

## 1. Background

- Linux Administrator is the first certification in LPI's multi-level Linux professional certification program. The Linux Administrator 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 Linux Administrator 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.

## 2. Training and exam for 1 student

- This course comprise of two exams **LPIC-101-500** and **LPIC-102-500**.
- Successfully passing the above-mentioned exams will result in the attainment of the **LPIC-1 Linux Administrator Certification**.

Duration of the course: **5 days**

Level- Intermediate

## 3. Content to be covered in the course

- 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.
- Perform easy maintenance tasks: help users, add users to a larger system, backup and restore, shutdown and reboot.

## Course 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

- 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

- 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

- 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

## 4. Mode of Training

- The mode of training required should be physical or in person at a Linux professional institute approved training partner.
- The Professional Linux approved partner or facility should provide all of the necessary course material, lab hardware and software as well as delegate computers, internet access and instructional aids.