



COURSE OUTLINE

Course Name: CompTIA Linux+

DURATION	SKILLS LEVEL	DILIVERY METHOD	TRAINING CREDITS	TECHNOLOGY
5 Days	Introduction	Instructor-Led	N/A	Linux/Open Source

Course Description:

For many years, Linux has dominated the server install base in the business world—and it will continue to do so in the foreseeable future. Linux's popularity has led to a greater need for information technology (IT) professionals who can manage servers that run some form of the Linux kernel.

The CompTIA® Linux+® course builds on your existing experience with systems operations and administration to provide you with the knowledge and skills required to configure, manage, operate, and troubleshoot a Linux environment by using security best practices, scripting, and automation.

Prerequisites:

- To ensure your success in this course, you should have at least foundational experience with general systems administration procedures, some hands-on exposure to one or more Linux distributions, as well as knowledge of computing hardware and basic networking and cybersecurity concepts.
- You can obtain this level of skills and knowledge by taking the following official CompTIA courses: The Official CompTIA® A+® Core 1 and 2 Student Guide (Exams 220-1001 and 220-1002); The Official CompTIA® Network+® Student Guide (Exam N10-007); The Official CompTIA® Security+® Student Guide (Exam SY0-501)

Target Audience:

- This course is designed for IT professionals whose primary job responsibility is the management of servers and other devices running the Linux operating system.
- A typical student in this course should have at least nine months of hands-on Linux experience and at least one and a half years of IT experience in other computing environments. The target student should wish to expand their skillset to support their career in Linux system administration and operation.

Learning Objectives:

On completion of the course, delegates will be able to:

- Perform basic Linux tasks.
- Manage users and groups.
- Manage permissions and ownership.
- Manage storage.
- Manage files and directories.
- Manage kernel modules.
- Manage the Linux boot process.
- Manage system components.
- Manage devices.
- Manage networking.
- Manage packages and software.
- Secure Linux systems.
- Write and execute Bash shell scripts.
- Automate tasks.
- Plan and perform a Linux installation.

Course Outline:

Lesson 1: Performing Basic Linux Tasks

- Topic A: Identify the Linux Design Philosophy
- Topic B: Enter Shell Commands
- Topic C: Get Help with Linux

Lesson 2: Managing Users and Groups

- Topic A: Assume Superuser Privileges
- Topic B: Create, Modify, and Delete Users
- Topic C: Create, Modify, and Delete Groups
- Topic D: Query Users and Groups
- Topic E: Configure Account Profiles

Lesson 3: Managing Permissions and Ownership

- Topic A: Modify File and Directory Permissions
- Topic B: Modify File and Directory Ownership
- Topic C: Configure Special Permissions and Attributes
- Topic D: Troubleshoot Permissions Issues

Lesson 4: Managing Storage

- Topic A: Create Partitions
 - Topic B: Manage Logical Volumes
 - Topic C: Mount File Systems
 - Topic D: Manage File Systems
 - Topic E: Navigate the Linux Directory Structure
 - Topic F: Troubleshoot Storage Issues
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Lesson 5: Managing Files and Directories

- Topic A: Create and Edit Text Files
- Topic B: Search for Files
- Topic C: Perform Operations on Files and Directories
- Topic D: Process Text Files
- Topic E: Manipulate File Output

Lesson 6: Managing Kernel Modules

- Topic A: Explore the Linux Kernel
- Topic B: Install and Configure Kernel Modules
- Topic C: Monitor Kernel Modules

Lesson 7: Managing the Linux Boot Process

- Topic A: Configure Linux Boot Components Associated Exam and Certification:
- Topic B: Configure GRUB 2

Lesson 8: Managing System Components

- Topic A: Configure Localization Options
- Topic B: Configure GUIs
- Topic C: Manage Services
- Topic D: Troubleshoot Process Issues
- Topic E: Troubleshoot CPU and Memory Issues

Lesson 9: Managing Devices

- Topic A: Identify the Types of Linux Devices
- Topic B: Configure Devices
- Topic C: Monitor Devices
- Topic D: Troubleshoot Hardware Issues

Lesson 10: Managing Networking

- Topic A: Identify TCP/IP Fundamentals
- Topic B: Identify Linux Server Roles
- Topic C: Connect to a Network
- Topic D: Configure DHCP and DNS Client Services
- Topic E: Configure Cloud and Virtualization Technologies
- Topic F: Troubleshoot Networking Issues

Lesson 11: Managing Packages and Software

- Topic A: Identify Package Managers
 - Topic B: Manage RPM Packages with YUM
 - Topic C: Manage Debian Packages with APT
 - Topic D: Configure Repositories
 - Topic E: Acquire Software
 - Topic F: Build Software from Source Code
 - Topic G: Troubleshoot Software Dependency Issues
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Lesson 12: Securing Linux Systems

- Topic A: Implement Cybersecurity Best Practices
- Topic B: Implement Identity and Access Management Methods
- Topic C: Configure SELinux or App Armor
- Topic D: Configure Firewalls
- Topic E: Implement Logging Services
- Topic F: Back Up, Restore, and Verify Data

Lesson 13: Working with Bash Scripts

- Topic A: Customize the Bash Shell Environment
- Topic B: Identify Scripting and Programming Fundamentals
- Topic C: Write and Execute a Simple Bash Script
- Topic D: Incorporate Control Statements in Bash Scripts

Lesson 14: Automating Tasks

- Topic A: Schedule Jobs
- Topic B: Implement Version Control Using Git
- Topic C: Identify Orchestration Concepts

Lesson 15: Installing Linux

- Topic A: Prepare for Linux Installation
- Topic B: Perform the Installation

Associated Exam and Certification:

This course will prepare students to take the CompTIA Linux+ exam XK0-004.

Successfully passing this exam will result in the attainment of the CompTIA Linux+ certification.

After completing this course students will receive a Netcampus course attendance certification.

Your CompTIA Linux+ certification is good for three years from the date of your exam .The CE program allows you to extend your certification in three-year intervals through activities and training that relate to the content of your certification.

Exams and Certifications

Notes and Annotations

What is Next

