

# CompTIA Linux+ (Exams LX0-103 and LX0-104)

## **Course Description**

### **Overview:**

The *CompTIA® Linux+™ Powered by LPI (Exams LX0-103 and LX0-104)* course, developed to cover CompTIA Powered by LPI exams LX0-103 and LX0-104, builds on your existing user-level knowledge and experience with the Linux operating system to present fundamental skills and concepts that you will use on the job in any type of Linux career.

This course can benefit you in two ways. If your job duties include Linux troubleshooting, installation, or maintenance, or if you are preparing for any type of Linux-related career, it provides the background knowledge and skills you will require to be successful. In addition, it assists you if you are preparing to take the CompTIA® Linux+™ Powered by LPI exams (Exam Codes: LX0-103 and LX0-104), in order to become a CompTIA® Linux+™ Certified Professional.

### **Course Objectives:**

In this course, you will administer Linux.

You will:

- Identify basic Linux concepts and perform basic Linux tasks.
- Manage user and group accounts.
- Manage partitions and the Linux filesystem.
- Manage various files in Linux.
- Work with Linux permissions and ownership.
- Print files.
- Manage packages.
- Manage kernel services.
- Work with the Bash shell and shell scripts.
- Manage jobs and processes.
- Manage system services.
- Configure network services.
- Configure basic Internet services.
- Implement measures to secure a Linux system.
- Manage hardware associated with Linux systems.
- Troubleshoot Linux system issues.
- Install the Linux operating system.
- Configure the GUI.

## **Course Content**

### **Lesson 1: Performing Basic Linux Tasks**

**Topic A:** Identify the History and Development of Linux

**Topic B:** Enter Shell Commands

**Topic C:** Get Help Using Linux

**Topic D:** Start and Stop Linux

### **Lesson 2: Managing User and Group Accounts**

**Topic A:** Create User and Group Accounts

**Topic B:** Configure User Profiles

**Topic C:** Administer User and Group Accounts

### **Lesson 3: Managing Partitions and the Linux Filesystem**

**Topic A:** Create Partitions

**Topic B:** Navigate Through the Linux Filesystem

**Topic C:** Manage the Filesystem

**Topic D:** Maintain the Filesystem

### **Lesson 4: Managing Files in Linux**

**Topic A:** Create and Edit Text Files

**Topic B:** Locate Files

**Topic C:** Search Text Using Regular Expressions

**Topic D:** Apply Filters to Text Streams

**Topic E:** Link Files

**Topic F:** Back Up and Restore Files

**Topic G:** Manage Databases Using MariaDB

### **Lesson 5: Managing Linux Permissions and Ownership**

**Topic A:** Modify File and Directory Permissions

**Topic B:** Modify Default Permissions

**Topic C:** Modify File and Directory Ownership

**Topic D:** Set Special Permissions and Attributes

## **Lesson 6: Printing Files**

- Topic A:** Configure a Local Printer
- Topic B:** Print Files
- Topic C:** Configure Remote Printing

## **Lesson 7: Managing Packages**

- Topic A:** Manage Packages Using RPM
- Topic B:** Verify Packages
- Topic C:** Upgrade Packages
- Topic D:** Configure Repositories
- Topic E:** Manage Packages Using YUM
- Topic F:** Advanced Package and Application Management

## **Lesson 8: Managing Kernel Services**

- Topic A:** Explore the Linux Kernel
- Topic B:** Customize Kernel Modules
- Topic C:** Create an initrd Image
- Topic D:** Manage Device Drivers and Hardware Devices
- Topic E:** Monitor Processes and Resources

## **Lesson 9: Working with the Bash Shell and Shell Scripts**

- Topic A:** Perform Basic Bash Shell Operations
- Topic B:** Write a Bash Shell Script
- Topic C:** Customize the Bash Shell
- Topic D:** Redirect Standard Input and Output
- Topic E:** Use Control Statements in Shell Scripts

## **Lesson 10: Managing Jobs and Processes**

- Topic A:** Manage Jobs and Background Processes
- Topic B:** Manage Processes Using the Process Table
- Topic C:** Delay and Detach Jobs
- Topic D:** Schedule Jobs
- Topic E:** Maintain the System Time

## **Lesson 11: Managing System Services**

- Topic A:** Configure System Services
- Topic B:** Monitor System Logs
- Topic C:** Configure Security-Enhanced Linux (SELinux)

## **Lesson 12: Configuring Network Services**

**Topic A:** Connect to a Network

**Topic B:** Configure Routes

**Topic C:** Configure Client Network Services

**Topic D:** Manage Remote Network Systems

## **Lesson 13: Configuring Basic Internet Services**

**Topic A:** Configure Email Services

**Topic B:** Control Internet Services

## **Lesson 14: Securing Linux**

**Topic A:** Implement Basic System Security

**Topic B:** Secure User Accounts

## **Lesson 15: Managing Hardware**

**Topic A:** Identify Common Hardware Components and Resources

**Topic B:** Configure Removable Hardware

**Topic C:** Configure Disk Quotas

## **Lesson 16: Troubleshooting Linux Systems**

**Topic A:** Troubleshoot System-Based Issues

**Topic B:** Troubleshoot Hardware Issues

**Topic C:** Troubleshoot Network Connection and Security Issues

## **Lesson 17: Installing Linux**

**Topic A:** Prepare for Installation

**Topic B:** The Linux Boot Process

**Topic C:** Configure GRUB

**Topic D:** Install the Operating System

## **Lesson 18: Configuring the GUI**

**Topic A:** Implement X

**Topic B:** Customize the Display Manager

**Topic C:** Enable Accessibility Settings in Linux