# INFOSOFT IT SOLUTIONS

**Training | Projects | Placements**

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# CompTIA Linux+

## Introduction to Linux

- History and evolution of Linux
- Linux distributions and their characteristics
- Understanding open-source concepts and licensing

## Linux Installation and Package Management

- Preparing for Linux installation
- Installation methods (graphical, command-line, network-based)
- Managing software packages (RPM, DPKG, APT)

## System Architecture

- Understanding Linux system components
- Kernel architecture and modules
- Boot process and bootloader configuration

## Linux Filesystems and Filesystem Hierarchy Standard (FHS)

- Filesystem types (ext4, XFS, Btrfs, etc.)

- Managing disk partitions and filesystems

- Filesystem permissions and ownership

## Linux Shells, Scripting, and Data Management

- Command-line shells (Bash, Zsh, etc.)

- Writing and executing shell scripts

- Text processing tools (grep, sed, awk)

## User Interfaces and Desktops

- Graphical desktop environments (GNOME, KDE, Xfce)

- Customizing desktop environments

- Remote desktop access and management

## System Administration Tasks

- Managing users and groups

- System monitoring and performance tuning

- Backup and recovery strategies

## Networking Fundamentals

- Configuring network interfaces and networking services

- Network troubleshooting tools and techniques

- DNS and DHCP configuration

## Security in Linux

- Basic security concepts and practices

- File and directory permissions
- Implementing firewall rules and securing services

## Linux Kernel and Modules

- Kernel management and configuration
- Loading and unloading kernel modules
- Kernel troubleshooting and debugging

## Virtualization and Containerization

- Overview of virtualization technologies (KVM, VirtualBox)
- Containerization with Docker and Podman
- Managing virtual machines and containers

## Cloud Computing and Orchestration

- Introduction to cloud computing concepts
- Managing cloud instances and services
- Using configuration management tools (Ansible, Chef, Puppet)

## Troubleshooting and System Maintenance

- System troubleshooting methodologies
- Logging and log file analysis
- Performance monitoring and optimization

**Advanced Linux Networking**

- Configuring VPNs and tunnels
- Network file sharing (NFS, Samba)
- Web server configuration (Apache, Nginx)

**Disaster Recovery and High Availability**

- Implementing backup strategies and schedules
- High availability concepts and clustering
- Disaster recovery planning and execution