CompTIA: Linux+ Certification

Course ID #: 1200-825-09-W
Hours: 35
Delivery Method: Group Internet Based

Course Content

Description:

In this course, you will cover: This course provides a comprehensive guide to common tasks performed by system administrators, including installation, customization, and troubleshooting. Expanded coverage of networking and security provide everything you need to hit the ground running. This course maps to the LX0-101 and LX0-102 Linux+ Powered by LPI exams.

Objectives:

Upon successful completion of this course, students will:

- Identify Basic Linux Concepts
- Administer Users and Groups
- Configure Permissions
- Implement File Management
- Author Text Files
- Deploy Software
- Administer Storage
- Manage the Linux Kernel and Devices
- Maintain Services
- Configure Network Settings
- Secure a Linux System
- Install Linux
- Script with Bash and Python
- Manage Containers in Linux
- Automate Infrastructure Management

Prerequisites:

To ensure your success in this course, you should have at least 12 months of hands-on experience working with Linux servers. CompTIA A+, Network+, and Server+ certifications, or the equivalent knowledge, are strongly recommended.

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Topics:

1.0. Identifying Basic Linux Concepts

Module 1.0 Introduction

1.1Use Linux Basics

- 1.1.1 Linux Distributions
- 1.1.2 Linux Interfaces
- 1.1.3 Command Shells
- 1.1.4 Bash Characteristics and Syntax
- 1.1.5 Basic Bash Commands
- 1.1.6 Bash Command Strategies
- 1.1.7 Interface Login Elements
- 1.1.8 Documentation and Manual Pages
- 1.1.9 Man Pages
- 1.1.10 Command Help
- 1.1.11 Lab: Get Help in Linux
- 1.1.12 The CompTIA Troubleshooting Methodology
- 1.1.13 Troubleshooting Methodology
- 1.1.14 Lesson Review

1.2 Use Linux Utilities

- 1.2.1 Vim and nano
- 1.2.2 Use Vim and nano
- 1.2.3 Lab: Create a File with Vim
- 1.2.4 Lab: Modify a File with Vim
- 1.2.5 Lab: Use the nano Editor
- 1.2.6 su and sudo Commands
- 1.2.7 Live Lab: Exploring The Linux Environment
- 1.2.8 Common Directories in Linux
- 1.2.9 Lesson Review

1.3 Module Quiz

2.0 Administering Users and Groups

Module 2.0 Introduction

2.1 Manage User Accounts

- 2.1.1 User Account Concepts
- 2.1.2 User Configuration Files
- 2.1.3 User Account Creation
- 2.1.4 Lab: Create a User Account
- 2.1.5 User Account Modification
- 2.1.6 Lab: Rename a User Account
- 2.1.7 Lab: Delete a User
- 2.1.8 User Management Command Scripts
- 2.1.9 Account Configuration Commands
- 2.1.10 User Login Commands
- 2.1.11 Managing User Passwords
- 2.1.12 Lab: Change Your Password
- 2.1.13 Troubleshooting User Login Issues
- 2.1.14 Live Lab: Manage User Accounts Localization
- 2.1.15 Lesson Review

2.2 Manage Group Accounts

- 2.2.1 Group Configuration Files
- 2.2.2 Group Management Commands
- 2.2.3 Managing Groups
- 2.2.4 Lab: Rename and Create Groups
- 2.2.5 Lab: Add Users to a Group
- 2.2.6 Troubleshooting User and Group Account Issues
- 2.2.7 Scripting Group Account Commands
- 2.2.8 Lab: Delete a Group and Users
- 2.2.9 Lab: Remove a User From a Group
- 2.2.10 Lab: Remove a User from All Groups
- 2.2.11 Live Lab: Manage Group Accounts
- 2.2.12 Lesson Review

2.3Modify User Configurations

- 2.3.1 User and System Accounts
- 2.3.2 User Shell Customization
- 2.3.3 User Profile Templates
- 2.3.4 Shell and Environment Variables
- 2.3.5 Declaring Variables
- 2.3.6 Command Aliases
- 2.3.7 Command History
- 2.3.8 User Password Settings
- 2.3.9 Lesson Review

