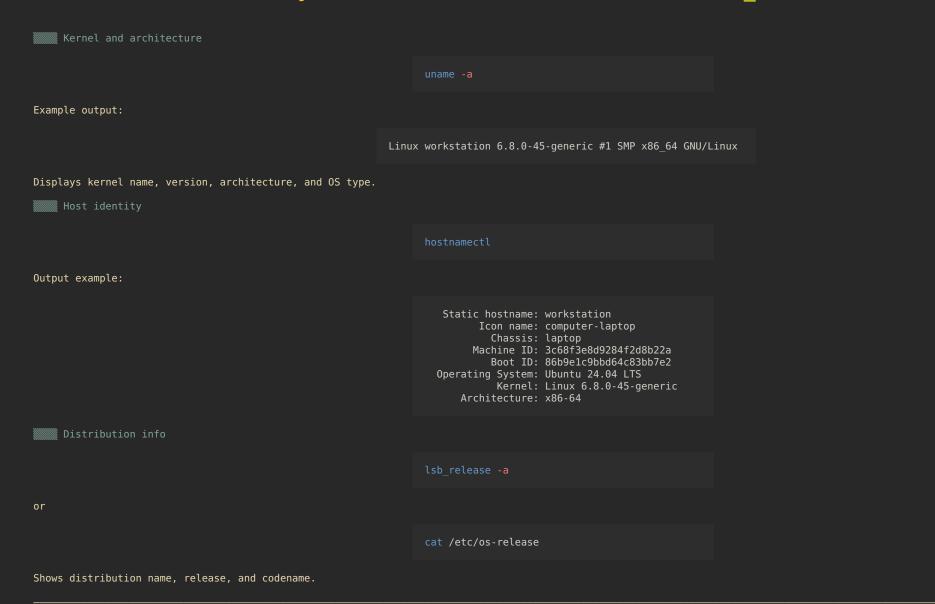
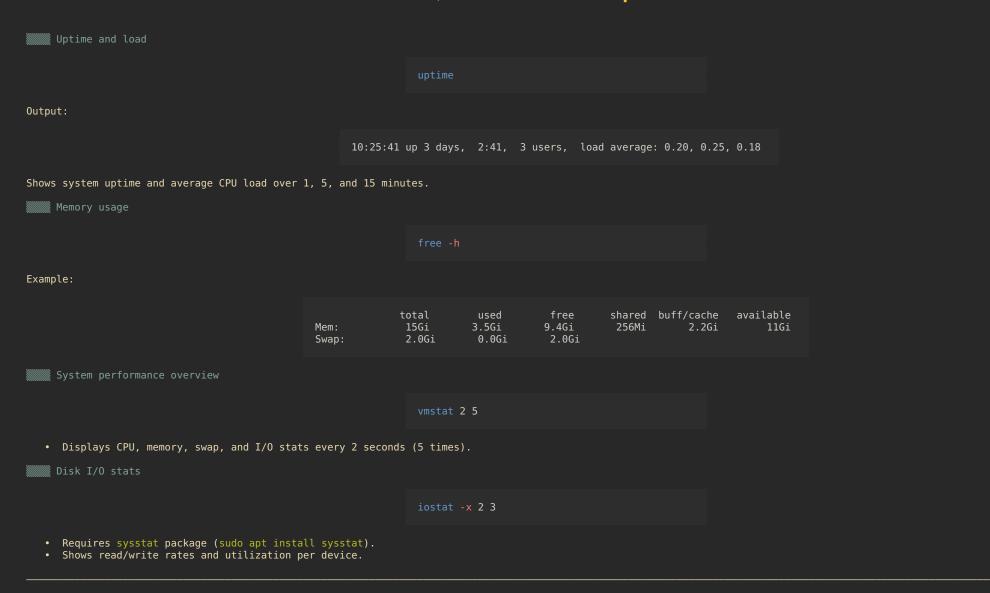
System Information & Troubleshooting (Plus)

Linux Commands Course · Section 18

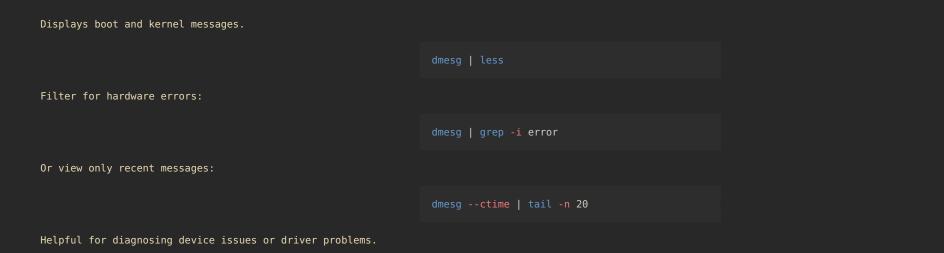
System Facts - uname, hostnamectl, lsb_release



Quick Health Snapshot



Kernel Messages — dmesg



Hardware Overview

| Shows detected memory blocks and sizes. | Separation |

PCI Devices - lspci

Lists hardware on the PCI bus (network cards, GPUs, etc.).				
		lspci less		
Example snippet:				
		VGA compatible controller: Intel Corporation UHD Gr 3D controller: NVIDIA Corporation RTX 3060	aphics	

Add -v or -vv for verbose details.

USB Devices — lsusb

Show all connected USB devices.	
	lsusb
Example output:	
	Bus 001 Device 004: ID 046d:c52b Logitech USB Receiver Bus 002 Device 002: ID 0781:5567 SanDisk Cruzer Blade

Use lsusb -t for a tree view by USB port.

System BIOS and Hardware Metadata — dmidecode

dmidecode reads the DMI/SMBIOS table for low-level system details.

sudo dmidecode | less

Examples of sections:

BIOS version and vendor
Baseboard (motherboard) info
Chassis and serial numbers
Memory slot info

To target a specific type:

sudo dmidecode -t bios
sudo dmidecode -t memory
sudo dmidecode -t system

Read-only - safe to inspect, not modify.

Example - Quick System Summary

Combine tools for a complete picture:

```
echo "==== SYSTEM ===="
hostnamectl
echo "==== CPU ===="
lscpu | grep 'Model name'
echo "==== MEMORY ===="
free -h
echo "==== DISKS ===="
lsblk -f
echo "==== NETWORK ===="
ip a | grep inet
```

This gives an at-a-glance report of your machine.

Recap

- System facts: uname, hostnamectl, lsb_release, /etc/os-release
 Health: uptime, free -h, vmstat, iostat, dmesg
 Hardware: lscpu, lsmem, lspci, lsusb, dmidecode

These commands together let you audit, benchmark, and troubleshoot your Linux system effectively.