

Linux Administration

Month 1: Linux Basics and Command-Line Usage

Week 1: Introduction to Linux

- Overview of Linux and open-source software
- Linux distributions and their characteristics
- Basic commands and file system navigation

Week 2-3: File System Management

- Understanding Linux file system hierarchy
- File and directory permissions
- File manipulation commands (cp, mv, rm, etc.)

Week 4-5: User and Group Management

- Managing users and groups
- User authentication and password policies
- Sudo and privilege escalation

Week 6: Shell Scripting Basics

- Introduction to shell scripting
- Writing and executing simple scripts
- Basic control structures in scripts

Month 2: System Administration and Security

Week 1-2: System Monitoring and Performance

- Monitoring system performance with commands like top, vmstat, etc.
- Log files and troubleshooting
- Resource utilization and management

Week 3-4: Networking and Services

- Network configuration and troubleshooting
- Introduction to network services (SSH, DNS, DHCP)
- Managing services using systemctl

Week 5-6: Security and Advanced Topics

- Basic security principles and practices
- Introduction to firewalls and iptables

- Introduction to SELinux or AppArmor
- Backup and recovery strategies