New Horizons®

CompTIA Linux+ Certification (Exam XK0-005)

Summary

Length: 40 hours Level: Experienced

CompTIA Linux+ validates the skills administrators need to secure the enterprise, power the cloud and keep systems running. The new certification ensures that IT professionals, software developers, cybersecurity engineers and penetration testers have these necessary skills to support today's tech systems. This course will prepare you to take the Linux+ Certification Exam (XK0-005). This course may earn you a Credly badge.

Learning Objectives

After course completion, you will be able to:

Describe history and features of Linux
Manage files and directories
Describe foundational concepts of documentation
Desbribe foundational concepts of troubleshooting
Implement identity management
Configure and execute remote connectivity for system management
Analyze and troubleshoot user access and file permissions
Apply the appropriate access controls
Create simple shell scripts to automate common tasks
Build and install software
Manage software configurations
Summarize Linux fundamentals
Use the appropriate networking tools or configuration files
Analyze and troubleshoot storage issues
Analyze and troubleshoot central processing unit (CPU) and memory issues
Configure and use the appropriate processes and services
Use of security best practices in a Linux environment
Use systemd to diagnose and resolve common problems with a Linux system
Analyze and troubleshoot network resource issues
Implement and configure firewalls
Summarize common infrastructure as code technologies
Perform basic version control using Git
Perform basic container operations
Summarize container, cloud, and orchestration concepts

Course Outline

1. ### Lesson 1: Introducing Linux

   Topic 1A: Identify Linux Characteristics
   Topic 1B: Understand Bash Interaction with Linux
   Topic 1C: Use Help in Linux
   Topic 1D: Identify the Linux Troubleshooting Methodology

2. ### Lesson 2: Administering Users and Groups

   Topic 2A: Manage User Accounts
   Topic 2B: Manage Group Accounts
   Topic 2C: Configure Privilege Escalation
   Topic 2D: Troubleshoot User and Group Issues

3.   **Lesson 3: Configuring Permissions**

     Topic 3A: Configure Standard Linux Permissions
     Topic 3B: Configure Special Linux Permissions
     Topic 3C: Configure Access Control Lists

4.   **Lesson 4: Implementing File Management**

     Topic 4A: Understand the Linux File System
     Topic 4B: Use File Management Commands
     Topic 4C: Find File Locations

5.   **Lesson 5: Authoring Text Files**

     Topic 5A: Edit Text Files
     Topic 5B: Manage Text Files

6.   **Lesson 6: Managing Software**

     Topic 6A: Understand Software Management
     Topic 6B: Manage RPM Software Packages and Repositories
     Topic 6C: Manage Debian-based Software Packages and Repositories
     Topic 6D: Compile from Source Code
     Topic 6E: Acquire Software
     Topic 6F: Run Software in a Sandbox

7.   **Lesson 7: Administering Storage**

     Topic 7A: Understand Storage
     Topic 7B: Deploy Storage
     Topic 7C: Manage Other Storage Options
     Topic 7D:Troubleshoot Storage

8.   **Lesson 8: Managing Devices, Processes, Memory, and the Kernel**

     Topic 8A: Gather Hardware Information
     Topic 8B: Manage Processes
     Topic 8C: Manage Memory
     Topic 8D: Manage the Linux Kernel

9.   **Lesson 9: Managing Services**

     Topic 9A: Manage System Services
     Topic 9B: Configure Common System Services
     Topic 9C: Configure Localization Settings

10. **Lesson 10: Configuring Network Settings**

     Topic 10A: Understand Network Fundamentals
     Topic 10B: Manage Network Settings
     Topic 10C: Configure Remote Administrative Access
     Topic 10D: Troubleshoot the Network

11. **Lesson 11: Configuring Network Security**

     Topic 11A: Configure the Firewall
     Topic 11B: Monitor Network Traffic

12. **Lesson 12: Managing Linux Security**

Topic 12A: Harden a Linux System
Topic 12B: Manage Certificates
Topic 12C: Understand Authentication
Topic 12D: Configure SELinux or AppArmor

13. **Lesson 13: Implementing Simple Scripts**

Topic 13A: Understand Bash Scripting Basics
Topic 13B: Use Shell Script Elements
Topic 13C: Implement Scripts with Logical Controls

14. **Lesson 14: Using Infrastructure as Code**

Topic 14A: Understand Infrastructure as Code
Topic 14B: Implement Orchestration
Topic 14C: Manage Version Control with Git

15. **Lesson 15: Managing Containers in Linux**

Topic 15A: Understand Containers
Topic 15B: Deploy Containers
Topic 15C: Understand Virtualization Concepts

16. **Lesson 16: Installing Linux**

Topic 16A: The Linux Boot Process
Topic 16B: Modify Boot Settings
Topic 16C: Deploy Linux

Audience

This course is suited for those whose job role could be Linux Administrator, Junior Cloud Engineer, Junior DevOps Support Engineer, Technical Support Specialist, Systems Administrator, Network Administrator, Web Administrator/ Developer, Cybersecurity Engineer, Linux Engineer.

Prerequisites

It is recommended that prior to taking this course, you have taken CompTIA A+, CompTIA Network+ and have 12 months experience as a Junior Linux Engineer