

Linux 101: Fundamentals and Essential Commands

SomNOG Capacity
Building Series
2026

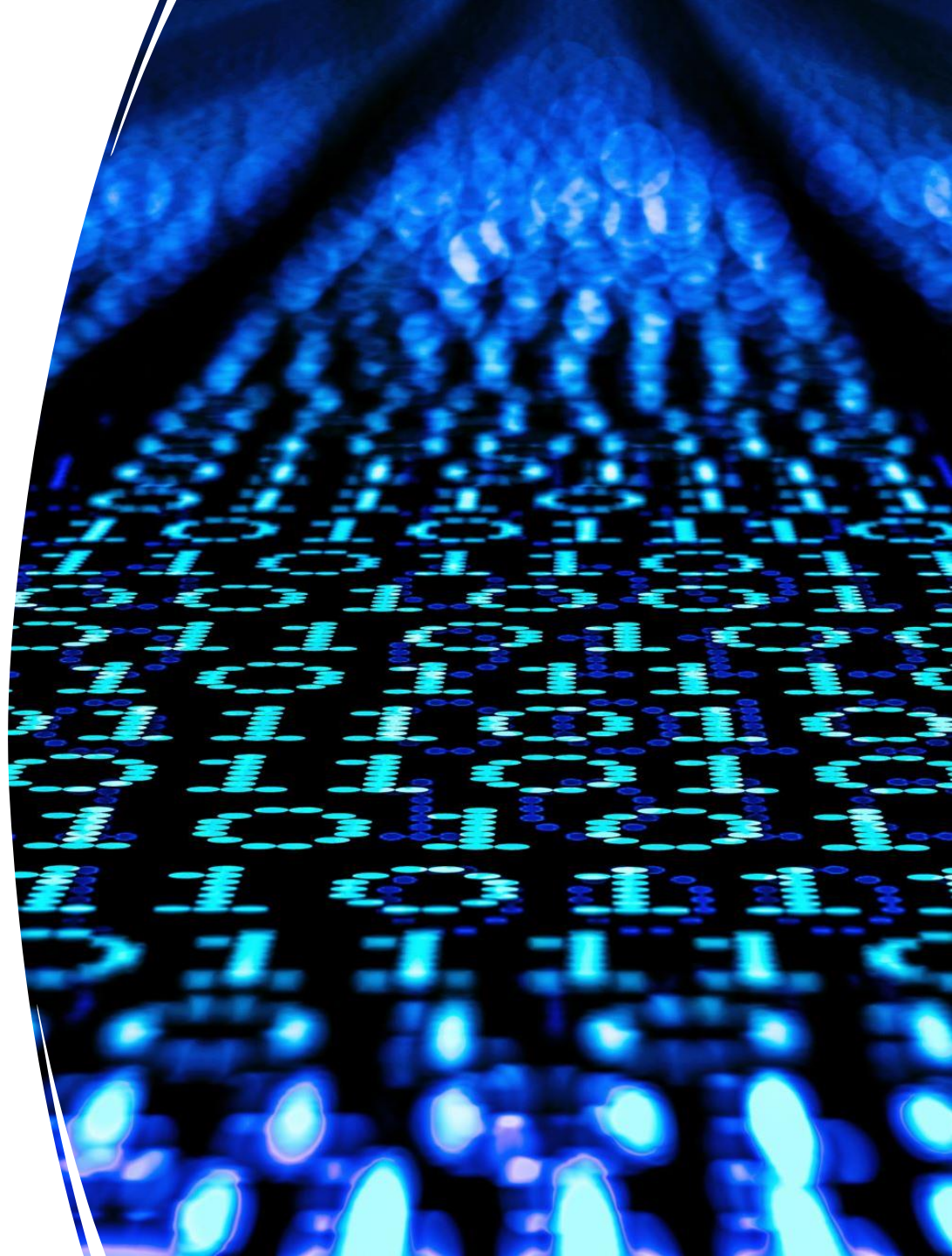
April 23

Objectives

- Understand Linux basics
- Use the command line
- Navigate the file system
- Perform basic file operations

What is Linux?

