



LPIC-1: Linux System Administrator

Duration: 5 Days **Course Code: LPIC-1**

Overview:

LPIC-1 is the first certification in LPI's multi-level Linux professional certification program. The LPIC-1 will validate the candidate's ability to perform maintenance tasks on the command line, install and configure a computer running Linux and configure basic networking. The LPIC-1 is designed to reflect current research and validate a candidate's proficiency in real world system administration. The objectives are tied to real-world job skills, which we determine through job task analysis surveying during exam development. Topics such as the Linux command-line tools, software management, hardware configuration, filesystems, the X Window System, the boot process, scripts, security, documentation, administration and networking will be covered in this course.

Target Audience:

Anyone with little or no experience with Linux and who are seeking a fundamental understanding of the Linux operating system

- Anyone wishing to prepare for the LPI 101 and 102 exams
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Objectives:

- Understand the architecture of a Linux system;
 - Install and maintain a Linux workstation, including X11 and setup it up as a network client;
 - Work at the Linux command line, including common GNU and Unix commands;
 - Handle files and access permissions as well as system security; and
 - Perform easy maintenance tasks: help users, add users to a larger system, backup and restore, shutdown and reboot.
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Prerequisites:

Before attending this course, delegates must have:

- Must have a little knowledge about Linux (What it is, and possibly a few Linux commands)

Or

- Basic computer skills, such as how to use a keyboard and how to insert a disc into a CD-ROM drive.

Testing and Certification

This course will prepare delegates to write the LPIC-1 exams, 101-400 and 102-400

Successfully passing exams 101-450 and 102-400 will result in the attainment of the LPIC-1 Linux System Administrator Certification.

Content:

Module 1: Exploring Linux Command-Line Tools

- Understanding Command-Line Basics
- Using Streams, Redirection and Pipes
- Processing Text Using Filters
- Using Regular Expressions

Module 2: Managing Software

- Package Concepts
- Using RPM
- Using Debian Packages
- Converting Between Package Formats
- Package Dependencies and Conflicts
- Managing Shared Libraries
- Managing Processes

Module 3: Configuring Hardware

- Configuring the BIOS and Core Hardware
- Configuring Expansion Cards
- Configuring USB Devices
- Configuring Hard Disks
- Designing a Hard Disk Layout
- Creating Partitions and Filesystems
- Maintaining Filesystems Health
- Mounting and Unmounting Filesystems

Module 4: Managing Files

- Managing Files
- Managing File Ownership
- Controlling Access to files
- Managing Disk Quotas
- Locating Files

Module 5: Booting Linux and Editing Files

- Installing Boot Loaders
- Understanding the Boot Process
- Dealing with Runlevels and Initialization Process
- Editing Files with Vi

Module 6: Configuring the X Window System, Localization and Printing

Configuring Basic X Features

- Configuring X Fonts
- Managing GUI Logins
- Using X for Remote Access
- X Accessibility
- Configuring Localization and Internationalization
- Configuring Printing

Module 7: Administering the System

- Managing Users and Groups
- Tuning User and System Environments
- Using System Log Files
- Maintaining the System Time
- Running Jobs in the Future

Module 8: Configuring Basic Networking

- Understanding the TCP/IP Networking
- Understanding Network Addressing
- Configuring Linux for a Local Network
- Diagnosing Network Connections

Module 9: Writing Scripts, Configuring E-Mail, and Using Databases

- Managing the Shell Environment
- Writing Scripts
- Managing E-Mail
- Managing Data with SQL

Module 10: Securing Your System

- Administering Network Security
- Administering Local Security
- Configuring SSH
- Using GPG