

Lab2_Redhat

1) Identify the current USB devices.

```
raneen@raneen-VirtualBox:~$ lsusb
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 002 Device 002: ID 80ee:0021 VirtualBox USB Tablet
Bus 002 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
raneen@raneen-VirtualBox:~$
```

2) Count how many CPUs (cores) on your device

```
raneen@raneen-VirtualBox:~$ cat /proc/cpuinfo
processor       : 0
vendor_id      : GenuineIntel
cpu family     : 6
model          : 142
model name     : Intel(R) Core(TM) i5-8265U CPU @ 1.60GHz
stepping       : 12
cpu MHz        : 1800.001
cache size     : 6144 KB
physical id    : 0
siblings       : 2
core id        : 0
cpu cores      : 2
apicid         : 0
initial apicid : 0
fpu            : yes
fpu_exception  : yes
cpuid level    : 22
wp             : yes
flags          : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mc
```

```
processor       : 1
vendor_id      : GenuineIntel
cpu family     : 6
model          : 142
model name     : Intel(R) Core(TM) i5-8265U CPU @ 1.60GHz
stepping       : 12
cpu MHz        : 1800.001
cache size     : 6144 KB
physical id    : 0
```

3) Take a snapshot of current disk statistics 5 times with 2 seconds interval

```
raneen@raneen-VirtualBox:~$ sudo apt install sysstat
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Suggested packages:
  lsag
The following NEW packages will be installed:
  sysstat
0 upgraded, 1 newly installed, 0 to remove and 197 not upgraded.
Need to get 487 kB of archives.
After this operation, 1,507 kB of additional disk space will be used.
Get:1 http://eg.archive.ubuntu.com/ubuntu jammy-updates/main amd64 sysstat amd64 12.5.2-2ubuntu0.1 [487 kB]
Fetched 487 kB in 2s (278 kB/s)
Preconfiguring packages ...
Selecting previously unselected package sysstat.
(Reading database ... 197947 files and directories currently installed.)
Preparing to unpack .../sysstat_12.5.2-2ubuntu0.1_amd64.deb ...
Unpacking sysstat (12.5.2-2ubuntu0.1) ...
Setting up sysstat (12.5.2-2ubuntu0.1) ...
```

```
raneen@raneen-VirtualBox:~$ iostat sda 2 5
Linux 5.19.0-35-generic (raneen-VirtualBox)      01 2023, أبر      _x86_64_
2 CPU)

avg-cpu:  %user   %nice %system %iowait  %steal   %idle
           2.16    0.57   1.47    5.10    0.00   90.70

Device            tps    kB_read/s    kB_wrtn/s    kB_dscd/s    kB_read    kB_wrtn
sda               11.94         722.69         398.52          0.00    2382516    133829

avg-cpu:  %user   %nice %system %iowait  %steal   %idle
           3.34    0.00   1.54    0.00    0.00   95.12

Device            tps    kB_read/s    kB_wrtn/s    kB_dscd/s    kB_read    kB_wrtn
sda               0.00          0.00          0.00          0.00          0          0

avg-cpu:  %user   %nice %system %iowait  %steal   %idle
           1.79    0.00   0.77    0.51    0.00   96.92

Device            tps    kB_read/s    kB_wrtn/s    kB_dscd/s    kB_read    kB_wrtn
```

4) measure the network activities using

```
raneen@raneen-VirtualBox:~$ sudo apt install nicstat
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  nicstat
0 upgraded, 1 newly installed, 0 to remove and 197 not upgraded.
Need to get 18.2 kB of archives.
After this operation, 54.3 kB of additional disk space will be used.
Get:1 http://eg.archive.ubuntu.com/ubuntu jammy/main amd64 nicstat amd64 1.95-1
build3 [18.2 kB]
Fetched 18.2 kB in 1s (25.6 kB/s)
Selecting previously unselected package nicstat.
(Reading database ... 198009 files and directories currently installed.)
Preparing to unpack .../nicstat_1.95-1build3_amd64.deb ...
Unpacking nicstat (1.95-1build3) ...
Setting up nicstat (1.95-1build3) ...
Processing triggers for man-db (2.10.2-1) ...
```

```
raneen@raneen-VirtualBox:~$ nicstat
  Time      Int    rKB/s    wKB/s    rPk/s    wPk/s    rAvs    wAvs %Util    Sat
10:55:01    lo     0.00     0.00     0.05     0.05    91.18    91.18  0.00    0.00
10:55:01  enp0s3   27.48     0.15   18.76     2.31  1499.8    64.72  0.02    0.00
raneen@raneen-VirtualBox:~$
```

5) List current PCI devices on your device

```
raneen@raneen-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)
00:0b.0 USB controller: Intel Corporation 82801FB/FBM/FR/FW/FRW (ICH6 Family) U
SB2 EHCI Controller
00:0d.0 SATA controller: Intel Corporation 82801HM/HEM (ICH8M/ICH8M-E) SATA Con
troller [AHCI mode] (rev 02)
```


6) List all files which are compressed by ZIP utilities

```
raneen@raneen-VirtualBox:~$ touch myfile.zip
raneen@raneen-VirtualBox:~$ ls *.zip
fil.zip  myfile.zip
raneen@raneen-VirtualBox:~$ ls -l *.zip
-rw-rw-r-- 1 raneen raneen 0 11:26 1 بر fil.zip
-rw-rw-r-- 1 raneen raneen 0 11:29 1 بر myfile.zip
raneen@raneen-VirtualBox:~$
```

7) Using grep and regex list all lines containing hex numbers on a /var/log/syslog

```
raneen@raneen-VirtualBox:~$ grep -e "0x" /var/log/syslog
Mar 29 01:50:33 raneen-VirtualBox kernel: [ 105.983549] audit: type=1326 audit
(1680047433.343:51): auid=1000 uid=1000 gid=1000 ses=4 subj=snap.snapd-desktop-
integration.snapd-desktop-integration pid=1964 comm="snapd-desktop-i" exe="/sna
p/snapd-desktop-integration/49/usr/bin/snapd-desktop-integration" sig=0 arch=c0
00003e syscall=314 compat=0 ip=0x7fab5bfb373d code=0x50000
grep: /var/log/syslog: binary file matches
raneen@raneen-VirtualBox:~$
```