2.4 Escalate Privileges

- 2.4.1 Privilege Escalation Concepts
- 2.4.2 Privilege Escalation Using su
- 2.4.3 Lab: Switch Users
- 2.4.4 Privilege Escalation Using sudo
- 2.4.5 Additional sudo Options
- 2.4.6 Privilege Elevation with sudo and visudo
- 2.4.7 Lab: Use sudo
- 2.4.8 Lab: Use visudo
- 2.4.9 PolicyKit Rules
- 2.4.10 Troubleshooting Privilege Escalation Scenarios
- 2.4.11 Live Lab: Configure And Troubleshoot Privilege Escalation
- 2.4.12 Lesson Review

2.5 Module Quiz

3.0 Configuring Permissions

Module 3.0 Introduction

3.1 Configure Standard Linux Permissions

- 3.1.1 Permissions and Access in Linux
- 3.1.2 View Permissions
- 3.1.3 Absolute and Symbolic Modes
- 3.1.4 Default Permissions
- 3.1.5 Configure Ownership
- 3.1.6 Configure Attributes
- 3.1.7 Troubleshoot Access Issues
- 3.1.8 Live Lab: Configure Standard Linux Permissions
- 3.1.9 Lesson Review

3.2 Configure Special Linux Permissions

- 3.2.1 User ID and Group ID Concepts
- 3.2.2 Setting Special Permissions
- 3.2.3 Lab: Set the SUID Bit
- 3.2.4 Lab: Remove SUID and SGID Permissions
- 3.2.5 The Sticky Bit
- 3.2.6 Set the Sticky Bit Permissions
- 3.2.7 Troubleshooting Special Permissions Access
- 3.2.8 Live Lab: Set Special Linux Permissions
- 3.2.9 Lesson Review

3.3 Configure Access Control Lists

- 3.3.1 Access Control List Concepts
- 3.3.2 Configure Access Control Lists on Files
- 3.3.3 Using ACLs
- 3.3.4 Live Lab: Configure Access Control Lists
- 3.3.5 Troubleshooting ACL Issues
- 3.3.6 Using Default ACLs
- 3.3.7 Applied Live Lab: Manage Identity And Access Control
- 3.3.8 Lesson Review

3.4 Module Quiz

4.0 Implementing File Management

Module 4.0 Introduction

4.1 Navigate the Linux File System

- 4.1.1 Linux File Organization
- 4.1.2 Key Directories
- 4.1.3 File Metadata
- 4.1.4 Absolute and Relative Paths
- 4.1.5 File Links
- 4.1.6 Lab: Create a Hard Link
- 4.1.7 Lab: Create a Symbolic Link
- 4.1.8 Search Commands
- 4.1.9 Finding Files
- 4.1.10 File Manipulation Commands
- 4.1.11 Lesson Review

4.2 Apply File Management Commands

- 4.2.1 Directory Navigation
- 4.2.2 Directory Modification
- 4.2.3 Lab: Create Directories
- 4.2.4 File Relocation and Display
- 4.2.5 Lab: Move Files
- 4.2.6 Directory and File Removal
- 4.2.7 Lab: Delete Files
- 4.2.8 Lab: Delete Directories
- 4.2.9 File Contents Display Commands
- 4.2.10 String Display and Searching
- 4.2.11 Lab: Use grep
- 4.2.12 Redirectors
- 4.2.13 Use Piping
- 4.2.14 Command Modifiers
- 4.2.15 Live Lab: Use File Management Commands
- 4.2.16 Lesson Review

4.3 Module Quiz

4.4 Checkpoint Review

5.0 Authoring Files

Module 5.0 Introduction

5.1 Edit Files

- 5.1.1 Configuration File Concepts
- 5.1.2 Vim
- 5.1.3 Vim Basics
- 5.1.4 nano
- 5.1.5 Use nano
- 5.1.6 Gedit
- 5.1.7 Live Lab: Edit Files And Write A Backup Script
- 5.1.8 Lesson Review

