

Infrastructure Foundation

Duration: 2 Days

Day 1: Operating Systems + Basic Networking

Module 1: Windows & Linux Fundamentals

Windows Basics

- Overview of Windows OS and versions
- Basic installation concepts
- User accounts and permissions (Local users, groups)
- File systems (NTFS basics)
- Task Manager and system monitoring
- Windows security basics (Firewall, Defender)

Linux Basics

- Introduction to Linux distributions
- Command Line Interface (CLI basics)
- File system structure (/home, /etc, /var)
- Basic commands (ls, cd, cp, mv, rm)
- File permissions (chmod basic usage)
- User management basics
- Process monitoring (top, ps)

Hands-on Labs

- Creating users in Windows/Linux
- Basic file operations
- Running and monitoring processes
- Simple troubleshooting tasks

Module 2: Networking Fundamentals

- What is networking (LAN, WAN basics)
- Network devices (Router, Switch, Access Point)
- IP Addressing (IPv4 basics, private vs public)
- Subnet basics (simple understanding only)
- OSI & TCP/IP models (high-level)
- Basic connectivity tools (ping, traceroute)

Hands-on Labs

- Assigning IP addresses
- Connectivity testing using ping
- Basic network troubleshooting

Day 2: Practical Infrastructure & Intro to Modern IT

Module 3: Switching, Routing & Network Basics

- Switch vs Router (simple understanding)
- VLAN concept (what and why)
- DHCP and DNS basics
- Introduction to NAT
- Basic network security concepts

Hands-on Labs

- Simple VLAN demonstration (conceptual)
- DHCP configuration demo (simulation-based)

Module 4: Storage, Backup & Virtualization

- What is Storage (DAS, NAS, SAN – high level)
- RAID basics (0,1,5 – only concept)
- Backup basics (Full, Incremental)
- RPO & RTO (basic understanding)

Virtualization Basics

- What is virtualization
- Virtual Machines and Hypervisors
- Basic VM lifecycle (create, start, stop)

Module 5: Introduction to Cloud & DevOps Concepts

- What is Cloud Computing
- IaaS, PaaS, SaaS basics
- Introduction to DevOps
- CI/CD concept (high-level only)
- Containers (what is Docker – concept only)

Final Hands-on / Activity

- Basic system + network troubleshooting scenario

- Mini lab combining OS + networking concepts
- Q&A and knowledge recap