

Official CompTIA Content
for Instructor-Led Training:

CompTIA Linux+ XK0-004

Official CompTIA Content for Instructor-Led Training is designed with the instructor in mind, providing insights and tools on how to successfully train learners pursuing their CompTIA Linux+ certification.

Overview

The Official CompTIA Linux+ Instructor and Student Guides (XK0-004) have been developed by CompTIA with input from instructors across the world. Rigorously evaluated by third-party subject matter experts to validate adequate coverage of the Linux+ XK0-004 exam objectives, the Official CompTIA Linux+ Instructor and Student Guides teach the essential skills needed to manage servers and other devices running the Linux operating system and prepares candidates to take the CompTIA Linux+ certification exam.

Official Content:

- The Official CompTIA Linux+ Instructor Guide (Exam XK0-004) – available in print and eBook
- The Official CompTIA Linux+ Student Guide (Exam XK0-004) – available in print and eBook
- CompTIA CHOICE Digital Learning Platform – included with purchase of print and eBook
- The Official CompTIA Linux+ CompTIA Labs (Exam XK0-004)

Why is Official CompTIA Content different?

- **For Exam Takers by the Exam Developer** - Official CompTIA Content is the only study material exclusively developed by CompTIA.
- **Designed for Instructors by Instructors** - Developed on the principle that “people learn best from other people,” the Official CompTIA Linux+ Guides are specifically designed for expert-facilitated delivery. More than 100 instructors were involved in the development of Linux+ Official Content.
- **Complete Library** - No other content library covers all exam objectives for all certifications.

Key Features and Benefits

- **Robust Assessment** - Practice questions for each lesson and a final assessment covering all lessons, more than 240 questions in total, are available to help students practice and demonstrate what they have learned.
- **Integrate Active Learning** - Each topic has at least one activity, enabling students to practice guidelines and procedures, as well as solidify understanding of the informational material presented in the course. Activities present a job-plausible scenario or job-realistic assignment and then provide step-by-step instructions for how to approach the problem at hand. Activities may also require the student to analyze sample data, engage in structured discussion or analyze case studies.
- **Alignment and Consistency Across Book, Labs and Assessment** - The book, labs and assessment all work together with a similar approach and voice ensuring that instructors and students have a cohesive, “single-sourced” solution for their Linux+ course. Activities within the book inform the classroom labs and the virtual labs designed for the course. Assessment are based on lessons in the book and includes a final cumulative assessment.

- **Engaging Video Program Developed Exclusively for CompTIA by ITProTV** - Videos developed exclusively for CompTIA provide short, engaging demonstrations of key activities in the course. The videos provide an alternative to hands-on demonstrations for virtual environments or for classrooms that do not have access to all equipment mentioned in the course.

Enhanced Learning Through CHOICE

The Official CompTIA Content Instructor and Student Guides and accompanying resources are delivered on the CompTIA CHOICE digital learning platform. The CompTIA CHOICE platform provides access to the following resources:

- **Classroom:** A link to the instructor’s classroom environment
- **eBook:** An interactive online version of the book, along with secure PDF and downloadable versions
- **Files:** Any course files available to download
- **Videos:** Brief videos, developed exclusively for CompTIA by ITProTV, provide demonstrations of key activities in the course
- **Assessment:** A series of different assessments for each lesson as well an overall self-assessment
- **Performance-based Questions:** Scenario-based interactive exercises to help students apply what they’ve learned
- **Checklists:** Step-by-step procedures for recurring IT tasks that are part of the course objectives and as post-class references
- **Links:** Helpful links to certification exam information, CompTIA’s IT Careers blog and additional resources for exam prep
- **Locker:** A resource allowing for secure file exchange with students

Labs

CompTIA Labs, hosted by Learn on Demand Systems, allow students to learn in actual software applications through a remote lab environment. Labs allow students to practice what they are learning using real, hands-on experiences. Students have access to the software environment for 6 months after a CompTIA Labs access key is redeemed, providing a fantastic post-class resource for students to practice their skills.