5.2 Manage Files

- 5.2.1 Archiving and Extracting Files with tar
- 5.2.2 Using tar to Archive and Compress Files
- 5.2.3 Lab: Create a Compressed tar File
- 5.2.4 Using tar to Extract Files
- 5.2.5 Lab: Extract from tar Files
- 5.2.6 Copy In/Copy Out
- 5.2.7 Using cpio
- 5.2.8 File Compression Concepts
- 5.2.9 File Compression with tar
- 5.2.10 File Integrity
- 5.2.11 Check File Integrity
- 5.2.12 Live Lab: Compress Backup And Restore Files
- 5.2.13 File Modification with dd
- 5.2.14 Data Recovery with ddrescue
- 5.2.15 Applied Live Lab: Troubleshoot File Management
- 5.2.16 Challenge Live Lab: Securely Manage Files
- 5.2.17 Lesson Review

5.3 Module Quiz

6.0 Deploying Software

Module 6.0 Introduction

6.1 Administer Software with Package Managers

- 6.1.1 Package Management Concepts
- 6.1.2 Manage Software Packages
- 6.1.3 Package Manager Tools
- 6.1.4 Software Installation and Updates
- 6.1.5 Install Packages with DNF
- 6.1.6 Managing Debian Packages
- 6.1.7 Lab: Use DNF to Install an RPM Package
- 6.1.8 Software Configuration
- 6.1.9 Software Removal
- 6.1.10 Lab: Use DNF to Remove an RPM Package
- 6.1.11 Lab: Use apt
- 6.1.12 Language-Specific Package Managers
- 6.1.13 Troubleshooting Software Dependency Issues
- 6.1.14 Lesson Review

6.2 Acquire and Use Software

- 6.2.1 Software Sources
- 6.2.2 Repositories
- 6.2.3 Troubleshooting Repository Misconfigurations
- 6.2.4 Package Queries
- 6.2.5 Sandboxed Software
- 6.2.6 Using snaps And snapd
- 6.2.7 Install and Run an Application Using flatpak
- 6.2.8 Customizing flatpak
- 6.2.9 Live Lab: Configure And Manage Software
- 6.2.10 Lesson Review

6.3 Module Quiz

7.0 Administering Storage

Module 7.0 Introduction

7.1 Deploy Standard Storage

- 7.1.1 Linux Storage Concepts
- 7.1.2 Hard Disk Drive Deployments
- 7.1.3 Lab: Use lsblk
- 7.1.4 Types of Partitions
- 7.1.5 Partitions on the Drive
- 7.1.6 Create an MBR Primary Partition
- 7.1.7 Partition Management
- 7.1.8 Filesystems on a Partition
- 7.1.9 Lab: Format a Hard Disk with ext4
- 7.1.10 Filesystem Management
- 7.1.11 Swap Space and Virtual Memory
- 7.1.12 Lab: Create a Swap Area
- 7.1.13 Live Lab: Deploy Standard Storage
- 7.1.14 Lesson Review

7.2 Deploy Logical Volume Management

- 7.2.1 Logical Volume Manager Storage
- 7.2.2 Create Physical Volumes and Volume Groups
- 7.2.3 Create and Modify Logical Volumes
- 7.2.4 Lab: Create a Logical Volume
- 7.2.5 Logical Volume Deployments
- 7.2.6 Live Lab: Deploy Logical Volume Manager Lvm
- 7.2.7 Lesson Review

7.3 Mount Storage

- 7.3.1 Manually Testing Mount
- 7.3.2 Mounting & Unmounting LVM Partitions
- 7.3.3 Testing the Storage
- 7.3.4 Automatically Mounting New Storage
- 7.3.5 Adding Entries to /etc/fstab
- 7.3.6 Disk Performance
- 7.3.7 Maintaining File Systems
- 7.3.8 Scheduling Input/Output Operations
- 7.3.9 Filesystem Issues
- 7.3.10 Troubleshooting Device Issues
- 7.3.11 Lesson Review

7.4 Manage Other Storage Options

- 7.4.1 Linux Unified Key Setup 2
- 7.4.2 Redundant Array of Independent Disks (RAID)
- 7.4.3 Network-Attached Storage
- 7.4.4 Storage Area Network
- 7.4.5 Troubleshooting Capacity Issues
- 7.4.6 Troubleshooting Storage Performance
- 7.4.7 Troubleshoot Storage Problems
- 7.4.8 Lab: Determine Disk Free Space
- 7.4.9 Lab: Determine the Directory Size
- 7.4.10 Setting and Troubleshooting Disk Quotas
- 7.4.11 Lab: Find the User Quota
- 7.4.12 Lab: Turn Quotas On
- 7.4.13 Lab: Turn Quotas Off
- 7.4.14 Applied Live Lab: Configure Storage
- 7.4.15 Lesson Review

