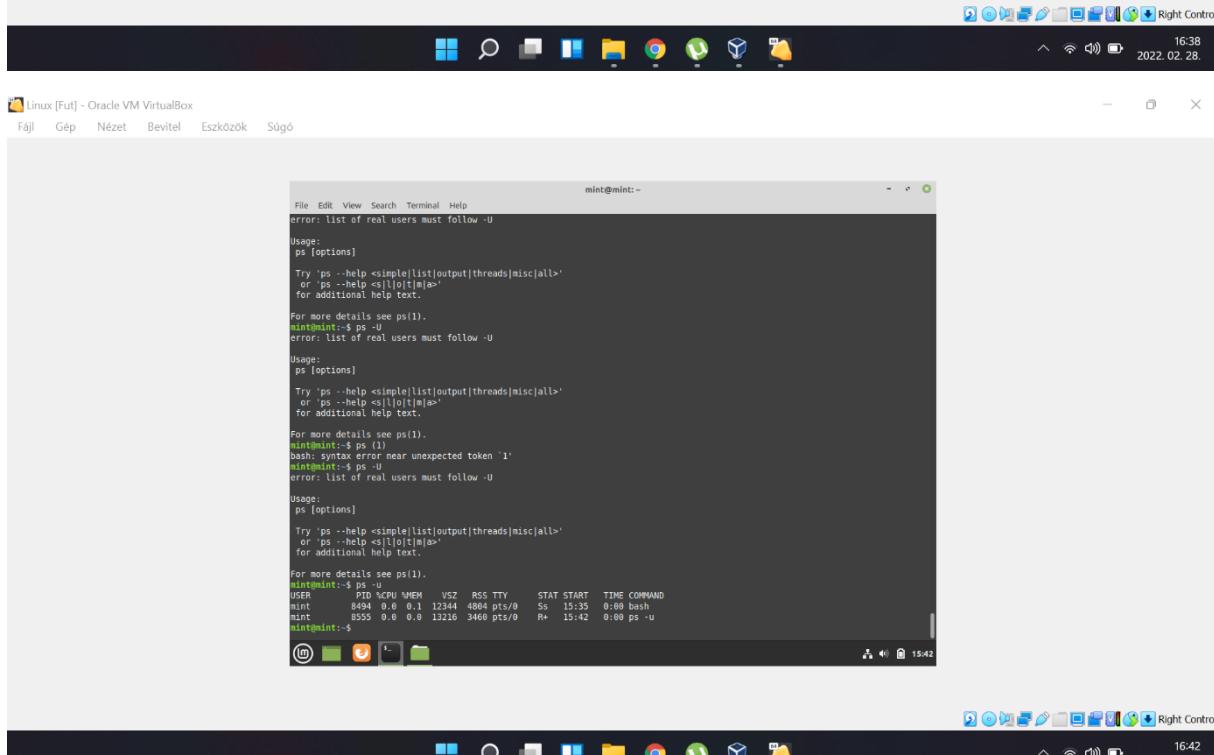
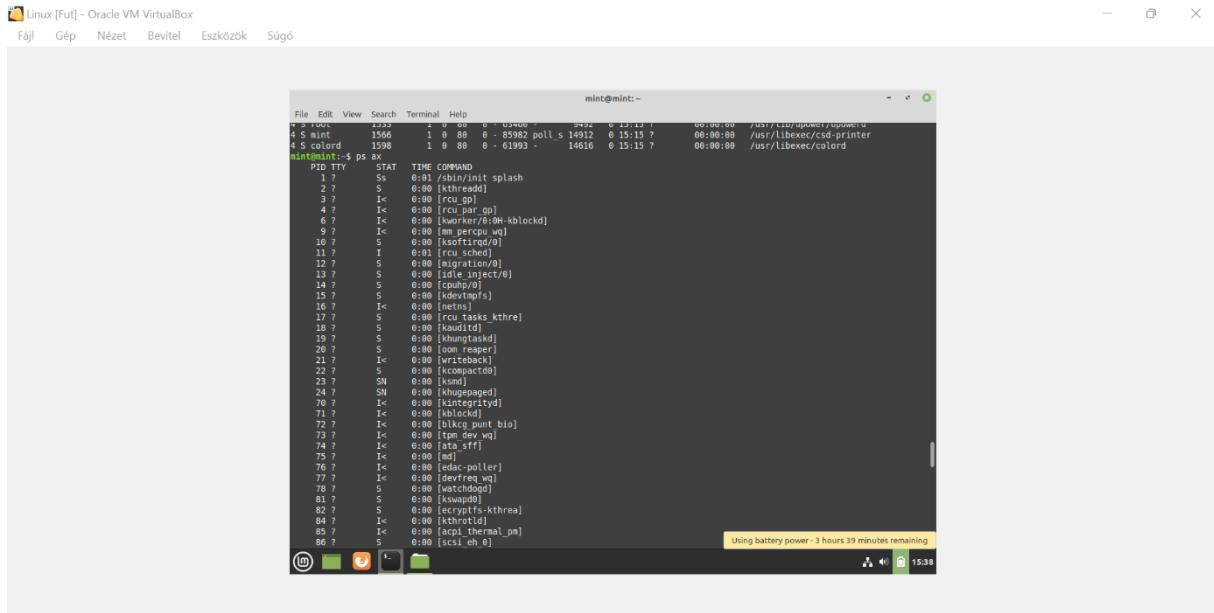
```
mint@mint:~$ ps -Af
U   PID  PPID C PRI NI ADDR SZ WCHAN  RSS PSR STIME TTY      TIME CMD
4 S 999 1861 1856 0 80 0 . 95221 poll_s ?    00:00:02 flatpak
4 S 999 1906 1219 0 80 0 . 15266 poll_s ?    00:00:00 applet.py
4 S 999 2003 1383 0 80 0 . 78959 poll_s ?    00:00:00 gvfsd-dns
4 S 999 2021 1383 0 80 0 . 79182 poll_s ?    00:00:00 gvfsd-dns
1 I 0 7991 2 0 80 0 . 0 . ?    00:00:00 kworker/u2
1 I 0 8014 2 0 80 0 . 0 . ?    00:00:00 kworker/u2
1 I 0 8021 2 0 80 0 . 0 . ?    00:00:00 kworker/u2
1 I 0 8276 2 0 80 0 . 0 . ?    00:00:00 kworker/u2
4 S 999 8486 1205 1 80 0 . 116437 poll_s ?    00:00:00 gnome-term
4 S 999 8494 8486 0 80 0 . 3086 do_wai pts/0 00:00:00 bash
4 S 999 8512 1658 2 80 0 . 178711 poll_s ?    00:00:00 nemo
1 I 0 8512 1658 2 80 0 . 0 . ?    00:00:00 kworker/u2
1 I 0 8528 2 0 80 0 . 0 . ?    00:00:00 kworker/u2
0 R 999 8546 8494 0 80 0 . 3284 .  pts/0 00:00:00 ps
```

```
mint@mint:~$ ps -Afh
U   PID  PPID C PRI NI ADDR SZ WCHAN  RSS PSR STIME TTY      TIME CMD
4 S root 1 0 88 0 . 25456 . 15:15 ? 00:00:01 /sbin/init splash
1 S root 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kthreadd]
1 I root 3 2 0 60-20 . 0 . 15:15 ? 00:00:00 [rcu_gp]
1 I root 4 2 0 60-20 . 0 . 15:15 ? 00:00:00 [rcu_bh]
1 I root 5 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kworker/u0:0:kblockd]
1 I root 6 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kworker/u0:0:kblockd]
1 I root 7 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kworker/u0:0:kblockd]
1 I root 9 2 0 60-20 . 0 . 15:15 ? 00:00:00 [mempercpu_wq]
1 S root 10 2 0 88 0 . 0 . 15:15 ? 00:00:00 [ksoftirqd/0]
1 I root 11 2 0 88 0 . 0 . 15:15 ? 00:00:00 [migration/0]
1 I root 12 2 0 48 . 0 . 15:15 ? 00:00:00 [migration/0]
1 S root 13 2 0 9 . . 0 . 15:15 ? 00:00:00 [idle_inject/0]
1 S root 14 2 0 88 0 . 0 . 15:15 ? 00:00:00 [cpuhp/0]
1 S root 15 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kdevtmpfs]
1 I root 16 2 0 60-20 . 0 . 15:15 ? 00:00:00 [rcu_tasks_kthre]
1 S root 17 2 0 60-20 . 0 . 15:15 ? 00:00:00 [rcu_tasks_kthre]
1 S root 18 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kauditd]
1 S root 19 2 0 88 0 . 0 . 15:15 ? 00:00:00 [khungtaskd]
1 S root 20 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kswapd0]
1 I root 21 2 0 60-20 . 0 . 15:15 ? 00:00:00 [writeback]
1 S root 22 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kcompactd0]
1 S root 23 2 0 85 5 . 0 . 15:15 ? 00:00:00 [kswapd0]
1 S root 24 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kswapd0]
1 S root 25 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kintegrityd]
1 I root 71 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kballocd]
1 I root 72 2 0 60-20 . 0 . 15:15 ? 00:00:00 [blkcg_punt_bio]
1 I root 73 2 0 60-20 . 0 . 15:15 ? 00:00:00 [tpm dev_wq]
1 I root 74 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kms_i915]
1 I root 75 2 0 60-20 . 0 . 15:15 ? 00:00:00 [md]
1 I root 76 2 0 60-20 . 0 . 15:15 ? 00:00:00 [edac_poller]
1 I root 77 2 0 60-20 . 0 . 15:15 ? 00:00:00 [devfreq_wq]
1 S root 78 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kintegrityd]
1 S root 81 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kswapd0]
1 S root 82 2 0 88 0 . 0 . 15:15 ? 00:00:00 [cryptifs-kthrea]
1 I root 84 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kthrotld]
1 S root 85 2 0 88 0 . 0 . 15:15 ? 00:00:00 [depmem_lpm]
1 S root 86 2 0 88 0 . 0 . 15:15 ? 00:00:00 [tcsch_ah_0]
1 I root 87 2 0 60-20 . 0 . 15:15 ? 00:00:00 [tcsch_tm_0]
```

