

Course Outline: Linux Professional Institute-LPI 101

Learning Method: Instructor-led Classroom Learning

Duration: 5.00 Day(s)/ 40 hrs

Overview:

Students will learn all the key core elements of the Linux operating system -installation, package management, X Windows,application management, and more.

Who Should Attend:

This course is intended for individuals who are employed as a PC Technician, Systems Administrator, Systems Engineer and IT Manager

At Course Completion:

At end of the course participants will learn the key core elements of the Linux Operating system including:

- Linux Overview
- Installing a Linux System
- Linux Commands
- Help and vi Editor
- File Systems, Files and Directories
- Package Management
- Shared Libraries
- Text Processing
- Processes

Outline:

Module 1: Introduction

- Course Format
- Product Development
- Structure
- Conventions
- Introduction to Labs
- Introduction to Labs solutions

- Lab convention

Module 2: Linux Overview

- What is Linux?
- History of Linux
- The free software model
- Proprietary software under Linux

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- The GNU General Public Licence
- Lesser General Public Licence
- Linux features
- Hardware
- Software
- Linux Advantages
- Virus are almost non-existent
- FHS and LSB
- System administration
- System documentation
- Providing User Support

Module 3: Installing a Linux System

- Installation Option
- Getting ready
- Types of servers and workstations
- Identify your hardware
- Determine networks settings
- Installation methods
- Installing from a CD-ROM
- Creating a boot floppy
- Installing from a network
- General installation steps
- Install or upgrade
- Other Partitioning Methods
- System Settings
- Linux Boot Loaders
- The 1024 Cylinder
- Boot loaders: LILO, GRUB, and LOADLIN

Module 4: Hardware

- Hardware
- System Boot Procedure
- POST
- BIOS

- CMOS
- Drives
- Floppy Drives
- SCSI
- AGP
- Linux Kernel

Module 6: Linux Usage

- Command Line Basics
- Command Line Syntax
- Common and commands
- Working in the Linux Shell
- Creating and Deleting directories

Module 7: Getting Help

- System Information
- Identifying the system
- Identifying and Communicating with Active Users
- The locate command
- The find command

Module 8: VI

- Linux Text Editors
- Basic vi
- vi modes
- Advanced Functions
- Moving within a file
- Listing buffers
- Editing buffers

Module 9: File System

- File System structure
- File System Types
- Checking file systems

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- Checking utilities
- User disk quota

Module 10: Files & Directories

- Standard directories
- The Linux File System
- Access control
- Overview
- Opening a file
- File and Directory permission
- File Manipulation permissions
- Setting user and group IDs
- Programs
- the sticky bit
- links

Module 11: The X Window System

- The X Window system
- X Client/Server model
- Starting your X Window system
- Adjusting the X window system
- X Resource files
- The xwininfo utility
- The xvidtune utility
- Remote X Clients
- X Stations and X Terminals

Module 12: Package Management

- Package managers
- Red Hat Package manager
- Rpm package names
- RPM commands
- The rpmrc file
- Debian package manager/non-debian packages
- Unpacking the Tarball

Module 13: Managing Shared Libraries

- Managing Shared Libraries
- System Library File Names and locations
- The libc and ld.so/ld-linux.so /Other files related to shared libraries
- Commands related to system libraries
- Errors related to missing or damaged shared libraries

Module 14: Text Processing

- Text processing
- the grep family
- regular expression
- filters
- addressing and editing
- redirecting input, output and errors
- input
- output
- error
- pipes

Module 15: Processes

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- Processes
- The Linux Kernel
- Programs & Processes
- Processes and the Kernel
- running processes
- background jobs
- signals

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