7.5 Module Quiz

8.0 Managing the Linux Kernel and Devices

Module 8.0 Introduction

8.1 Gather Hardware Information

- 8.1.1 Server Architectures
- 8.1.2 Hardware Reporting Tools
- 8.1.3 Viewing Hardware Information
- 8.1.4 Hardware Monitoring Tools
- 8.1.5 Devices in the /dev Directory
- 8.1.6 The IPMI Tool
- 8.1.7 Central Processing Unit (CPU) Information
- 8.1.8 Memory Information
- 8.1.9 Troubleshoot CPU & Memory Issues
- 8.1.10 Lab: View /proc Information
- 8.1.11 Memory Exhaustion
- 8.1.12 Lesson Review

8.2 Manage Processes

- 8.2.1 Process Concepts
- 8.2.2 Process Information Commands
- 8.2.3 Viewing Process Information with ps
- 8.2.4 Viewing Process Information with top and htop
- 8.2.5 Lab: View Process Information
- 8.2.6 Performance Analysis
- 8.2.7 Detailed Process Information
- 8.2.8 Process Management
- 8.2.9 Process Manipulation
- 8.2.10 Termination Signals and Zombie Processes
- 8.2.11 Lab: Stop a Zombie Process
- 8.2.12 Lab: Use pidof
- 8.2.13 Prioritizing CPU Processes
- 8.2.14 Job Control
- 8.2.15 Troubleshooting Process Issues
- 8.2.16 Live Lab: Manage Processes
- 8.2.17 Lesson Review

8.3 Manage the Linux Kernel

- 8.3.1 The Linux Kernel
- 8.3.2 Kernel Updates and Parameters
- 8.3.3 Kernel Module Management
- 8.3.4 Lab: Insert a Module into the Kernel
- 8.3.5 Lab: Remove a Module from the Kernel
- 8.3.6 Kernel Panic
- 8.3.7 Troubleshooting Kernel Issues
- 8.3.8 Troubleshooting Application Crashes
- 8.3.9 Lesson Review

8.4 Module Quiz

8.5 Checkpoint Review

9.0 Maintaining Services

Module 9.0 Introduction

9.1 Configure Services with systemd

- 9.1.1 System Initialization
- 9.1.2 systemd Unit Files
- 9.1.3 Service Unit Files
- 9.1.4 Timer Unit Files
- 9.1.5 Mount Unit Files
- 9.1.6 Target Unit Files
- 9.1.7 Services and Daemons
- 9.1.8 Start, Stop, and Reload Services
- 9.1.9 Enable, Disable, and Mask Services
- 9.1.10 systemctl Commands
- 9.1.11 Lab: Manage System Services
- 9.1.12 Service Failures
- 9.1.13 Lab: Enable System Services at Boot
- 9.1.14 Live Lab: Manage Systemd And Services
- 9.1.15 Lesson Review

9.2 Configure Common System Services

- 9.2.1 System Service Configuration Basics
- 9.2.2 Network Time
- 9.2.3 Synchronize Time with NTP
- 9.2.4 Task Scheduling
- 9.2.5 Webserver Configuration
- 9.2.6 Network File System Configuration
- 9.2.7 Samba File Sharing Configuration
- 9.2.8 Printing Configuration
- 9.2.9 Live Lab: Deploy Services
- 9.2.10 Lesson Review

9.3 Apply Localization Settings

- 9.3.1 Output Modification
- 9.3.2 Configuring Locale Settings
- 9.3.3 System Localization
- 9.3.4 Configuring Time Zone Settings
- 9.3.5 Troubleshooting Time Zone Issues
- 9.3.6 Applied Live Lab: Manage Processes And Configure Authentication
- 9.3.7 Challenge Live Lab: Manage Servers
- 9.3.8 Lesson Review

9.4 Module Quiz

10.0 Configuring Network Settings

Module 10.0 Introduction

10.1 Identify Network Fundamentals

- 10.1.1 TCP/IP and Network Devices
- 10.1.2 IP Addresses
- 10.1.3 Network Ports
- 10.1.4 Lesson Review

