

LPIC-1: Linux Administrator Rapid Track

Course Duration: 40 Hours

Course code: LPIC-1

1. Course Overview

This course provides a fast-paced, comprehensive introduction to Linux system administration, aimed at preparing learners for LPIC-1 certification. Participants will gain hands-on experience in Linux installation, command-line usage, file management, system maintenance, user management, and networking essentials. The course focuses on practical skills that are essential for daily Linux administration tasks.

2. What you'll learn?

By the end of the course, participants will be able to:

- Understand Linux architecture and distributions
- Install and configure Linux systems
- Navigate and manage the Linux filesystem
- Perform user and group management
- Manage software packages and system processes
- Configure basic networking and security
- Troubleshoot Linux systems efficiently
- Prepare for LPIC-1 certification exams

3. Target Audience

- Aspiring Linux administrators preparing for LPIC-1 certification
- IT professionals seeking to rapidly gain Linux administration skills
- System engineers, developers, and DevOps practitioners requiring Linux expertise

4. Pre-Requisites

Familiarity with:

- Basic computer operations and concepts

- Command-line interface fundamentals
- Networking basics

5. Course content

Topic 101: System Architecture

- 101.1 Determine and configure hardware settings
- 101.2 Boot the system
- 101.3 Change run levels/boot targets and shutdown or reboot the system

Topic 102: Linux Installation and Package Management

- 102.1 Design hard disk layout
- 102.2 Install a boot manager
- 102.3 Manage shared libraries
- 102.4 Use Debian package management
- 102.5 Use RPM and YUM package management
- 102.6 Linux as a virtualization guest

Topic 103: GNU and Unix Commands

- 103.1 Work on the command line
- 103.2 Process text streams using filters
- 103.3 Perform basic file management
- 103.4 Use streams, pipes, and redirects
- 103.5 Create, monitor, and kill processes
- 103.6 Modify process execution priorities
- 103.7 Search text files using regular expressions
- 103.8 Basic file editing

Topic 104: Devices, Linux Filesystems, Filesystem Hierarchy Standard

- 104.1 Create partitions and filesystems
- 104.2 Maintain the integrity of filesystems
- 104.3 Control mounting and unmounting of filesystems

- 104.4 Removed
- 104.5 Manage file permissions and ownership
- 104.6 Create and change hard and symbolic links
- 104.7 Find system files and place files in the correct location

Topic 105: Shells and Shell Scripting

- 105.1 Customize and use the shell environment
- 105.2 Customize or write simple scripts

Topic 106: User Interfaces and Desktops

- 106.1 Install and configure X11
- 106.2 Graphical Desktops
- 106.3 Accessibility
- Topic 107: Administrative Tasks
- 107.2 Automate system administration tasks by scheduling jobs
- 107.3 Localisation and internationalisation

Topic 108: Essential System Services

- 108.1 Maintain system time
- 108.2 System logging
- 108.3 Mail Transfer Agent (MTA) basics

Topic 109: Networking Fundamentals

- 109.1 Fundamentals of internet protocols
- 109.2 Persistent network configuration
- 109.3 Basic network troubleshooting
- 109.4 Configure client-side DNS
- Topic 110: Security
- 110.1 Perform security administration tasks
- 110.2 Set up host security