16:37 2022.02.28.

mint@mint:~\$ ps -Af
U PID PPID C PRI NI ADDR SZ WCHAN RSS PSR STIME TTY TIME CMD
1 S root 1 0 88 0 . 25456 . 15:15 ? 00:00:01 /sbin/init splash
1 S root 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kthreadd]
1 I root 3 2 0 60-20 . 0 . 15:15 ? 00:00:00 [rcu_gp]
1 I root 4 2 0 60-20 . 0 . 15:15 ? 00:00:00 [rcu_bh]
1 I root 5 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kworker/u0:0:kblockd]
1 I root 6 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kworker/u0:0:kblockd]
1 I root 7 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kworker/u0:0:kblockd]
1 I root 9 2 0 60-20 . 0 . 15:15 ? 00:00:00 [mempercpu_wq]
1 S root 10 2 0 88 0 . 0 . 15:15 ? 00:00:00 [ksoftirqd/0]
1 I root 11 2 0 88 0 . 0 . 15:15 ? 00:00:00 [migration/0]
1 I root 12 2 0 48 . 0 . 15:15 ? 00:00:00 [migration/0]
1 S root 13 2 0 9 . . 0 . 15:15 ? 00:00:00 [idle_inject/0]
1 S root 14 2 0 88 0 . 0 . 15:15 ? 00:00:00 [cpuhp/0]
1 S root 15 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kdevtmpfs]
1 I root 16 2 0 60-20 . 0 . 15:15 ? 00:00:00 [rcu_tasks_kthre]
1 S root 17 2 0 60-20 . 0 . 15:15 ? 00:00:00 [rcu_tasks_kthre]
1 S root 18 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kauditd]
1 S root 19 2 0 88 0 . 0 . 15:15 ? 00:00:00 [khungtaskd]
1 S root 20 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kswapd0]
1 I root 21 2 0 60-20 . 0 . 15:15 ? 00:00:00 [writeback]
1 S root 22 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kcompactd0]
1 S root 23 2 0 85 5 . 0 . 15:15 ? 00:00:00 [kswapd0]
1 S root 24 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kswapd0]
1 S root 25 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kintegrityd]
1 I root 71 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kballocd]
1 I root 72 2 0 60-20 . 0 . 15:15 ? 00:00:00 [blkcg_punt_bio]
1 I root 73 2 0 60-20 . 0 . 15:15 ? 00:00:00 [tpm dev_wq]
1 I root 74 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kms_i915]
1 I root 75 2 0 60-20 . 0 . 15:15 ? 00:00:00 [md]
1 I root 76 2 0 60-20 . 0 . 15:15 ? 00:00:00 [edac_poller]
1 I root 77 2 0 60-20 . 0 . 15:15 ? 00:00:00 [devfreq_wq]
1 S root 78 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kintegrityd]
1 S root 81 2 0 88 0 . 0 . 15:15 ? 00:00:00 [kswapd0]
1 S root 82 2 0 88 0 . 0 . 15:15 ? 00:00:00 [cryptifs-kthrea]
1 I root 84 2 0 60-20 . 0 . 15:15 ? 00:00:00 [kthrotld]
1 S root 85 2 0 88 0 . 0 . 15:15 ? 00:00:00 [depmem_lpm]
1 S root 86 2 0 88 0 . 0 . 15:15 ? 00:00:00 [tcsch_ah_0]
1 I root 87 2 0 60-20 . 0 . 15:15 ? 00:00:00 [tcsch_tm_0]

16:37 2022.02.28.



