Hints: Hardware Identification: ● Begin by identifying the hardware components of the system.

1.lscpu:

Threads= Per core so it is doing only one task per core

1: mina@mina-VirtualBox: ~ ⌄

```
mina@mina-VirtualBox:~$ lscpu
Architecture:          x86_64
  CPU op-mode(s):      32-bit, 64-bit
  Address sizes:       39 bits physical, 48 bits virtual
  Byte Order:          Little Endian
CPU(s):                4
  On-line CPU(s) list: 0-3
Vendor ID:             GenuineIntel
  Model name:          Intel(R) Core(TM) i5-10300H CPU @ 2.50GHz
    CPU family:        6
    Model:             165
    Thread(s) per core: 1
    Core(s) per socket: 4
    Socket(s):         1
    Stepping:          2
    BogoMIPS:          4992.00
    Flags:             fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mc
                       a cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall n
                       x rdtscp lm constant_tsc rep_good nopl xtopology nonsto
                       p_tsc cpuid tsc_known_freq pni pclmulqdq ssse3 cx16 pci
                       d sse4_1 sse4_2 x2apic movbe popcnt aes xsave avx rdran
                       d hypervisor lahf_lm abm 3dnowprefetch invpcid_single f
                       sgsbase bmi1 avx2 bmi2 invpcid rdseed clflushopt arat m
                       d_clear flush_l1d arch_capabilities
Virtualization features:
  Hypervisor vendor:   KVM
  Virtualization type: full
Caches (sum of all):
  L1d:                 128 KiB (4 instances)
  L1i:                 128 KiB (4 instances)
  L2:                  1 MiB (4 instances)
  L3:                  32 MiB (4 instances)
NUMA:
  NUMA node(s):        1
  NUMA node0 CPU(s):   0-3
Vulnerabilities:
  Gather data sampling: Unknown: Dependent on hypervisor status
  Itlb multihit:       KVM: Mitigation: VMX unsupported
  L1tf:                Not affected
  Mds:                 Not affected
  Meltdown:            Not affected
  Mmio stale data:     Vulnerable: Clear CPU buffers attempted, no microcode;
                       SMT Host state unknown
  Retbleed:            Vulnerable
  Spec rstack overflow: Not affected
  Spec store bypass:   Vulnerable
```

2. Df –h : CPU's Usage

```
mina@mina-VirtualBox:~$ df -h
Filesystem      Size  Used Avail Use% Mounted on
tmpfs           794M  1.6M  792M   1% /run
/dev/sda3        24G   15G  7.9G  66% /
tmpfs           3.9G     0  3.9G   0% /dev/shm
tmpfs           5.0M  4.0K  5.0M   1% /run/lock
/dev/sda2       512M  6.1M  506M   2% /boot/efi
tmpfs           794M  120K  794M   1% /run/user/1000
/dev/sr0         52M   52M     0 100% /media/mina/VBox_GAs_7.0.14
mina@mina-VirtualBox:~$
```

3. lsmem: command in Linux lists the ranges of available memory along with their online status

```
mina@mina-VirtualBox:~$ lsmem
RANGE                                  SIZE  STATE REMOVABLE BLOCK
0x0000000000000000-0x00000000dfffffff  3.5G online           yes  0-27
0x0000000100000000-0x000000021fffffff  4.5G online           yes 32-67

Memory block size:       128M
Total online memory:       8G
Total offline memory:      0B
mina@mina-VirtualBox:~$
```
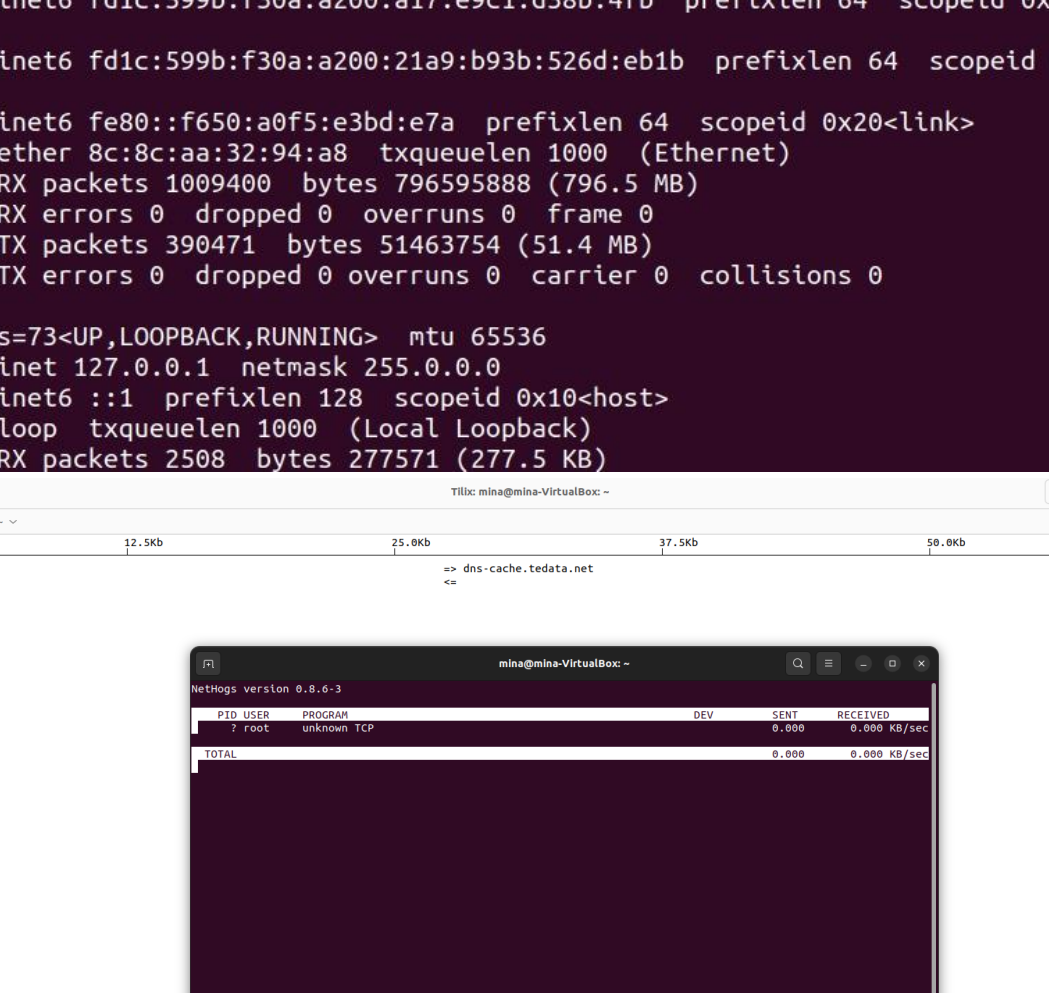
Ethernet:

1. To monitor network traffic and usage in the terminal, you can use the following commands:

Ifconfig. , sudo iftop , sudo nethogs