TRAINING DAY 11 REPORT

14 JULY 2025

Understand Linux Commands and Linux Terminal

Today, I learn some important concepts

Windows Networking Commands

Command	Description
`ipconfig`	Displays IP, subnet mask, gateway, and DNS info.
`ipconfig /all`	Shows full adapter details including MAC address.
`ipconfig /release`	Releases current DHCP lease.
`ipconfig /renew`	Renews DHCP lease.
`ipconfig /flushdns`	Clears the DNS cache.
`ipconfig /displaydns`	Shows contents of the DNS cache.

Basic Linux Commands

Command	Description
`ls`	List files in a directory
`ls -l`	Long listing (permissions, owner, size)
`ls -a`	Show hidden files
`cd <dir>`	Change directory
`cd ..`	Go up one level
`pwd`	Print current directory
`mkdir <dir>`	Create new directory
`rmdir <dir>`	Remove empty directory
`rm -r <dir>`	Remove directory and contents
`rm <file>`	Delete file
`touch <file>`	Create empty file
`cp <src> <dst>`	Copy file or directory
`mv <src> <dst>`	Move or rename file/directory
`find <dir> -name "<pattern>"`	Find files by name

Command	Description
`tree`	View directory structure as a tree (install with `sudo apt install tree`)

Linux Terminal

The **Linux Terminal** is a text-based interface that lets you interact directly with the operating system using **commands**. It's one of the most powerful tools in Linux used for everything from navigating files to managing processes, installing software, and hacking (especially in Kali Linux).

What Is the Linux Terminal?

- Also known as: **Shell**, **Console**, or **Command Line Interface (CLI)**.
- Common shells:
  - **Bash** (default in most distros)
  - **Zsh** (popular for customization)
  - **Fish**, **Dash**, etc.

You open the terminal via:

- `Ctrl + Alt + T` (on most distros)
- Search for **"Terminal"** in the application menu.

Why Use the Terminal?

- Faster than GUIs for many tasks.
- Easier to automate via scripting.
- Often required for administrative tasks.
- More control, especially in server or hacking environments.

Linux Network Configuration and Troubleshooting Commands

1. ifconfig

ifconfig (interface configurator) command is use to initialize an interface. assign IP Address to interface and enable or disable interface on demand. With this

command you can view IP Address and Hardware / MAC address assign to interface and also MTU (Maximum transmission unit) size.ifconfig with interface (eth0) command only shows specific interface details like IP Address, MAC Address etc. with -a options will display all available interface details if it is disable also.

2. ping

`ping` is a network diagnostic command used to test the **reachability** of a host (such as a website or IP address) and to measure the **round-trip time** for messages sent from your computer to the destination.

3. Traceroute

The `traceroute` command shows the **path** that packets take from your system to a **destination host**, and **how long** each hop (router) along the way takes to respond.

Grep Command

`grep` stands for Global Regular Expression Print**.**
It searches text or files for lines that match a pattern (string or regex) and prints those lines to the terminal.