Linux [Fut] - Oracle VM VirtualBox

Fájl Gép Nézet Bevitel Eszközök Súgó

```
mint@mint:~
```

```
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```

```
ps aux
mint 8494 0.0 0.1 12344 4884 pts/0 Ss 15:35 0:00 bash
mint 8555 0.0 0.0 13216 3466 pts/0 R+ 15:42 0:00 ps -u

mint@mint:~ ps -eajl
PID  PWD   SID TTY      TIME CMD
 2    /  0    ?    0:00:00 kthreadd
 3    /  0    ?    0:00:00 rCU gp
 4    /  0    ?    0:00:00 rCU par gp
 6    /  0    ?    0:00:00 kworker/0-0-kblockd
 9    /  0    ?    0:00:00 am _cpu_wm
10   /  0    ?    0:00:00 ksfttqrd/0
11   /  0    ?    0:00:01 rCU sched
12   /  0    ?    0:00:00 migration/0
13   /  0    ?    0:00:00 migration/0
14   /  0    ?    0:00:00 cpuph/0
15   /  0    ?    0:00:00 kdvtmfp
16   /  0    ?    0:00:00 netns
17   /  0    ?    0:00:00 ksks_kthre
18   /  0    ?    0:00:00 kauuid
19   /  0    ?    0:00:00 khungtaskd
20   /  0    ?    0:00:00 oom reaper
21   /  0    ?    0:00:00 writeback
22   /  0    ?    0:00:00 ksm
23   /  0    ?    0:00:00 ksm
24   /  0    ?    0:00:00 khugepaged
70   /  0    ?    0:00:00 kthreetyrd
71   /  0    ?    0:00:00 kbdiod
72   /  0    ?    0:00:00 blkcg_punt_blo
73   /  0    ?    0:00:00 tpm dev wq
74   /  0    ?    0:00:00 ata_sff
75   /  0    ?    0:00:00 ksm
76   /  0    ?    0:00:00 edac-pol
77   /  0    ?    0:00:00 devfreq_wq
78   /  0    ?    0:00:00 watchdogd
81   /  0    ?    0:00:00 cryptfs
82   /  0    ?    0:00:00 cryptfs-kthrea
84   /  0    ?    0:00:00 kthrotld
85   /  0    ?    0:00:00 acpi_thermal_pm
86   /  0    ?    0:00:00 scsi_eh_0
87   /  0    ?    0:00:00 scsi_tmf_0
```

mint@mint:~

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USER PID %CPU %MEM VSZ RSS TTY STAT START TIME COMMAND

