

CompTIA Linux+™ Powered by LPI

Course length: 5.0 day(s)

Course Description

Course Objective: You will acquire the skills needed to install and support one or more distributions of the Linux operating system and learn information and skills that will be helpful as you prepare for CompTIA® Linux+™ Powered by LPI exams (Exam Codes: LX0–101 and LX0–102).

Target Student: This course is intended for entry-level computer support professionals with basic knowledge of computer hardware, software, and operating systems, who wish to increase their knowledge and understanding of Linux concepts and skills to prepare for a career in Linux support or administration, or to prepare for CompTIA® Linux+™ Powered by LPI exams (Exam Codes: LX0–101 and LX0–102). A typical student in the CompTIA® Linux+™ Certification course should have at least 6 to 12 months of Linux experience.

Prerequisites: To ensure your success, we recommend you first take the following Element K courses or have equivalent knowledge:

- *UNIX and Linux: Fundamentals*
- *UNIX and Linux: Advanced User*

Course Objectives

Upon successful completion of this course, students will be able to:

- 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.
- manage jobs and processes.
- manage system services.
- configure Linux services to provide users with network connectivity.
- 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: Familiarizing Yourself with Linux

Topic 1A: Review the History and Development of Linux

Topic 1B: Enter Shell Commands

Topic 1C: Get Help Using Linux

Topic 1D: Start and Stop Linux

Lesson 2: Managing User and Group Accounts

Topic 2A: Create User and Group Accounts

Topic 2B: Configure User Profiles

Topic 2C: Manage User and Group Accounts

Lesson 3: Managing Partitions and the Linux Filesystem

Topic 3A: Create Partitions

Topic 3B: Navigate Through the Linux Filesystem

Topic 3C: Manage the Filesystem

Topic 3D: Maintain the Filesystem

Lesson 4: Managing Files in Linux

Topic 4A: Create and Edit Files

Topic 4B: Locate Files

Topic 4C: Search Text Using Regular Expressions

Topic 4D: Apply Filters to Text Streams

Topic 4E: Link Files

Topic 4F: Back Up and Restore Files

Topic 4G: Manage Databases Using MySQL

Lesson 5: Working with Linux Permissions and Ownership

Topic 5A: Modify File and Directory Permissions

Topic 5B: Modify Default Permissions

Topic 5C: Modify File and Directory Ownership

Topic 5D: Set Advanced Permissions

Lesson 6: Printing Files

Topic 6A: Configure a Local Printer

Topic 6B: Print Files

Topic 6C: Manage Print Jobs and Queues

Topic 6D: Configure Remote Printing

Lesson 7: Managing Packages

Topic 7A: Manage Packages Using RPM

Topic 7B: Verify Packages

Topic 7C: Upgrade Packages
Topic 7D: Configure Repositories
Topic 7E: Manage Packages Using YUM
Topic 7F: Manage Packages Using the Debian Package Manager
Topic 7G: Manage Packages Using Source Files
Topic 7H: Manage Shared Libraries

Lesson 8: Managing Kernel Services

Topic 8A: Explore the Linux Kernel
Topic 8B: Customize Kernel Modules
Topic 8C: Create an initrd Image
Topic 8D: Manage Device Drivers
Topic 8E: Monitor Hardware Devices
Topic 8F: Monitor Processes and Resources

Lesson 9: Working with the Bash Shell and Shell Scripts

Topic 9A: Perform Basic Bash Shell Operations
Topic 9B: Write a Bash Shell Script
Topic 9C: Customize the Bash Shell
Topic 9D: Redirect Standard Input and Output
Topic 9E: Use Control Statements in Shell Scripts

Lesson 10: Managing Jobs and Processes

Topic 10A: Manage Jobs and Background Processes
Topic 10B: Manage Processes Using the Process Table
Topic 10C: Examine Delayed and Detached Jobs
Topic 10D: Schedule Jobs
Topic 10E: Maintain the System Time

Lesson 11: Managing System Services

Topic 11A: Configure System Services
Topic 11B: Monitor System Logs
Topic 11C: Configure SELinux

Lesson 12: Configuring Network Services

Topic 12A: Connect to a Network
Topic 12B: Configure Routes
Topic 12C: Configure Client Network Services
Topic 12D: Manage Remote Network Systems

Lesson 13: Configuring Basic Internet Services

Topic 13A: Configure Email Services
Topic 13B: Control Internet Services

Lesson 14: Securing Linux

Topic 14A: Examine the Basics of System Security
Topic 14B: Secure User Accounts
Topic 14C: Enable Firewall Functionality
Topic 14D: Implement Security Auditing
Topic 14E: Describe the Intrusion Detection System

Lesson 15: Managing Hardware

Topic 15A: Identify Common Hardware Components and Resources
Topic 15B: Configure Removable Hardware
Topic 15C: Configure Disk Quotas

Lesson 16: Troubleshooting Linux Systems

Topic 16A: Troubleshoot System-Based Issues
Topic 16B: Troubleshoot Hardware Issues
Topic 16C: Troubleshoot Network Connection and Security Issues

Lesson 17: Installing Linux

Topic 17A: Prepare for Installation
Topic 17B: Identify the Phases of the Linux Boot Sequence
Topic 17C: Configure GRUB
Topic 17D: Install the Operating System
Topic 17E: Perform Post-Installation Tasks

Lesson 18: Configuring the GUI

Topic 18A: Implement X
Topic 18B: Customize the Display Manager
Topic 18C: Customize the Window Environment
Topic 18D: Enable Accessibility Settings in Linux

Appendix A: Mapping Course Content to the CompTIA Linux+ Powered by LPI Certification Exam Objectives

Appendix B: CompTIA Linux+ Powered by LPI: Acronyms and Abbreviations

Appendix C: Syntax