LAB 2

- **STEP-1**: Identify the current USB devices (**Hint**: `lsusb`)

Commands

- `lsusb`

```
hager@hager-VirtualBox:~$ lsusb
Bus 001 Device 003: ID 80ee:0021 VirtualBox USB Tablet
Bus 001 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
```

- **STEP-2**: Count how many CPUs(cores) on your device (**Hint**: `/proc/cpuinfo`)

Commands

- `Cat /proc/cpuinfo | grep processor | wc -l`

```
hager@hager-VirtualBox:~$ cat /proc/cpuinfo | grep processor | wc -l
4
```

- **STEP-3**: Take a snapshot of current disk statistics 5 times with 2 sec interval (**Hint**: `iostat`)

Commands

- `sudo apt install sysstat`
- `iostat -d 2 5`

```
hager@hager-VirtualBox:~$ sudo apt install sysstat
[sudo] password for hager:
```

```
hager@hager-VirtualBox:~$ iostat -d 2 5
Linux 5.19.0-32-generic (hager-VirtualBox)      01 2023 ,ابر      _x86_64_      (
4 CPU)

Device             tps    kB_read/s    kB_wrtn/s    kB_dscd/s    kB_read    kB_
wrtn    kB_dscd
loop0             0.04         0.27         0.00         0.00        348
   0          0
loop1             0.01         0.01         0.00         0.00         17
   0          0
loop10            0.03         0.27         0.00         0.00        349
   0          0
loop11            0.04         0.28         0.00         0.00        364
   0          0
loop12            0.03         0.27         0.00         0.00        348
   0          0
loop13            1.23        43.38         0.00         0.00      55449
   0          0
loop14            0.02         0.04         0.00         0.00         54
   0          0
loop15            0.03         0.38         0.00         0.00        481
   0          0
loop16            0.02         0.03         0.00         0.00         41
   0          0
loop17            0.05         0.85         0.00         0.00       1094
   0          0
loop2             0.04         0.28         0.00         0.00        363
   0          0
```

- **STEP-4**: Measure the network activities using `nicstat`

Commands

- `sudo apt install nicstat`
- `ifconfig -a`
- `nicstat -z -t -n -I enp0s3`

```
hager@hager-VirtualBox:~$ sudo apt install nicstat
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
```

```
hager@hager-VirtualBox:~$ ifconfig -a
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.2.15  netmask 255.255.255.0  broadcast 10.0.2.255
        inet6 fe80::9d01:4e51:f56b:3179  prefixlen 64  scopeid 0x20<link>
        ether 08:00:27:00:f5:64  txqueuelen 1000  (Ethernet)
        RX packets 71201  bytes 106530896 (106.5 MB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 11916  bytes 785179 (785.1 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 284  bytes 25125 (25.1 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 284  bytes 25125 (25.1 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

hager@hager-VirtualBox:~$ nicstat -z -t -n -i enp0s3
11:06:02    InKB   OutKB   InSeg  OutSeg Reset  AttF %ReTX InConn OutCon Drops
TCP         0.00    0.00   11.67    6.26  0.00  0.00 0.000   0.00   0.02  0.00
```

- **STEP-5**: List current PCI devices on your device (**Hint**: `lspci`)

Commands

- `lspci`

```
hager@hager-VirtualBox:~$ lspci
00:00.0 Host bridge: Intel Corporation 440FX - 82441FX PMC [Natoma] (rev 02)
00:01.0 ISA bridge: Intel Corporation 82371SB PIIX3 ISA [Natoma/Triton II]
00:01.1 IDE interface: Intel Corporation 82371AB/EB/MB PIIX4 IDE (rev 01)
00:02.0 VGA compatible controller: VMware SVGA II Adapter
00:03.0 Ethernet controller: Intel Corporation 82540EM Gigabit Ethernet Control
ler (rev 02)
00:04.0 System peripheral: InnoTek Systemberatung GmbH VirtualBox Guest Service
00:05.0 Multimedia audio controller: Intel Corporation 82801AA AC'97 Audio Cont
roller (rev 01)
00:06.0 USB controller: Apple Inc. KeyLargo/Intrepid USB
00:07.0 Bridge: Intel Corporation 82371AB/EB/MB PIIX4 ACPI (rev 08)
00:0d.0 SATA controller: Intel Corporation 82801HM/HEM (ICH8M/ICH8M-E) SATA Con
troller [AHCI mode] (rev 02)
```

- **STEP-6**: List all files which are compressed by ZIP utilities

Commands

- `sudo find / -name "*.zip" -type f 2>/dev/null`

```
hager@hager-VirtualBox:~$ sudo find / -name "*.zip" -type f 2>/dev/null
/usr/share/libreoffice/share/config/images_colibre.zip
/usr/share/libreoffice/share/config/images_breeze_svg.zip
/usr/share/libreoffice/share/config/images_yaru.zip
/usr/share/libreoffice/share/config/images_elementary.zip
/usr/share/libreoffice/share/config/images_yaru_svg.zip
/usr/share/libreoffice/share/config/images_breeze.zip
/usr/share/libreoffice/share/config/images_helpimg.zip
/usr/share/libreoffice/share/config/images_elementary_svg.zip
/usr/share/libreoffice/share/config/images_breeze_dark.zip
/usr/share/libreoffice/share/config/images_yaru_mate.zip
/usr/share/libreoffice/share/config/images_breeze_dark_svg.zip
/usr/share/libreoffice/share/config/images_yaru_mate_svg.zip
/usr/lib/libreoffice/share/config/wizard/web/buttons/sukapura.zip
/usr/lib/libreoffice/share/config/wizard/web/buttons/round-white.zip
/usr/lib/libreoffice/share/config/wizard/web/buttons/simple.zip
/usr/lib/libreoffice/share/config/wizard/web/buttons/elementary.zip
```

- **STEP-7**: Using grep and regex list all lines containing hex numbers on a `/var/log/syslog`

Commands

- `grep -e "0x" /var/log/syslog`

```
hager@hager-VirtualBox:~$ grep -e "0x" /var/log/syslog
Mar  1 02:03:58 hager-VirtualBox kernel: [    0.000000] x86/fpu: Supporting XSA
VE feature 0x001: 'x87 floating point registers'
Mar  1 02:03:58 hager-VirtualBox kernel: [    0.000000] x86/fpu: Supporting XSA
VE feature 0x002: 'SSE registers'
Mar  1 02:03:58 hager-VirtualBox kernel: [    0.000000] x86/fpu: Supporting XSA
VE feature 0x004: 'AVX registers'
Mar  1 02:03:58 hager-VirtualBox kernel: [    0.000000] x86/fpu: Enabled xstate
 features 0x7, context size is 832 bytes, using 'standard' format.
Mar  1 02:03:58 hager-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x00000
00000000000-0x000000000009fbff] usable
Mar  1 02:03:58 hager-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x00000
0000009fc00-0x000000000009ffff] reserved
Mar  1 02:03:58 hager-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x00000
000000f0000-0x00000000000fffff] reserved
Mar  1 02:03:58 hager-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x00000
00000100000-0x000000007ffeffff] usable
Mar  1 02:03:58 hager-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x00000
0007fff0000-0x000000007fffffff] ACPI data
Mar  1 02:03:58 hager-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x00000
000fec00000-0x00000000fec00fff] reserved
Mar  1 02:03:58 hager-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x00000
000fee00000-0x00000000fee00fff] reserved
```