```
root 2 0.0 0.0 0 0 ? S 15:15 0:00 [kthreadd]
root 3 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [rcu_gp]
root 4 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [rcu_par]
root 6 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [kworker/0-0]
root 9 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [kworker/0-0]
root 10 0.0 0.0 0 0 ? S 15:15 0:00 \_ [ksfttqrd]
root 11 0.0 0.0 0 0 ? I 15:15 0:01 \_ [rcu_sche]
root 12 0.0 0.0 0 0 ? S 15:15 0:00 \_ [migration/0]
root 13 0.0 0.0 0 0 ? S 15:15 0:00 \_ [migration/0]
root 14 0.0 0.0 0 0 ? S 15:15 0:00 \_ [cpuph/0]
root 15 0.0 0.0 0 0 ? S 15:15 0:00 \_ [kdvtmfp]
root 16 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [netns]
root 17 0.0 0.0 0 0 ? S 15:15 0:00 \_ [kauuid]
root 18 0.0 0.0 0 0 ? S 15:15 0:00 \_ [kauuid]
root 19 0.0 0.0 0 0 ? S 15:15 0:00 \_ [khungtaskd]
root 20 0.0 0.0 0 0 ? S 15:15 0:00 \_ [oom reaper]
root 21 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [writeback]
root 22 0.0 0.0 0 0 ? S 15:15 0:00 \_ [kcompact]
root 23 0.0 0.0 0 0 ? SN 15:15 0:00 \_ [ksmd]
root 24 0.0 0.0 0 0 ? SN 15:15 0:00 \_ [khugepag]
root 70 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [kthreetyrd]
root 71 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [blkcg_pu]