10.2 Manage Network Settings

- 10.2.1 Network Interface Configuration
- 10.2.2 NetworkManager
- 10.2.3 Using NetworkManager
- 10.2.4 Netplan
- 10.2.5 Network Interface Errors
- 10.2.6 Network Configuration Files
- 10.2.7 Network Tools
- 10.2.8 IP Address Assignments
- 10.2.9 Configure DHCP Clients
- 10.2.10 Name Resolution Configuration
- 10.2.11 Configure DNS Settings
- 10.2.12 Testing Name Resolution
- 10.2.13 Troubleshooting Name Resolution Failures
- 10.2.14 Lab: Use nslookup
- 10.2.15 Email Service Configuration
- 10.2.16 Live Lab: Configure Network Settings
- 10.2.17 Lesson Review

10.3 Set Up Remote Administrative Access

- 10.3.1 Secure Shell Configuration
- 10.3.2 Key-based Authentication
- 10.3.3 Remote Tools for the Command-line Interface
- 10.3.4 Testing Remote Systems
- 10.3.5 Data Transfer Tools
- 10.3.6 Remote Tools for the Graphical User Interface
- 10.3.7 Live Lab: Configure Remote Administration
- 10.3.8 Lesson Review

10.4 Configure the Firewall

- 10.4.1 Firewall Use Cases
- 10.4.2 Key Firewall Features
- 10.4.3 Configure the Firewall
- 10.4.4 Firewall Management with iptables and nftables Tools
- 10.4.5 Firewall Management with firewalld
- 10.4.6 Configure firewalld
- 10.4.7 Firewall Management with Uncomplicated Firewall
- 10.4.8 Live Lab: Configure A Firewall
- 10.4.9 Network Address Translation
- 10.4.10 Troubleshooting Common Firewall Issues
- 10.4.11 Lesson Review

10.5 Monitor Network Traffic

- 10.5.1 Basic Network Monitoring Tools
- 10.5.2 Troubleshooting High Network Latency
- 10.5.3 Connectivity Testing with Path Tools
- 10.5.4 Using Network Troubleshooting Tools - Ping
- 10.5.5 Using Network Troubleshooting Tools - Traceroute
- 10.5.6 Lab: Find Path Information
- 10.5.7 Connectivity Testing with Socket Tools
- 10.5.8 Network Traffic Analysis
- 10.5.9 Live Lab: Intercept Network Traffic
- 10.5.10 Network Mapping
- 10.5.11 Troubleshoot Connectivity Issues
- 10.5.12 Applied Live Lab: Configure Networking
- 10.5.13 Lesson Review

10.6 Module Quiz

11.0 Securing a Linux System

Module 11.0 Introduction

11.1 Harden a Linux System

- 11.1.1 Security Goals
- 11.1.2 Hardening Servers
- 11.1.3 Data Integrity
- 11.1.4 Secure File Destruction
- 11.1.5 Identity and Access Management (IAM)
- 11.1.6 Configure Public Key Authentication
- 11.1.7 Authentication Methods
- 11.1.8 Configuring VPN Access and Authentication
- 11.1.9 Centralized Authentication Methods
- 11.1.10 Pluggable Authentication Modules (PAM)
- 11.1.11 Password Management with Pluggable Authentication Modules (PAM)
- 11.1.12 Live Lab: Harden A Linux System
- 11.1.13 Lesson Review

11.2 Monitor and Audit Log Files

- 11.2.1 Compliance Procedures
- 11.2.2 auditd Configuration
- 11.2.3 Data Sources for Monitoring
- 11.2.4 journalctl Configuration
- 11.2.5 rsyslog Configuration
- 11.2.6 Log Parsing and Forwarding
- 11.2.7 Viewing Log Files
- 11.2.8 Lab: View Log Files
- 11.2.9 logrotate Configuration
- 11.2.10 Vulnerability Scanning
- 11.2.11 Lesson Review

11.3 Manage Encryption and Certificates

- 11.3.1 Encryption Concepts
- 11.3.2 Encryption Types
- 11.3.3 Hashing
- 11.3.4 Data Protection States
- 11.3.5 Certificate Use Cases
- 11.3.6 Public Key Infrastructure (PKI) Certificate Management
- 11.3.7 Live Lab: Manage Certificates With Openssl
- 11.3.8 Lesson Review

