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"Charting the Course ...

... to Your Success!"

Linux +

Course Summary

Description
The CompTIA Linux+ certification course, developed to cover CompTIA's 2009 objectives, builds on your existing user-level knowledge and experience with the Linux operating system, to present fundamental skills and concepts that you will use on the job in any type of Linux career.

Objectives
At the end of this course, students will be able to:

- Identify basic Linux concepts and perform basic Linux tasks.
- Manage user and group accounts.
- Manage partitions and the Linux filesystem.
- Manage various files in Linux.
- Work with Linux permissions and ownership.
- Print files.
- Manage packages.
- Manage kernel services.
- Work with the Bash shell.
- Manage jobs and processes.
- Manage system services.
- Configure Linux services to provide users with network connectivity.
- Configure basic Internet services.
- Implement measures to secure Linux.
- Manage hardware associated with Linux machines.
- Troubleshoot Linux system issues.
- Install the Linux operating system.
- Configure the GUI.

Topics

- Familiarizing Yourself with Linux
- Managing User and Group Accounts
- Managing Partitions and the Linux Filesystem
- Managing Files in Linux
- Working with Linux
- Printing Files
- Managing Packages
- Managing Kernel Services
- Working with the Bash Shell and Shell Scripts
- Managing Jobs and Processes
- Managing System Services
- Configuring Network Services
- Configuring Basic Internet Services
- Securing Linux
- Managing Hardware
- Troubleshooting Linux Systems
- Installing Linux
- Configuring the GUI
- Appendix A: Mapping Course Content to the CompTIA Linux+ 2009 Exam Objectives
- Appendix B: CompTIA Linux+ Acronyms
- Appendix C: Syntax

Audience
This course is intended for entry-level computer support professionals with basic knowledge of computer hardware, software, and operating systems, who wish to increase their knowledge and understanding of Linux concepts and skills to prepare for a career in Linux support or administration, or to prepare for the Linux+ certification, 2009 objectives (exam number XK0-003).

Prerequisites
CompTIA A+ certification, or the equivalent skills and knowledge, is helpful but not required. A typical student in should have at least 6 to 12 months of Linux experience.

Duration
Five days

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Course Outline

I. Familiarizing Yourself with Linux
- A. Review the History and Development of Linux
- B. Enter Shell Commands
- C. Get Help Using Linux
- D. Start and Stop Linux

II. Managing User and Group Accounts
- A. Create User and Group Accounts
- B. Configure User Profiles
- C. Manage User and Group Accounts

III. Managing Partitions and the Linux Filesystem
- A. Create Partitions
- B. Navigate through the Linux Filesystem
- C. Manage the Filesystem
- D. Maintain the Filesystem

IV. Managing Files in Linux
- A. Create and Edit Files
- B. Locate Files
- C. Link Files
- D. Back Up and Restore Files
- E. Manage Databases Using MySQL

V. Working with Linux Permissions and Ownership
- A. Modify File and Directory Permissions
- B. Modify Default Permissions
- C. Modify File and Directory Ownership
- D. Set Advanced Permissions

VI. Printing Files
- A. Configure a Local Printer
- B. Print Files
- C. Manage Print Jobs and Queues
- D. Configure Remote Printing

VII. Managing Packages
- A. Manage Packages Using RPM
- B. Verify Packages
- C. Upgrade Packages
- D. Configure Repositories
- E. Manage Packages Using YUM
- F. Manage Packages Using the Debian Package Manager
- G. Work with Source Files

VIII. Managing Kernel Services
- A. Explore the Linux Kernel
- B. Customize Kernel Modules
- C. Create an initrd Image
- D. Manage Device Drivers
- E. Monitor Hardware Devices
- F. Monitor Processes and Resources

IX. Working with the Bash Shell and Shell Scripts
- A. Perform Basic Bash Shell Operations
- B. Introduction to Shell Scripting
- C. Customize the Bash Shell
- D. Redirect Standard Input and Output
- E. Use Control Statements in Shell Scripts

X. Managing Jobs and Processes
- A. Manage Jobs and Background Processes
- B. Manage Processes Using the Process Table
- C. Examine Delayed and Detached Jobs
- D. Schedule Jobs
- E. Maintain the System Time

XI. Managing System Services
- A. Configure System Services
- B. Monitor System Logs
- C. Configure SELinux

XII. Configuring Network Services
- A. Connect to a Network
- B. Configure Routes
- C. Configure DHCP
- D. Configure DNS
- E. Implement Network File Sharing Services
- F. Configure NIS
- G. Manage Remote Network Systems

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Course Outline (cont'd)

XIII. Configuring Basic Internet Services
- A. Configure a Web Server
- B. Implement Apache Access Control
- C. Implement Access Control in a Proxy Server
- D. Configure Email Services
- E. Control Internet Services

XIV. Securing Linux
- A. Examine the Basics of System Security
- B. Secure User Accounts
- C. Enable Firewall Functionality
- D. Implement Security Auditing
- E. Detect Intrusion

XV. Managing Hardware
- A. Identify Common Hardware Components and Resources
- B. Configure Power Management
- C. Configure Removable Hardware
- D. Configure Mass Storage Devices
- E. Manage Logical Volumes Using the Logical Volume Manager
- F. Configure Disk Quotas

XVI. Troubleshooting Linux Systems
- A. Troubleshoot System-Based Issues
- B. Troubleshoot Hardware Issues
- C. Troubleshoot Network Connection and Security Issues

XVII. Installing Linux
- A. Prepare for Installation
- B. Identify Phases of the Linux Boot Sequence
- C. Configure GRUB
- D. Install the Operating System
- E. Perform Post-Installation Tasks

XVIII. Configuring the GUI
- A. Implement X
- B. Customize the Display Manager
- C. Customize the Window Environment

XIX. Appendix A: Mapping Course Content to the CompTIA Linux+ 2009 Exam Objectives

XX. Appendix B: CompTIA Linux+ Acronyms

XXI. Appendix C: Syntax

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