root 72 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [blkcg_pu]
root 73 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [tpm dev]
root 74 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [ata_sff]
root 75 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [ata_sff]
root 76 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [edac-pol]
root 77 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [devfreq]
root 78 0.0 0.0 0 0 ? S 15:15 0:00 \_ [watchdog]
root 81 0.0 0.0 0 0 ? S 15:15 0:00 \_ [cryptfs]
root 82 0.0 0.0 0 0 ? S 15:15 0:00 \_ [cryptfs]
root 84 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [kthrotld]
root 85 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [acpi_therma]
root 86 0.0 0.0 0 0 ? S 15:15 0:00 \_ [scsi_eh_0]
root 87 0.0 0.0 0 0 ? I< 15:15 0:00 \_ [scsi_tmf]
root 88 0.0 0.0 0 0 ? S 15:15 0:00 \_ [scsi_eh_0]
root 89 0.0 0.0 0 0 ? Tr 15:15 0:00 \_ [rcuu0]
```

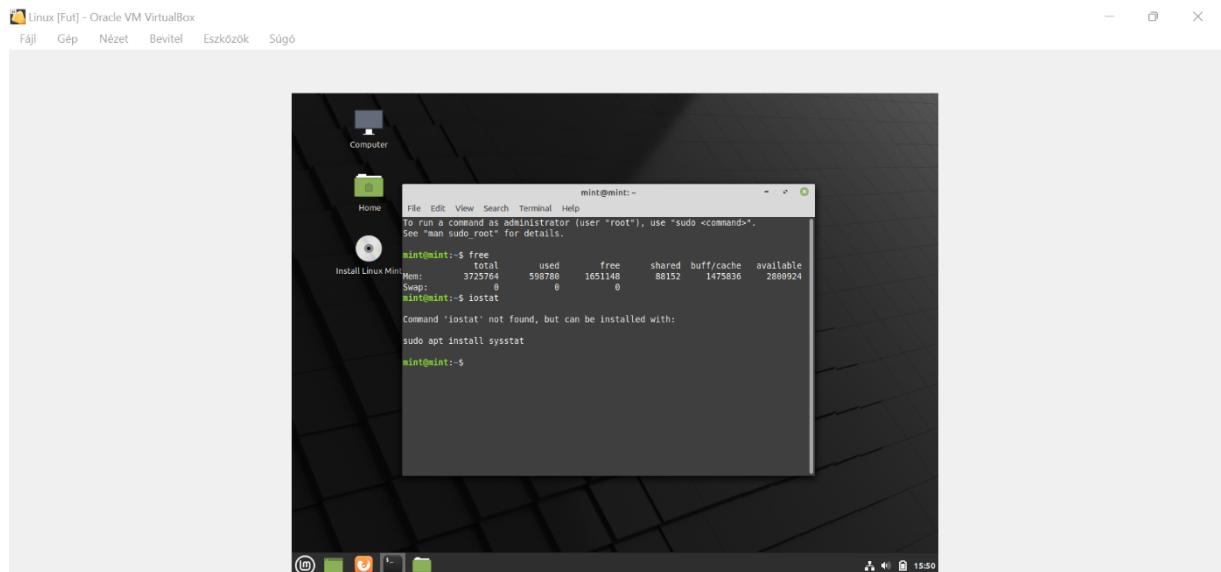
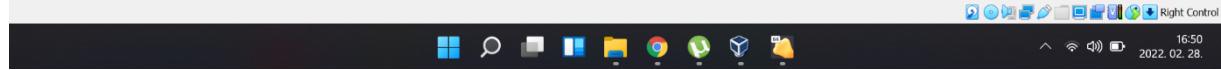
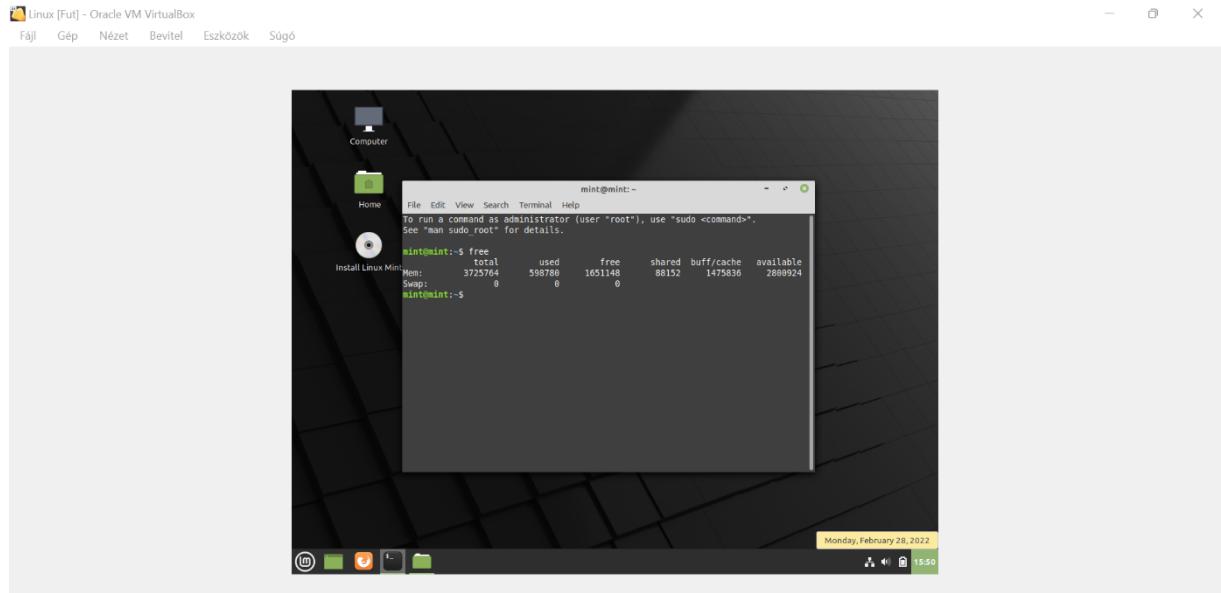
Connected to the wired network

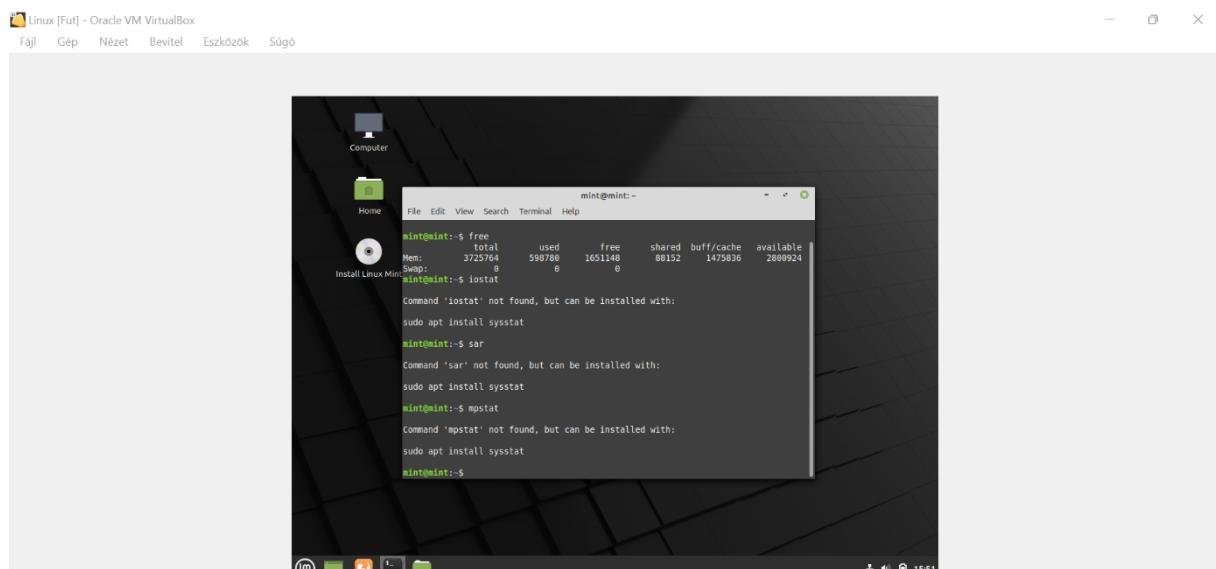
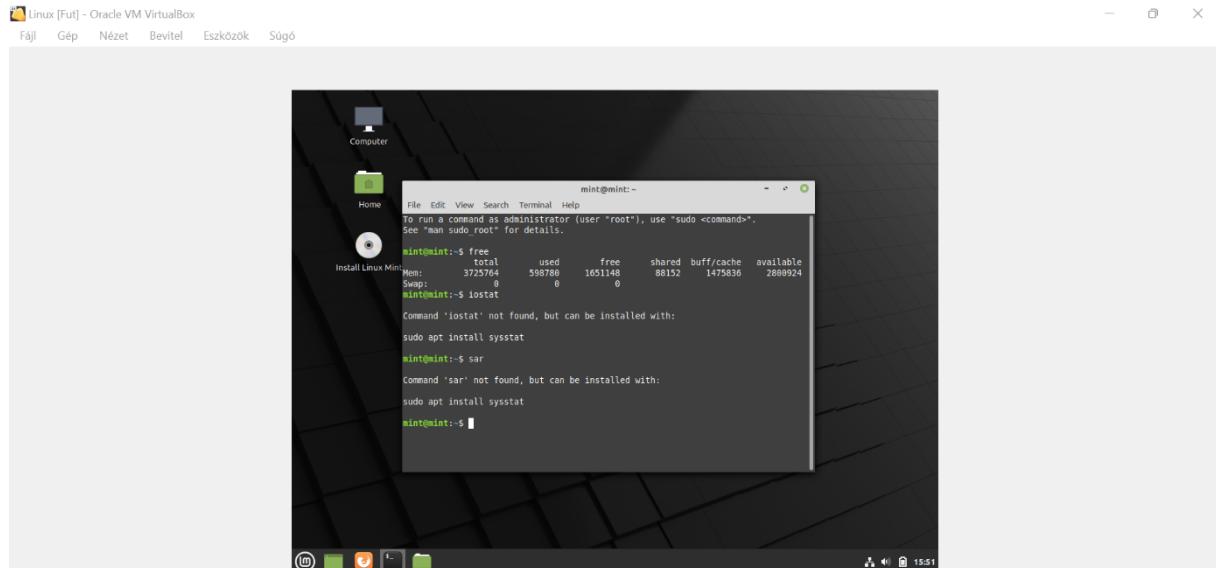
mint@mint:~

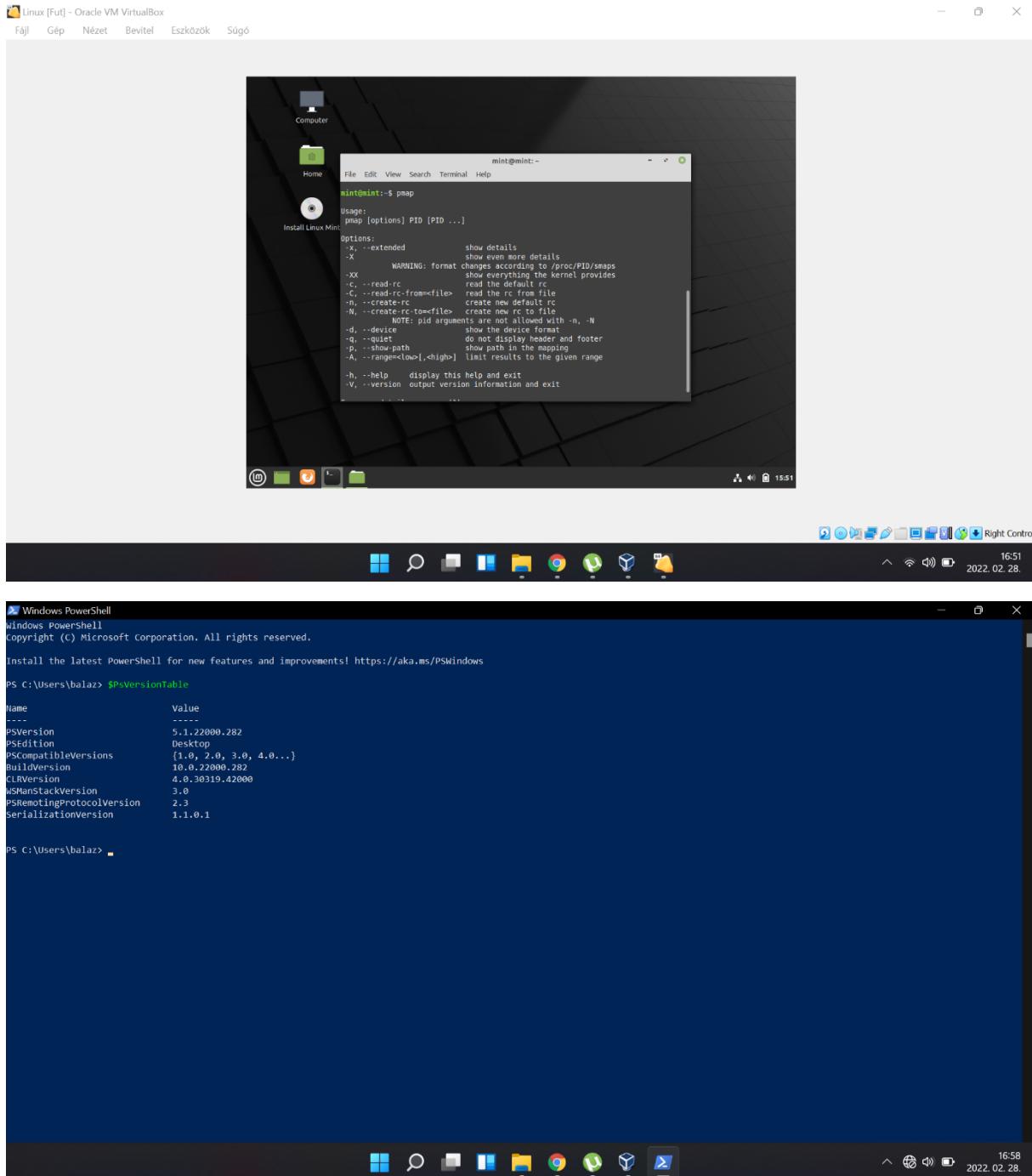
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Right Control

16:49 2022. 02. 28.