- Open-source operating system
- Based on Unix
- Widely used in servers and cloud



Why Learn Linux?

-
- Powers the internet
 - Used in DevOps and cloud
 - Essential for IT professionals



Linux
Distributions

Ubuntu

Debian

CentOS / Rocky

Kali (specialized)

Terminal vs GUI

GUI = graphical
interface

CLI = command line

Linux is powerful via
CLI

Accessing Linux

Local machine

Virtual machine

Remote access (SSH)

File System Overview

/home – user files

/etc – configurations

/var – logs

/bin – commands

Paths

Absolute path:
`/home/user/file`

Relative path:
`./file`

Navigation Commands



`pwd` – current
directory



`ls` – list files



`cd` – change
directory

File Management

`touch` – create file

`mkdir` – create folder

`cp` – copy

`mv` – move/rename

`rm` – delete (be careful!)

Wildcards

* → multiple files

? → single character

[] → range

Useful for working faster

Editing Files - Nano

nano file.txt

Edit text

Save → Ctrl + O

Exit → Ctrl + X

Editing Files - Vim (Basic Awareness)

`vim file.txt`

`i` → insert

`Esc` → exit insert

`:wq` → save & quit

Viewing Files



cat



less



head



tail

Help Commands

man
command

--help option

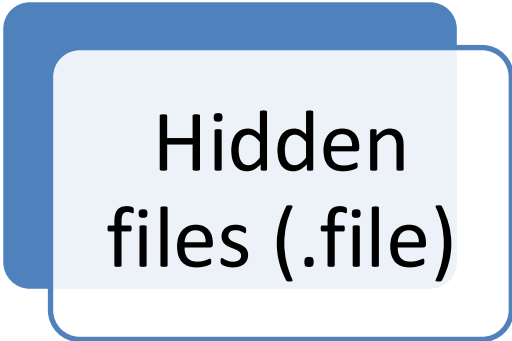
No need to
memorize
everything



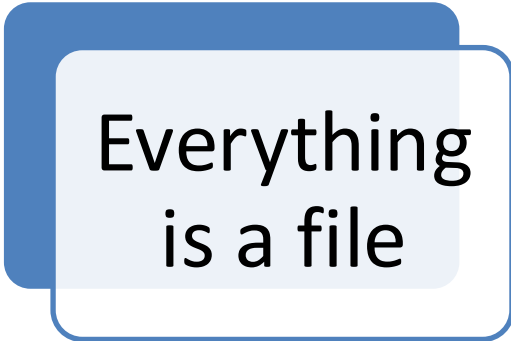
Basic Concepts



Case
sensitive



Hidden
files (.file)



Everything
is a file

Hands-On Practice



Create directories



Create files



Navigate



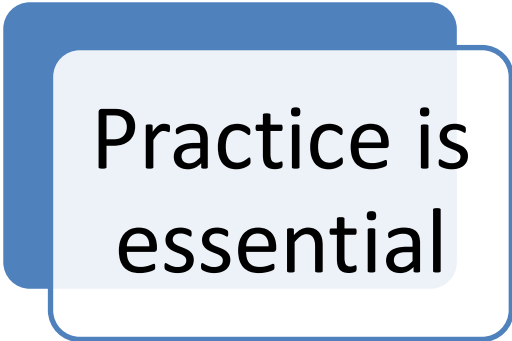
Copy and move files



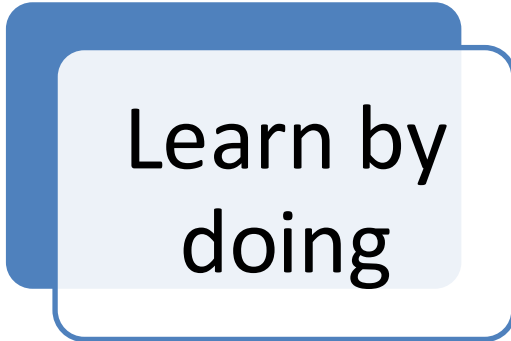
Key Takeaways



Linux
uses CLI



Practice is
essential



Learn by
doing



Next Steps

Linux 201 –
Intermediate

Practice
regularly