Labs Available

- Lesson 1: Performing Basic Linux Tasks
- Lesson 2: Managing Users and Groups
- Lesson 3: Managing Permissions and Ownership
- Lesson 4: Managing Storage
- Lesson 5: Managing Files and Directories
- Lesson 6: Managing Kernel Modules
- Lesson 7: Managing the Linux Boot Process
- Lesson 8: Managing System Components
- Lesson 9: Managing Devices
- Lesson 10: Managing Networking
- Lesson 11: Managing Packages and Software
- Lesson 12: Securing Linux Systems
- Lesson 13: Working with Bash Scripts
- Lesson 14: Automating Tasks
- Lesson 15: Installing Linux

Exam Prep with CertMaster Practice

CertMaster Practice for Linux+ includes performance-based questions that test the ability to solve problems in a simulated environment. CertMaster Practice builds confidence, and ensures students retain the material.

Course Overview

This course is for students who are preparing for CompTIA Linux+ certification exam XK0-004. Linux+ XK0-004 is now developed by CompTIA and offered as a single, performance-based exam.

Linux+ validates the necessary skills of IT professionals with hands-on experience configuring, monitoring, and supporting servers running the Linux OS. It is the right step for all early to mid-career IT professionals utilizing Linux-based systems, whether they are managing infrastructure, cloud workflows, or ensuring the cybersecurity of their organization. Linux+ also validates the critical Linux skills needed in cloud and cybersecurity.

Prerequisites

Students should have CompTIA A+, CompTIA Network+ certifications and preferably 9 – 12 months of Linux experience.

In this course, students will learn the background knowledge and skills necessary to administer, troubleshoot, install or maintain Linux. Concepts covered include:

- System Configuration
- The Command Line Interface
- Scripting Basics
- Network Settings and Services
- System Security

Course content summary

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

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

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



Job Roles

- Linux Administrator
- Systems Administrator
- Network Administrator
- Web Administrator
- Technical Support Specialist

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

Lesson 12: Securing Linux Systems

Topic A: Implement Cybersecurity Best Practices

Topic B: Implement Identity and Access Management Methods

Topic C: Configure SELinux or AppArmor

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

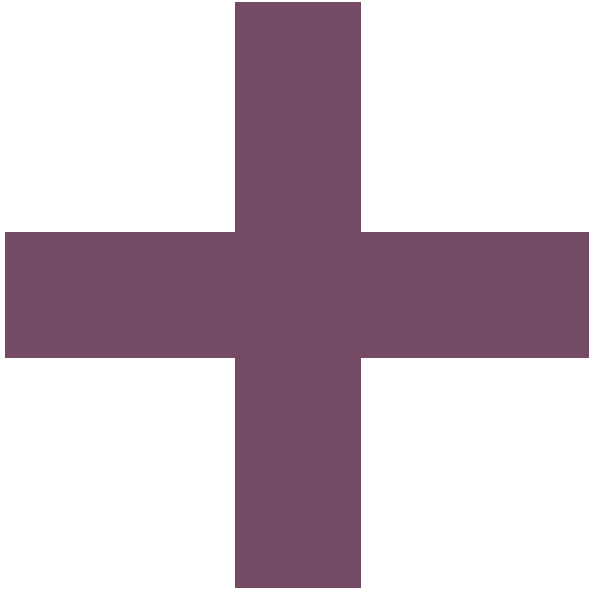
Topic B: Implement Version Control Using Git

Topic C: Identify Orchestration Concepts

Lesson 15: Installing Linux

Topic A: Prepare for Linux Installation

Topic B: Perform the Installation



Purchase Everything in One Place

Official CompTIA Content is available on the CompTIA Store at store.comptia.com, which means partners will be able to obtain Official CompTIA Content, CompTIA CertMaster products and exam vouchers all in one place.

Please contact your CompTIA business development representative for more information.