```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\balaz> $psversiontable
Name           Value
----           -----
PSVersion      5.1.22000.282
PSEdition     Desktop
PSCompatibleVersions {1.0, 2.0, 3.0, 4.0...}
BuildVersion   10.0.22000.282
CLRVersion    4.0.30319.42000
WSManStackVersion 3.0
PSRemotingProtocolVersion 2.3
SerializationVersion 1.1.0.1

PS C:\Users\balaz> Get-Date
2022. február 28., hétfő 16:59:14

PS C:\Users\balaz>
```

```
Windows PowerShell
PS C:\Users\balaz> Get-Process
Handles  NPM(K)    PM(K)      Ws(K) CPU(s) Id  SI ProcessName
-----  -----    -----      -----  --  --  -----
 88       6    1400      5240   6720  0 AggregatorHost
538      31   25852     46208   3,41  8276  2 ApplicationFrameHost
327      18     5092     15260   4620  0 AsusAppService
348      17     4884     10880   4712  0 AsusLinkNear
201      12     6408      8296   4648  0 AsusLinkRemote
191      11     2080      7432   3772  0 AsusOptimization
300      16     3040     16924   0,23  2468  2 AsusOptimizationStartupTask
168      15     3700     14628   0,17  5648  2 AsusOSD
563      20    10556     18364   4656  0 AsusSoftwareManager
393      24    34184     35772   0,81  6020  2 AsusSoftwareManagerAgent
186      11     2816      7548   4672  0 AsusSwitch
1490     18     3900     13272   4696  0 AsusSystemAnalysis
150       9     1784      6952   4640  0 AsusSystemDiagnosis
244      14     9872     18080  11,00  11420  0 audiodg
82        7     5276      5268   2652  0 conhost
257      14     5896     19236   1,69  14728  2 cortana
817      49    30416     43564   4,03  18768  2 ctfmon
457      17     4536     21532   8,66  17392  2 ctfmon
844      28     2004      5960   864   0 csrss
607      23     2580      7332   8940  2 csrss
143       7     1412      4668   5792  0 dasHost
204      18     3572     10568   8788  0 dlhost
267      31     6936     16196   0,36  15464  2 dlhost
117       8     1496     11348   0,00  17120  2 dlhost
243      13     2732     17824   0,89  20332  2 dlhost
407      16     5216     24964   2,13  22420  2 dlhost
1342     80   171144    123668   15924  2 dwm
128      11     1420      5696   4952  0 ElevationService
703      74   126040    53440  139,28 11548  2 EpicGamesLauncher
294      20   21432     28060   2,17  2760  2 EpicWebHelper
436      24   36212     35712   0,33  18204  2 EpicWebHelper
107       8     1652      5236   4944  0 esif_uf
4063     129   160536    205060  233,70 10072  2 explorer
195      13     3324     18184   1,03  1964  2 FileCoAuth
33        6     1724      3104   1180  0 Fontdrvhost
33        7     2452      6776   3412  2 Fontdrvhost
613      25   10732     23876   12452  0 gamingservices
142       8     1564      5800   5888  0 gamingservicesnet
180      11     1708      1608   11588  0 GoogleCrashHandler
162       9     1688      1048   11652  0 GoogleCrashHandler64
```

```
Windows PowerShell
d-r-- 2021. 11. 08. 11:40      Videos
d----- 2021. 04. 26. 11:46      VirtualBox VMs
-a---- 2021. 02. 09. 13:50      183 .gitconfig

PS C:\Users\balaz> cd..
PS C:\Users> cd..
PS C:\> dir

Directory: C:\

Mode                LastWriteTime       Length Name
----                -----
d----- 2022. 02. 22. 19:01            0    0
d----- 2021. 05. 06. 10:07          DRIVERS
d----- 2019. 09. 15. 20:10          eSupport
d----- 2021. 05. 07. 13:15          Microsoft
d----- 2021. 06. 05. 14:10          PerfLogs
d-r-- 2022. 02. 25. 15:52          Program Files
d-r-- 2022. 02. 25. 15:52          Program Files (x86)
d----- 2022. 01. 23. 20:54          Riot Games
d----- 2020. 10. 30. 15:45          totalcmd
d-r-- 2021. 11. 05. 1:00           Users
d----- 2022. 02. 12. 13:19           Windows

PS C:\> ■
```

```
Windows PowerShell
PS C:\> Get-Alias

CommandType      Name          Version   Source
-----          ----          -----   -----
Alias          % -> ForEach-Object
Alias          ? -> Where-Object
Alias          ac -> Add-Content
Alias          asnp -> Add-PSNapin
Alias          cat -> Get-Content
Alias          cd -> Set-Location
Alias          CFS -> ConvertFrom-String
Alias          chdir -> Set-Location
Alias          clc -> Clear-Content
Alias          clear -> Clear-Host
Alias          clhy -> Clear-History
Alias          cli -> Clear-Item
Alias          clp -> Clear-ItemProperty
Alias          cls -> Clear-Host
Alias          clv -> Clear-Variable
Alias          cnsn -> Connect-PSSession
Alias          compare -> Compare-Object
Alias          copy -> Copy-Item
Alias          cp -> Copy-Item
Alias          cpi -> Copy-Item
Alias          cpp -> Copy-ItemProperty
Alias          curl -> Invoke-WebRequest
Alias          cvpa -> Convert-Path
Alias          dbp -> Disable-PSBreakpoint
Alias          del -> Remove-Item
Alias          diff -> Compare-Object
Alias          dir -> Get-ChildItem
Alias          dsn -> Disconnect-PSSession
Alias          ebp -> Enable-PSBreakpoint
Alias          echo -> Write-Output
Alias          epal -> Export-Alias
Alias          epcsv -> Export-Csv
Alias          epsn -> Export-PSSession
Alias          erase -> Remove-Item
Alias          etsn -> Enter-PSSession
Alias          exsn -> Exit-PSSession
Alias          fc -> Format-Custom
Alias          fxh -> Format-Hex
3.1.0.0 Microsoft.PowerShell.Utility