11.4 Implement Mandatory Access Controls

- 11.4.1 SELinux Concepts
- 11.4.2 SELinux Cons
- 11.4.3 SELinux Settings
- 11.4.4 Managing SELinux
- 11.4.5 SELinux Policy Types
- 11.4.6 SELinux Troubleshooting Tools
- 11.4.7 Live Lab: Configure Selinux
- 11.4.8 AppArmor
- 11.4.9 Applied Live Lab: Configure System Security
- 11.4.10 Challenge Live Lab: Secure A Network
- 11.4.11 Lesson Review

11.5 Module Quiz

12.0 Installing Linux

Module 12.0 Introduction

12.1 Summarize the Linux Boot Process

- 12.1.1 Boot Sources
- 12.1.2 Device Initialization Firmware
- 12.1.3 The Bootloader
- 12.1.4 Use GRUB2
- 12.1.5 Lab: Set the GRUB Timeout
- 12.1.6 Live Lab: Manage Grub2
- 12.1.7 Loading the Kernel
- 12.1.8 Boot Process Steps
- 12.1.9 Troubleshooting Common Boot Problems
- 12.1.10 Live Lab: Systemd Boot Options
- 12.1.11 Lesson Review

12.2 Deploy Linux Virtualization

- 12.2.1 Virtual Machine Concepts
- 12.2.2 Virtual Machine Management
- 12.2.3 Virtual Machine Deployment
- 12.2.4 Virtual Machine Management Commands
- 12.2.5 Configure Virtualization Settings
- 12.2.6 Virtual Networks
- 12.2.7 Configuring Networking on a Virtual Machine
- 12.2.8 Lesson Review

12.3 Deploy Linux

- 12.3.1 Physical and Virtual Linux Deployments
- 12.3.2 The Linux Installation Process
- 12.3.3 Preparing to Install Linux
- 12.3.4 Partition the Drive and Install Linux
- 12.3.5 Live Lab: Deploy Linux On A Vm
- 12.3.6 The Graphical User Interface
- 12.3.7 Post-Deployment Steps
- 12.3.8 Applied Live Lab: Install Linux On A New Client
- 12.3.9 Lesson Review

12.4 Module Quiz

12.5 Checkpoint Review

13.0 Scripting with Bash and Python

Module 13.0 Introduction

13.1 Write Basic Bash Scripts

- 13.1.1 The Purpose of Scripts
- 13.1.2 Script Editors and Naming Conventions
- 13.1.3 Script Comments
- 13.1.4 Write and Execute a Simple Script
- 13.1.5 Run Scripts in Linux
- 13.1.6 Executing and Sourcing a Script
- 13.1.7 Script Syntax
- 13.1.8 Lesson Review

13.2 Implement Shell Script Elements

- 13.2.1 Built-in Shell Commands
- 13.2.2 Script Components
- 13.2.3 Exit Codes
- 13.2.4 Common Script Utilities
- 13.2.5 File Manipulation Commands in Scripts
- 13.2.6 Standard Stream Redirection
- 13.2.7 Lesson Review

13.3 Execute Scripts

- 13.3.1 Variables Concepts
- 13.3.2 Modifying Variables
- 13.3.3 Variables in Use
- 13.3.4 Field Separator Variables
- 13.3.5 Conditionals
- 13.3.6 Control Statements in Bash Scripts
- 13.3.7 Loops
- 13.3.8 For Loops
- 13.3.9 While and Until Loops
- 13.3.10 Shell Parameter Expansion
- 13.3.11 Arrays and Expansions
- 13.3.12 Operators
- 13.3.13 Best Practices in Scripting
- 13.3.14 Live Lab: Use Scripting Elements
- 13.3.15 Lesson Review

13.4 Write Basic Python Code

- 13.4.1 Python Concepts
- 13.4.2 Python Installation
- 13.4.3 Python Code Development
- 13.4.4 Python Virtual Environments
- 13.4.5 Modules, Packages, and Libraries
- 13.4.6 Writing a Python Program
- 13.4.7 Generating Python Code with Artificial Intelligence (AI)
- 13.4.8 Lesson Review

