

# CompTIA Linux+ (XK0-006)

## Course Overview

The CompTIA Linux+ can benefit you in two ways. If you intend to pass the CompTIA Linux+ (Exam XK0-006) certification examination, this course can be a significant part of your preparation. However, certification is not the only key to professional success in the field of systems administration. Today's job market demands individuals with demonstrable skills, and the information and activities in this course can help you build your sysadmin skill set so that you can confidently perform your duties in any intermediate-level Linux systems administration role.

Upon completing this course, you will be able to:

- Identify Basic Linux Concepts
- Administer Users and Groups
- Configure Permissions
- Implement File Management
- Author Text Files
- Deploy Software
- Administer Storage
- Manage the Linux Kernel and Devices
- Maintain Services
- Configure Network Settings
- Secure a Linux System
- Install Linux
- Script with Bash and Python
- Manage Containers in Linux
- Automate Infrastructure Management

## Target Student

This course is designed for IT professionals whose primary job responsibility is the management of servers and other devices running the Linux operating system. A typical student in this course should have at least 9 months of hands-on Linux experience and at least one and a half years of IT experience in other computing environments or at least 12 months of hands-on experience working with Linux servers in a junior Linux support engineer or junior cloud/DevOps support engineer job role.. The target student should wish to expand their skillset to support their career in Linux system administration and operation.

This course is also designed for students who are seeking the CompTIA Linux+ certification and who want to prepare for Exam XK0-006. The Linux+ certification can validate the student's understanding and skill in configuring, monitoring, and supporting Linux systems.

## Course Prerequisites

To ensure your success in this course, you should have at least foundational experience with general systems administration procedures, some hands-on exposure to one or more Linux distributions, as well as knowledge of computing hardware and basic networking and cybersecurity concepts.

## Associated Certifications

Linux+

## Table of Contents

### 1.0 Identifying Basic Linux Concepts

- 1.1 Use Linux Basics
- 1.2 Use Linux Utilities

### 2.0 Administering Users and Groups

- 2.1 Manage User Accounts
- 2.2 Manage Group Accounts
- 2.3 Modify User Configurations
- 2.4 Escalate Privileges

### 3.0 Configuring Permissions

- 3.1 Configure Standard Linux Permissions
- 3.2 Configure Special Linux Permissions
- 3.3 Configure Access Control Lists

### 4.0 Implementing File Management

- 4.1 Navigate the Linux File System
- 4.2 Apply File Management Commands

### 5.0 Authoring Text Files

- 5.1 Edit Text Files
- 5.2 Manage Text Files

### 6.0 Deploying Software

- 6.1 Administer Software with Package Managers
- 6.2 Acquire and Use Software

### 7.0 Administering Storage

- 7.1 Deploy Standard Storage
- 7.2 Deploy Logical Volume Management
- 7.3 Mount Storage
- 7.4 Manage Other Storage Options

### 8.0 Managing the Linux Kernel and Devices

- 8.1 Gather Hardware Information
- 8.2 Manage Processes
- 8.3 Manage the Linux Kernel

## **9.0 Maintaining Services**

- 9.1 Configure Services with systemd
- 9.2 Configure Common System Services
- 9.3 Apply Localization Settings

## **10.0 Configuring Network Settings**

- 10.1 Identify Network Fundamentals
- 10.2 Manage Network Settings
- 10.3 Set Up Remote Administrative Access
- 10.4 Configure the Firewall
- 10.5 Monitor Network Traffic

## **11.0 Securing a Linux System**

- 11.1 Harden a Linux System
- 11.2 Monitor and Audit Log Files
- 11.3 Manage Encryption and Certificates
- 11.4 Implement Mandatory Access Controls

## **12.0 Installing Linux**

- 12.1 Summarize the Linux Boot Process
- 12.2 Deploy Linux Virtualization
- 12.3 Deploy Linux

## **13.0 Scripting with Bash and Python**

- 13.1 Write Basic Bash Scripts
- 13.2 Implement Shell Script Elements
- 13.3 Execute Scripts
- 13.4 Write Basic Python Code
- 13.5 Manage Version Control with Git

## **14.0 Managing Containers in Linux**

- 14.1 Manage Container Administration, Storage, and Networking
- 14.2 Implement Container Orchestration

## **15.0 Automating Infrastructure Management**

- 15.1 Implement Automation
- 15.2 Apply Orchestration