PS C:\> ■
```

```
Windows PowerShell

PS C:\> New-Alias "processz" Get-Process
PS C:\> processz

Handles  NPM(K)    PM(K)      WS(K)    CPU(s)   Id SI ProcessName
-----  -----    -----      -----    -----   -- -- -----
     88       6    1340        5212    6720  0 AggregatorHost
    538      31    25852       46208   3,41  8276  2 ApplicationFrameHost
    327      18    5092        15260    4620  0 AsusAppService
    348      17    4880        10876    4712  0 AsusLinkNear
    291      12    6408        8296    4648  0 AsusLinkRemote
    191      11    2080        7432    3772  0 AsusOptimization
    300      16    3040       16924   0,23  2468  2 AsusOptimizationStartupTask
    168      15    3700       14628   0,17  5648  2 AsusSD
    563      20    10376      18812    4656  0 AsusSoftwareManager
    393      24    34184      35772   0,81  6020  2 AsusSoftwareManagerAgent
    186      11    2816        7548    4672  0 AsusSwitch
1490      18    3900       13272    4696  0 AsusSystemAnalysis
    150      9    1784        6952    4640  0 AsusSystemDiagnosis
    271      29    18372      31700   0,16  12960  2 backgroundTaskHost
     82      7    5248        5256    2652  0 conhost
    257      14    5896       19248   6,95  14728  2 conhost
    817      49    30416      43564   4,05  18768  2 cortana
    452      17    4480       21500   8,72  17392  2 ctfmon
    838      28    2004        5952    864   0 csrss
    611      24    2580        7340    8940  2 csrss
    143      7    1412        4668    5792  0 csrssHost
    264      18    3572       10568    8788  0 csrssHost
    267      31    6936       16196   0,36  15464  2 csrssHost
    117      8    1496       11348   0,00  17120  2 csrssHost
    239      13    2680       17812   0,89  20332  2 csrssHost
    407      16    5160       24888   2,13  22420  2 csrssHost
1338      80    171072      123668   1574  2 dwm
    128      11    1420        5660    4862  0 elevationservice
    695      74    126004      53448  140,05 11548  2 epicgameslauncher
    290      20    21396       28044   2,17  2760  2 epicwebhelper
    426      24    36208      35704   0,33  18204  2 epicwebhelper
    107      8    1656        5236    4944  0 esif
3999      128    159365      213056  238,94 10872  2 explorer
    195      13    3324       18104   1,03  1964  2 filecouthost
    33      5    1724        3104    1188  0 fontdrvhost
    33      7    2452       6780    3412  2 fontdrvhost
    606      25    10620      23816   12452  0 gamingservices

17:08 2022. 02. 28.
```

```
Windows PowerShell

PS C:\>
PS C:\>
PS C:\>
PS C:\>
PS C:\>
PS C:\> Sort-Object
PS C:\> Get-Service | Sort-Object name

Status   Name           DisplayName
-----  --           -----
Running  Aarsvc_400f5be Agent Activation Runtime_400f5be
Stopped AJRouter        Alloyn-útválasztó szolgáltatás
Stopped ALG             Alkalmazási réteg átválasztás
Stopped AppIDSvc        Alkalmazásiidentitás
Running AppInfo          Alkalmazásiinformációk
Stopped AppReadiness     Alkalmazás-előkészítő
Running AppXSvc          AppX telepítő szolgáltatás (Appxsvc)
Running AsusAppService   ASUS App Service
Running AsusLinkNear     ASUS Link Near
Running ASUSLinkRemote   ASUS Link Remote
Running ASUSOptimization ASUS Optimization
Running ASUSSoftwareMan... ASUS Software Manager
Running ASUSSwitch        ASUS Switch
Running ASUSSystemAnalysis ASUS System Analysis
Running ASUSSystemDiagn... ASUS System Diagnosis
Running AudioEndpointBu... Windows-hangvégezőtelepítő
Running Audiosrv         Windows audio
Stopped autotimesvc     Mobilhálózati idő
Stopped Axinstsv        ActiveX Telepítő (AxInstsv)
Stopped BcastDVRUserSer... Játékképítő-rögzítő és Közvetítés fe...
Running BDEsvc          Bitlocker meghajtótíkositási szolg...
Running BFE              Alap szűrőprogram
Stopped BITS             Háttérben futó intelligens átvitel...
Stopped BluetoothUserSe... Felhasználói Bluetooth-támogatási s...
Running Bonjour Service  Bonjour Service
Running BrokerInfrastru... Háttérfeladatok infrastruktura-szolg...
Stopped BTAGService      Bluetooth-hangátjáró szolgáltatás
Running BthAvctpSvc      AVCTP-szolgáltatás
Stopped bthserv          Bluetooth-támogatási szolgáltatás
Running camsvc           Képesség hozzáférés-kezelési szolgá...
```

```
Windows PowerShell
PS C:\>
PS C:\>
PS C:\>
PS C:\>
PS C:\> Sort-Object
PS C:\> Get-Service | Sort-Object name

Status Name DisplayName
----- ----
Running AarSvc_400f5be Agent Activation Runtime_400f5be
Stopped ALRouter Alloin-útválasztó szolgáltatás
Stopped ALG Alkalmazási réteg átjárós szolgáltatása
Stopped AppIDsvc Alkalmazásszínenek
Running AppInfo Alkalmazási információk
Stopped AppReadiness Alkalmazási előszűrő
Running AppXService_ AppX telepítő szolgáltatás (AppXSV...
running ASUSAppService ASUS App Service
Running ASUSLinkNear ASUS Link Near
Running ASUSLinkRemote ASUS Link Remote
Running ASUSOptimization ASUS Optimization
Running ASUSSoftwareMan... ASUS Software Manager
Running ASUSSwitch ASUS Switch
Running ASUSSystemAnalysis ASUS System Analysis
Running ASUSSystemDiagn... ASUS System Diagnosis
Running AudioEndpointBu... Windows-hangvégpontépítő
Running Audiosrv Windows audio
Stopped autotimesvc Mobilhálózati idő
Stopped AxInstSV ActiveX Telepítő (AxInstSV)
Stopped BcastDVRUserService_ Játékvideó-rögzítő és Követésítés fe...
Running BDHSVc Bitlocker meghajtókitkötési szolg...
Running BFE Alap szűrőprogram
Stopped BITS Háttérben futó intelligens átviteli...
Stopped BluetoothUserSe... Felhasználói Bluetooth-támogatási s...
Running Bonjour Service Bonjour Service
Running BrokerInfrastru... Háttér feladatok infrastruktúra-szolg...
Stopped BTAGService Bluetooth-hangtájáró szolgáltatás
Running BthAvctpSvc AVCTP-szolgáltatás
Stopped bthserv Bluetooth-támogatási szolgáltatás
Running camsvc Képesség hozzáférés-kerelei szolgá...
Stopped CaptureService_... CaptureService_400f5be
Running cbdhsvc_400f5be Vágólap felhasználói szolgáltatás_4...
Running CDPSvc Csatlakoztatott eszközök platformja...
Running CPUSvc Csatlakoztatott eszközök platformja...
Stopped CertPropSvc Tanúsítvány-terjesztés
```