13.5 Manage Version Control with Git

- 13.5.1 Git Concepts
- 13.5.2 Installing Git
- 13.5.3 Code Management with Git
- 13.5.4 Using a Git Repository
- 13.5.5 Local Git Repository Scenario
- 13.5.6 Remote Git Repository Scenario
- 13.5.7 Lab: Use Git
- 13.5.8 Live Lab: Manage Version Control With Git
- 13.5.9 Applied Live Lab: Manage Scripts
- 13.5.10 Lesson Review

13.6 Module Quiz

14.0 Managing Containers in Linux

Module 14.0 Introduction

14.1 Manage Container Administration, Storage, and Networking

- 14.1.1 Container Concepts
- 14.1.2 Container Operations
- 14.1.3 Container Deployment
- 14.1.4 Customizing Containers
- 14.1.5 Container Administration
- 14.1.6 Managing Containers
- 14.1.7 Container Storage
- 14.1.8 Container Networking
- 14.1.9 Live Lab: Deploy Containers
- 14.1.10 Lesson Review

14.2 Implement Container Orchestration

- 14.2.1 Container Orchestration Concepts
- 14.2.2 Docker Compose
- 14.2.3 Docker Swarm
- 14.2.4 Kubernetes
- 14.2.5 Container Orchestration Solutions
- 14.2.6 Lesson Review

14.3 Module Quiz

15.0 Automating Infrastructure Management

Module 15.0 Introduction

15.1 Implement Automation

- 15.1.1 Automation Concepts
- 15.1.2 Automation
- 15.1.3 Automation Use Cases
- 15.1.4 Begin Using Automation
- 15.1.5 Lesson Review

15.2 Apply Orchestration

- 15.2.1 DevOps Concepts
- 15.2.2 Orchestration
- 15.2.3 Infrastructure as Code
- 15.2.4 File Types in Infrastructure as Code
- 15.2.5 Configuration Management
- 15.2.6 Ansible
- 15.2.7 Live Lab: Configure A System With Ansible
- 15.2.8 Puppet
- 15.2.9 OpenTofu
- 15.2.10 Challenge Live Lab: Deploy And Configure A Linux Server
- 15.2.11 Lesson Review

15.3 Module Quiz

A.0 Linux+ XK0-006 Practice Exams

A.1 Prepare for CompTIA Linux+ Certification

- A.1.1 Why Should I Take a Certification Exam?
- A.1.2 Exam Details for Linux+ (XK0-006)
- A.1.3 How to Take the Exam
- A.1.4 Tips for Taking the Exam

A.2 CompTIA Linux+ XK0-006 Practice Materials

- A.2.1 Exam Practice 1: System Management
- A.2.2 Exam Practice 2: Services and User Management
- A.2.3 Exam Practice 3: Security
- A.2.4 Exam Practice 4: Automation, Orchestration, and Scripting
- A.2.5 Exam Practice 5: Troubleshooting
- A.2.6 Skills Practice: Competency in Linux
- A.2.7 Practice Test: CompTIA Linux+ XK0-006

Register for this class by visiting us at:
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NASBA CPE details are provided on the following pages.

NASBA Information

Level: Advanced
Advanced Preparation:
Attendance Requirement: To be awarded the full credit hours, you must sign in and attend the entire course.
Recommended Field(s) of Study:
Recommended CPEs: 39.00

Policies: Course Registration, Cancellation, Refund, and Complaint Resolution
For more information regarding administrative policies such as complaint and program cancellation policies, please contact our offices at 800-639-3535 or visit us at: **www.tcworkshop.com**

Official National Registry Statement:
The Computer Workshop is registered with the National Association of State Boards of Accountancy (NASBA) as a sponsor of continuing professional education on the National Registry of CPE Sponsors. State boards of accountancy have final authority on the acceptance of individual courses for CPE credits. Complaints regarding registered sponsors may be submitted to the National Registry of CPE Sponsors through its website: www.nasbaregistry.org

NOTE: Since our information is in multiple places on our website or in PDF format that is sent to clients, we have provided our normal course content with the NASBA Information added along with links to our policy page on the web. We will add our name to the Official National Registry Statement after we are approved.