'dmesg' commands for Troubleshooting (To display kernel related messages):

(To print the message buffer of kernel and to display information about hardware, device driver, ..)

hepzi@ubuntu:~$ sudo dmesg
[sudo] password for hepzi:
[0.000000] Linux version 5.15.0-58-generic (buildd@lcy02-amd64-101) (gcc (Ubuntu 11.3.0-1ubuntu1~22.04) 11.3.0, GNU ld (GNU Binutils for Ubuntu) 2.38) #64-Ubuntu SMP Thu Jan 5 11:43:13 UTC 2023 (Ubuntu 5.15.0-58.64-generic 5.15.74)

To list all loaded drivers :
Output of dmesg is very large so won't fit on a single page, using dmesg with pipe more or less command will display logs in a single page:
hepzi@ubuntu:~$ sudo dmesg | less

To search detected device : hepzi@ubuntu:~$ sudo dmesg | grep -i usb

To findout if Ethernet is active or not :
hepzi@ubuntu:~$ sudo dmesg | grep -i etho0
[sudo] password for hepzi:

To clear buffer message logs :
dmesg -c

To display full hardware information(lshw):

hepzi@ubuntu:~$ sudo lshw
ubuntu
    description: Computer
    product: VirtualBox
    vendor: innotek GmbH
    version: 1.2
    serial: 0
    width: 64 bits
    capabilities: smbios-2.5 dmi-2.5 smp vsyscall32
    configuration: family=Virtual Machine uuid=843ebd07-4d06-4b7a-bab0-bbee44a80ffb
  *-core
      description: Motherboard
      product: VirtualBox
      vendor: Oracle Corporation
      physical id: 0
      version: 1.2
       serial: 0
    *-firmware
        description: BIOS
        vendor: innotek GmbH

physical id: 0
      version: VirtualBox
      date: 12/01/2006
      size: 128KiB
      capacity: 128KiB
      capabilities: isa pci cdboot bootselect int9keyboard int10video acpi
   *-memory
      description: System memory
      physical id: 1
      size: 2GiB
   *-cpu
      product: Intel(R) Pentium(R) CPU N3540 @ 2.16GHz
      vendor: Intel Corp.
      physical id: 2
      bus info: cpu@0
      version: 6.55.8
      width: 64 bits
      capabilities: fpu fpu_exception wp vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca
cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall nx rdtscp x86-64 constant_tsc rep_good nopl
xtopology nonstop_tsc cpuid tsc_known_freq pni pclmulqdq ssse3 cx16 sse4_1 sse4_2 x2apic
movbe popcnt rdrand hypervisor lahf_lm 3dnowprefetch pti

To list all network :
hepzi@ubuntu:~$ sudo lshw -C Network
  *-network
      description: Ethernet interface
      product: 82540EM Gigabit Ethernet Controller
      vendor: Intel Corporation
      physical id: 3
      bus info: pci@0000:00:03.0
      logical name: enp0s3
      version: 02
      serial: 08:00:27:69:d2:c8
      size: 1Gbit/s
      capacity: 1Gbit/s
      width: 32 bits
      clock: 66MHz
      capabilities: pm pcix bus_master cap_list ethernet physical tp 10bt 10bt-fd 100bt 100bt-fd
1000bt-fd autonegotiation
      configuration: autonegotiation=on broadcast=yes driver=e1000 driverversion=5.15.0-58-
generic duplex=full ip=10.0.2.15 latency=64 link=yes mingnt=255 multicast=yes port=twisted pair
speed=1Gbit/s
      resources: irq:19 memory:f0200000-f021ffff ioport:d020(size=8)

