Linux® Essentials

Duration: 4 Days
Method: Instructor-Led

Certification: Linux® Essentials Professional Development — Exam: LPI-010

Course Description

The Linux® Professional Institute (LPI) course is a great way to show that you have the foundational skills required for your next job or promotion. The Linux® Essentials course will provide candidates with entry level skills of Linux® as an operating system, basic open source concepts and the basics of the Linux® command line.

In this course, candidates will be exposed to Linux® virtual machines and a step-by-step labs which offers hands-on access to practice Linux® command line concepts. With no previous knowledge of Linux® required, this course is the perfect starting point to gain Linux® skills. It also serves as an ideal stepping-stone to the more advanced Linux® Professional Institute Certificate (LPIC) professional courses such as LPIC-1, LPIC-2 and LPIC-3.

Linux® adoption continues to rise world-wide as individual users, government entities and industries ranging from automotive to space exploration embrace open source technologies. This expansion of open source in enterprise is redefining traditional Information and Communication Technology (ICT) job roles to require more Linux® skills. Whether you are starting your career in Open Source or looking for advancement, independently verifying your skills set can help you stand out to hiring managers or your management team.

Target Audience

This course is intended for:

- Database/Systems/IT Administrators
- Network/Systems/Security Engineers

Prerequisites

To attend this course, candidates should have:

- Basic Computer Skills
- Basic Knowledge of Linux® Environment

Course Objectives

After completing the course, candidates will have a thorough understanding of:

- FOSS, the various communities, and licenses
- Knowledge of open source applications in the workplace as they relate to closed source equivalents
- Basic concepts of hardware, processes, programs and the components of the Linux® Operating System
- How to work on the command line and with files
- How to create and restore compressed backups and archives
- System security, users/groups and file permissions for public and private directories
- How to create and run simple scripts

Course Content

Chapter 1: Selecting an Operating System

- What is an OS?
- Investigating User Interfaces
- Where does Linux® fit in the OS World?
- What is a Distribution?

Chapter 2: Understanding Software Licensing

- Investigating Software Licenses
- Looking at the Free Software Foundation
- Looking at the Open Source Initiative
- Looking at the Creative Commons
- Using Open Source Licenses

Chapter 3: Investigating Linux's® Principles and Philosophy

- Exploring Linux® through the Ages
- Using Open Source Software
- Understanding OS Roles

Chapter 4: Using Common Linux® Programs

- Using Linux® Desktop Environment
- Working with Productivity Software
- Using Server Programs
- Managing Programming Languages
- Handling Software Packages

Chapter 5: Managing Hardware

- Learning about Your CPU
- Identifying Motherboard Capabilities
- Sizing Your Power Supply
- Understanding Disk Issues
- Managing Displays
- Handling USB Devices
- Managing Drivers

Chapter 6: Getting to Know the Command Line

- Starting a Command Line
- Running Programs
- Using Shell Features
- Getting help Using man Pages
- Getting help Using info Pages
- Finding Additional Documentation

Course Content, *Continued*

Chapter 7: Managing Files

- Understanding Where Things Go
- Navigating Files and Directories
- Manipulating Files
- Manipulating Directories

Chapter 8: Searching, Extracting and Archiving Data

- Using Regular Expressions
- Searching for and Extracting Data
- Redirecting Input and Output
- Archiving Data

Chapter 9: Exploring Processes and Process Data

- Understanding Package Management
- Understanding the Process Hierarchy
- Identifying Running Processes
- Using Log Files

Chapter 10: Editing Files

- Understanding the Role of Text Files
- Choosing an Editor
- Launching an Editor
- Editing Files with pico or nano
- Editing Files with vi

Chapter 11: Creating Scripts

- Beginning a Shell Script
- Using Commands
- Using Arguments
- Using Variables
- Using Conditional Expressions
- Using Loops
- Using Functions
- Setting the Script's Exit Value

Chapter 12: Understanding Basic Security

- Understanding Accounts
- Using Account Tools
- Working as root

Chapter 13: Creating Users and Groups

- Creating New Accounts
- Modifying Accounts
- Deleting Accounts
- Managing Groups

Chapter 14: Setting Ownership and Permissions

- Setting Ownership
- Setting Permissions
- Using Special Permission Bits and File Features

Chapter 15: Managing Network Connections

- Understanding Network Features
- Configuring a Network Connection
- Testing Your Network Connection
- Protecting Your System from the Bad Guys

Appendix A: Answers to Review Questions

Appendix B: LPI's Certification Program

LABS INCLUDED