System Admin2_Lab2

Lab objectives:

- **Identify the current USB devices.**

  - lsusb

  ```
  donia@donia-VirtualBox:~/Desktop$ lsusb
  Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
  Bus 002 Device 003: ID 80ee:0021 VirtualBox USB Tablet
  Bus 002 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
  donia@donia-VirtualBox:~/Desktop$
  ```

- **Count how many CPUs (cores) on your device.**

  - cat /proc/cpuinfo |grep processor

  ```
  donia@donia-VirtualBox:~$ cat /proc/cpuinfo | grep processor
  processor       : 0
  donia@donia-VirtualBox:~$
  ```

- **Take a snapshot of current disk statistics 5 times with 2 seconds interval.**

  - iostat 2 5

  ```
  donia@donia-VirtualBox:~$ iostat 2 5
  Linux 5.15.0-56-generic (donia-VirtualBox)      04/01/2023      _x86_64_      (1 CPU)

  avg-cpu:  %user   %nice %system %iowait  %steal   %idle
             3.58    0.00    0.69    1.58    0.00   94.14

  Device             tps    kB_read/s    kB_wrtn/s    kB_dscd/s    kB_read    kB_wrtn    kB_dscd
  sda               2.59        73.94        57.11         0.00    1031218     796509          0
  sr0               0.00         0.00         0.00         0.00          1          0          0


  avg-cpu:  %user   %nice %system %iowait  %steal   %idle
             3.05    0.00    0.00    0.00    0.00   96.95

  Device             tps    kB_read/s    kB_wrtn/s    kB_dscd/s    kB_read    kB_wrtn    kB_dscd
  sda               0.00         0.00         0.00         0.00          0          0          0
  sr0               0.00         0.00         0.00         0.00          0          0          0


  avg-cpu:  %user   %nice %system %iowait  %steal   %idle
            15.23    0.00    4.06    0.00    0.00   80.71

  Device             tps    kB_read/s    kB_wrtn/s    kB_dscd/s    kB_read    kB_wrtn    kB_dscd
  sda               0.00         0.00         0.00         0.00          0          0          0
  sr0               0.00         0.00         0.00         0.00          0          0          0


  avg-cpu:  %user   %nice %system %iowait  %steal   %idle
  ```

- **measure the network activities using.**

- nicstat

```
donia@donia-VirtualBox:~$ nicstat
Command 'nicstat' not found, but can be installed with:
sudo apt install nicstat
donia@donia-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 242 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://archive.ubuntu.com/ubuntu jammy/main amd64 nicstat amd64 1.95-1build3 [18.2 kB]
Fetched 18.2 kB in 1s (25.4 kB/s)
Selecting previously unselected package nicstat.
(Reading database ... 536983 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) ...
donia@donia-VirtualBox:~$ nicstat
    Time      Int   rKB/s   wKB/s   rPk/s   wPk/s    rAvs    wAvs %Util    Sat
10:13:08       lo    0.02    0.02    0.16    0.16   122.0   122.0  0.00    0.00
10:13:08   enp0s3    3.93    0.09    3.07    0.93  1308.7   95.26  0.00    0.00
```

- **List current PCI devices on your device.**

- lspci

```
donia@donia-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 Controller (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 Controller (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) USB2 EHCI Controll
er
00:0d.0 SATA controller: Intel Corporation 82801HM/HEM (ICH8M/ICH8M-E) SATA Controller [AHCI mod
e] (rev 02)
```

- **List all files which are compressed by ZIP utilities**

  - touch file.zip
  - ls *.zip

```
donia@donia-VirtualBox:~/Desktop$ touch file1.zip
donia@donia-VirtualBox:~/Desktop$ touch file.zip
donia@donia-VirtualBox:~/Desktop$ touch file2.zip
donia@donia-VirtualBox:~/Desktop$ touch file3.zip
donia@donia-VirtualBox:~/Desktop$ ls *.zip
file1.zip  file2.zip  file3.zip  file.zip
donia@donia-VirtualBox:~/Desktop$ ls -l *.zip
-rw-rw-r-- 1 donia donia 0 Apr  1 12:16 file1.zip
-rw-rw-r-- 1 donia donia 0 Apr  1 12:16 file2.zip
-rw-rw-r-- 1 donia donia 0 Apr  1 12:16 file3.zip
-rw-rw-r-- 1 donia donia 0 Apr  1 12:16 file.zip
donia@donia-VirtualBox:~/Desktop$
```

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

  - grep –e "0x" /var/log/syslog

```
donia@donia-VirtualBox:~/Desktop$ grep -e "0x" /var/log/syslog
Mar 28 15:45:06 donia-VirtualBox alsactl[602]: Found hardware: "ICH" "Analog Devices AD1980"
97a:41445370" "0x1028" "0x0177"
Mar 28 15:45:06 donia-VirtualBox kernel: [    0.000000] x86/fpu: Supporting XSAVE feature 0x0
 'x87 floating point registers'
Mar 28 15:45:06 donia-VirtualBox kernel: [    0.000000] x86/fpu: Supporting XSAVE feature 0x0
 'SSE registers'
Mar 28 15:45:06 donia-VirtualBox kernel: [    0.000000] x86/fpu: Supporting XSAVE feature 0x0
 'AVX registers'
Mar 28 15:45:06 donia-VirtualBox kernel: [    0.000000] x86/fpu: Enabled xstate features 0x7,
ntext size is 832 bytes, using 'standard' format.
Mar 28 15:45:06 donia-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x0000000000000000-0x
000000009fbff] usable
Mar 28 15:45:06 donia-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x000000000009fc00-0x
000000009ffff] reserved
Mar 28 15:45:06 donia-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x00000000000f0000-0x
00000000fffff] reserved
Mar 28 15:45:06 donia-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x0000000000100000-0x
00000ae2effff] usable
Mar 28 15:45:06 donia-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x00000000ae2f0000-0x
00000ae2fffff] ACPI data
Mar 28 15:45:06 donia-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x00000000fec00000-0x
00000fec00fff] reserved
Mar 28 15:45:06 donia-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x00000000fee00000-0x
00000fee00fff] reserved
Mar 28 15:45:06 donia-VirtualBox kernel: [    0.000000] BIOS-e820: [mem 0x00000000fffc0000-0x
00000ffffffff] reserved
Mar 28 15:45:06 donia-VirtualBox kernel: [    0.000004] clocksource: kvm-clock: mask: 0xffffff
```