**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