```
Windows PowerShell
Running Bonjour Service    Bonjour Service
Stopped BluetoothUserSe...  Felhasználói Bluetooth-támogatási ...
Stopped BITS             Hárterben futó intelligens átvitel...
Running BFE              Alap szűrőprogram
Running BDESVC           Bitlocker meghajtótítkosítási szolg...
Stopped BroadcastUserSer... Játékvideó-rögzítő és Közvetítés fe...
Stopped AxInstSv          ActiveX Telepítő (AxInstSv)
Stopped autotimesvc       Mobilhálózati idő
Running Audiosrv         Windows audio
Running AudioEndpointBu...  Windows-hangvégpontépítő
Running ASUSSystemDiagn...  ASUS System Diagnosis
Running ASUSSystemAnalysis  ASUS System Analysis
Running ASOSwitch          ASUS Switch
Running ASOSoftwareMan...  ASUS Software Manager
Running ASUSOptimization   ASUS Optimization
Running ASUSLinkRemote     ASUS Link Remote
Running ASUSLinkNear        ASUS Link Near
Running AsusAppService     ASUS App Service
Running AppXService        Alkalmazás telepítő szolgáltatás (AppXSCV)
Stopped AppXReadiness      Alkalmazás-előkészítő
Running AppInfo            Alkalmazásinformációk
Stopped AppIDSvc           Alkalmazásidentitás
Stopped ALG                Alkalmazási röstag átvárolószolgáltatása
Stopped AJRouter           Alljoyn-útválasztó szolgáltatás
Running Aarsvc_400f5be     Agent Activation Runtime_400f5be

PS C:\> Get-Service | Where-Object { $_.Name -like "wi*" }

Status Name          DisplayName
----- --          -----
Stopped WiRpc        Állókép-beviteli események
Running WinDefend    Microsoft Defender víruskereső szolg...
Running WinHttpAutoProx... WinHTTP automatikus webproxy-kereső...
Running Wmiprvse      Windows Management Instrumentation
Stopped WinRM         Rendszerfelügyeleti webszolgáltatások
Stopped wisvc        Windows Insider szolgáltatás

PS C:\>
```

```
Windows PowerShell

PS C:\> Get-Service | Group-Object status

Count Name          Group
---- --          -----
 129 Running      {Aarsvc_400f5be, Appinfo, AppXSvc, AsusAppService...}
 163 Stopped      {A)Router, ALG, AppIDSvc, AppReadiness...}

PS C:\>
```

```
Windows PowerShell

PS C:\> Get-Service | Measure-Object

Count : 292
Average :
Sum :
Maximum :
Minimum :
Property :
```

```
Windows PowerShell
At line:1 char:15
+ Get-Process | Measure-Object -Maximum -Minimum -Average -Sum
+ ~~~~~~
+ CategoryInfo          : InvalidType: (System.Diagnostics.Process (WUDFHost):Process) [Measure-Object], PSInvalidOperationException
+ FullyQualifiedErrorHandlerId : NonNumericInputObject,Microsoft.PowerShell.Commands.MeasureObjectCommand

Measure-Object : Input object "System.Diagnostics.Process (YourPhone)" is not numeric.
At line:1 char:15
+ Get-Process | Measure-Object -Maximum -Minimum -Average -Sum
+ ~~~~~~
+ CategoryInfo          : InvalidType: (System.Diagnostics.Process (YourPhone):Process) [Measure-Object], PSInvalidOperationException
+ FullyQualifiedErrorHandlerId : NonNumericInputObject,Microsoft.PowerShell.Commands.MeasureObjectCommand

Measure-Object : Input object "System.Diagnostics.Process (YourPhoneServer)" is not numeric.
At line:1 char:15
+ Get-Process | Measure-Object -Maximum -Minimum -Average -Sum
+ ~~~~~~
+ CategoryInfo          : InvalidType: (System.Diagnostics.Process (YourPhoneServer):Process) [Measure-Object], PSInvalidOperationException
+ FullyQualifiedErrorHandlerId : NonNumericInputObject,Microsoft.PowerShell.Commands.MeasureObjectCommand

Count    : 217
Average   :
Sum      :
Maximum   :
Minimum   :
Property  :

PS C:\> Get-Process | Measure-Object -Property id -Maximum -Minimum -Average -Sum

Count    : 217
Average   : 7832,11059907834
Sum      : 1699568
Maximum   : 22420
Minimum   : 0
Property  : Id

PS C:\>
```

```
Windows PowerShell
At line:1 char:15
+ Get-Process | Measure-Object -Property id -Maximum -Minimum -Average -Sum
+ ~~~~~~
+ CategoryInfo          : ObjectNotFound: (Get-Windows:String) [], CommandNotFoundException
+ FullyQualifiedErrorHandlerId : CommandNotFoundException

PS C:\> Get-Windows time
Get-Windows : The term 'Get-Windows' is not recognized as the name of a cmdlet, function, script file, or operable program. Check the spelling of the name, or if a path was included, verify that the path is correct and try again.
At line:1 char:1
+ Get Windows time
+ ~~~~~~
+ CategoryInfo          : ObjectNotFound: (Get-Windows:String) [], CommandNotFoundException
+ FullyQualifiedErrorHandlerId : CommandNotFoundException

PS C:\> $szoveg = "misiklc"
PS C:\> $szoveg.Length
/
PS C:\> $szoveg.ToUpper()
MISKOLC
PS C:\> $szoveg.Replace("ol", "il")
misiklic
PS C:\> $szoveg -contains "olc"
False
PS C:\> $szoveg.Split("k")
mis
olc
PS C:\>
```

```
Kijelölés Windows PowerShell
PS C:\> Get-Windows time
Get-Windows : The term 'Get-Windows' is not recognized as the name of a cmdlet, function, script file, or operable program. Check the spelling of the name, or if a path was included, verify that the path is correct and try again.
At line:1 char:1
+ Get-Windows time
+ ~~~~~
    + CategoryInfo          : ObjectNotFound: (Get-Windows:String) [], CommandNotFoundException
    + FullyQualifiedErrorId : CommandNotFoundedException

PS C:\> $szoveg = "miskolc"
PS C:\> $szoveg.Length
7
PS C:\> $szoveg.ToUpper()
MISKOLC
PS C:\> $szoveg.Replace("ol", "ll")
mislllc
PS C:\> $szoveg -contains "olc"
False
PS C:\> $szoveg.Split("k")
mis
olc
PS C:\> Get-date
2022. február 28., hétfő 17:29:54

PS C:\> Get-Service | Where-Object {$_ .name -eq "W32Time" }

Status   Name           DisplayName
-----   --           -----
Running  W32Time       Windows Time

PS C:\> w32time
w32time : The term 'w32time' is not recognized as the name of a cmdlet, function, script file, or operable program. Check the spelling of the name, or if a path was included, verify that the path is correct and try again.
At line:1 char:1
+ w32time
+ ~~~~~
    + CategoryInfo          : ObjectNotFound: (w32time:String) [], CommandNotFoundException
    + FullyQualifiedErrorId : CommandNotFoundedException

PS C:\>
```

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