To list all storage :
hepzi@ubuntu:~$ sudo lshw -C Storage
  *-ide
      description: IDE interface
      product: 82371AB/EB/MB PIIX4 IDE
      vendor: Intel Corporation
      physical id: 1.1
      bus info: pci@0000:00:01.1

logical name: scsi1
        version: 01
        width: 32 bits
        clock: 33MHz
        capabilities: ide isa_compat_mode pci_native_mode bus_master emulated
        configuration: driver=ata_piix latency=64
        resources: irq:0 ioport:1f0(size=8) ioport:3f6 ioport:170(size=8) ioport:376
ioport:d000(size=16)
   *-sata
        description: SATA controller
        product: 82801HM/HEM (ICH8M/ICH8M-E) SATA Controller [AHCI mode]
        vendor: Intel Corporation
        physical id: d
        bus info: pci@0000:00:0d.0
        logical name: scsi2
        version: 02
        width: 32 bits
        clock: 33MHz
        capabilities: sata pm ahci_1.0 bus_master cap_list emulated
        configuration: driver=ahci latency=64
        resources: irq:21 ioport:d240(size=8) ioport:d248(size=4) ioport:d250(size=8)
ioport:d258(size=4) ioport:d260(size=16) memory:f0806000-f0807fff

To displaying information about PCI buses in the system and devices connected to them :

hepzi@ubuntu:~$ sudo 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 Controller
00:0d.0 SATA controller: Intel Corporation 82801HM/HEM (ICH8M/ICH8M-E) SATA Controller [AHCI mode] (rev 02)

To display the amount of disk space :

hepzi@ubuntu:~$ df -h
Filesystem   Size Used Avail Use% Mounted on
tmpfs   198M 1.6M 197M   1% /run
/dev/sda3   24G   13G   11G 55% /
tmpfs   988M   0 988M   0% /dev/shm
tmpfs   5.0M 4.0K 5.0M   1% /run/lock
/dev/sda2   512M 5.3M 507M   2% /boot/efi
tmpfs   198M 2.4M 196M   2% /run/user/1000

hepzi@ubuntu: ~

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hepzi@ubuntu:~$ sudo dmesg | less
hepzi@ubuntu:~$ sudo dmesg | grep -i usb
[    0.558210] ACPI: bus type USB registered
[    0.558210] usbcore: registered new interface driver usbfs
[    0.558210] usbcore: registered new interface driver hub
[    0.558210] usbcore: registered new device driver usb
[    0.704025] ehci_hcd: USB 2.0 'Enhanced' Host Controller (EHCI) Driver
[    0.706531] ehci-pci 0000:00:0b.0: new USB bus registered, assigned bus number 1
[    0.720809] ehci-pci 0000:00:0b.0: USB 2.0 started, EHCI 1.00
[    0.720972] usb usb1: New USB device found, idVendor=1d6b, idProduct=0002, bcdDevice= 5.15
[    0.720978] usb usb1: New USB device strings: Mfr=3, Product=2, SerialNumber=1
[    0.720982] usb usb1: Product: EHCI Host Controller
[    0.720985] usb usb1: Manufacturer: Linux 5.15.0-58-generic ehci_hcd
[    0.720988] usb usb1: SerialNumber: 0000:00:0b.0
[    0.721268] hub 1-0:1.0: USB hub found
[    0.722140] ohci_hcd: USB 1.1 'Open' Host Controller (OHCI) Driver
[    0.724570] ohci-pci 0000:00:06.0: new USB bus registered, assigned bus number 2
[    0.791627] usb usb2: New USB device found, idVendor=1d6b, idProduct=0001, bcdDevice= 5.15
[    0.791639] usb usb2: New USB device strings: Mfr=3, Product=2, SerialNumber=1
[    0.791642] usb usb2: Product: OHCI PCI host controller
[    0.791645] usb usb2: Manufacturer: Linux 5.15.0-58-generic ohci_hcd
[    0.791648] usb usb2: SerialNumber: 0000:00:06.0
[    0.791903] hub 2-0:1.0: USB hub found
[    0.793258] uhci_hcd: USB Universal Host Controller Interface driver
[    1.249267] usb 2-1: new full-speed USB device number 2 using ohci-pci
[    1.560194] usb 2-1: New USB device found, idVendor=80ee, idProduct=0021, bcdDevice= 1.00
[    1.560205] usb 2-1: New USB device strings: Mfr=1, Product=3, SerialNumber=0
[    1.560209] usb 2-1: Product: USB Tablet
[    1.560212] usb 2-1: Manufacturer: VirtualBox
[    2.771755] usbcore: registered new interface driver usbhid
[    2.771763] usbhid: USB HID core driver
[    3.336633] input: VirtualBox USB Tablet as /devices/pci0000:00/0000:00:06.0/usb2/2-1/2-1:1.0/0003:80EE:0021.0001/input/input6
[    3.338205] hid-generic 0003:80EE:0021.0001: input,hidraw0: USB HID v1.10 Mouse [VirtualBox USB Tablet] on usb-0000:00:06.0-1/inp
ut0
hepzi@ubuntu:~$
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hepzi@ubuntu: ~

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hepzi@ubuntu:~$ sudo dmesg
[sudo] password for hepzi:
[    0.000000] Linux version 5.15.0-58-generic (buildd@lcy02-amd64-101) (gcc (Ubuntu 11.3.0-1ubuntu1~22.04) 11.3.0, GNU ld (GNU Binu
tils for Ubuntu) 2.38) #64-Ubuntu SMP Thu Jan 5 11:43:13 UTC 2023 (Ubuntu 5.15.0-58.64-generic 5.15.74)
[    0.000000] Command line: BOOT_IMAGE=/boot/vmlinuz-5.15.0-58-generic root=UUID=cb93599c-e234-4ab6-baad-2062e0c223bf ro quiet spla
sh
[    0.000000] KERNEL supported cpus:
[    0.000000]   Intel GenuineIntel
[    0.000000]   AMD AuthenticAMD
[    0.000000]   Hygon HygonGenuine
[    0.000000]   Centaur CentaurHauls
[    0.000000]   zhaoxin   Shanghai
[    0.000000] x86/fpu: x87 FPU will use FXSAVE
[    0.000000] signal: max sigframe size: 1440
[    0.000000] BIOS-provided physical RAM map:
[    0.000000] BIOS-e820: [mem 0x0000000000000000-0x000000000009fbff] usable
[    0.000000] BIOS-e820: [mem 0x000000000009fc00-0x000000000009ffff] reserved
[    0.000000] BIOS-e820: [mem 0x00000000000f0000-0x00000000000fffff] reserved
[    0.000000] BIOS-e820: [mem 0x0000000000100000-0x000000007ffeffff] usable
[    0.000000] BIOS-e820: [mem 0x000000007fff0000-0x000000007fffffff] ACPI data
[    0.000000] BIOS-e820: [mem 0x00000000fec00000-0x00000000fec00fff] reserved
[    0.000000] BIOS-e820: [mem 0x00000000fee00000-0x00000000fee00fff] reserved
[    0.000000] BIOS-e820: [mem 0x00000000fffc0000-0x00000000ffffffff] reserved
[    0.000000] NX (Execute Disable) protection: active
[    0.000000] SMBIOS 2.5 present.
[    0.000000] DMI: innotek GmbH VirtualBox/VirtualBox, BIOS VirtualBox 12/01/2006
[    0.000000] Hypervisor detected: KVM
[    0.000000] kvm-clock: Using msrs 4b564d01 and 4b564d00
[    0.000000] kvm-clock: cpu 0, msr 3a801001, primary cpu clock
[    0.000000] kvm-clock: using sched offset of 7065552005 cycles
[    0.000012] clocksource: kvm-clock: mask: 0xffffffffffffffff max_cycles: 0x1cd42e4dffb, max_idle_ns: 881590591483 ns
[    0.000020] tsc: Detected 2166.658 MHz processor
[    0.003722] e820: update [mem 0x00000000-0x00000fff] usable ==> reserved
[    0.003736] e820: remove [mem 0x000a0000-0x000fffff] usable
[    0.003748] last_pfn = 0x7fff0 max_arch_pfn = 0x400000000
[    0.003791] Disabled
```