

Linux+

Course Description & Overview

SecureNinja's CompTIA Linux+ (XK0-005) certification training is designed to equip IT professionals with the essential skills needed to manage and maintain Linux systems in various environments, including on-premises, cloud, and hybrid infrastructures. This course provides a hands-on approach to learning Linux system administration, security, scripting, automation, and troubleshooting. Participants will gain expertise in configuring, operating, and securing Linux environments, ensuring they are well-prepared for real-world system administration challenges.

The course covers the latest Linux tools and technologies while aligning with industry best practices for modern IT operations, cybersecurity, and DevOps workflows. Upon completion, candidates will have the knowledge required to deploy and manage Linux-based infrastructures, automate administrative tasks, and troubleshoot system-related issues efficiently.

Why Choose CompTIA Linux+?

- Industry-Recognized Certification – A globally respected credential validating Linux administration skills.
- Vendor-Neutral Approach – Focuses on multiple distributions, including Ubuntu, CentOS, Debian, and Red Hat, providing flexibility in different work environments.
- Hands-On Learning – Emphasizes practical troubleshooting, scripting, and security measures to prepare candidates for real-world Linux administration.
- Cloud & Automation Focus – Covers topics such as containers, orchestration, and infrastructure as code, aligning with modern DevOps and cloud technologies.
- Career Advancement – Ideal for IT professionals seeking roles in system administration, cybersecurity, cloud computing, and DevOps engineering.

Topics Covered

- Linux System Management – Installation, package management, user permissions, file system structures, and process monitoring.
- Security & Hardening – Implementing firewalls, encryption, access control policies, and compliance measures.
- Scripting & Automation – Writing shell scripts, managing system logs, and utilizing automation tools like Ansible.
- Networking & Services – Configuring network interfaces, managing DNS, firewalls, and troubleshooting network connectivity.
- Containers & Cloud Integration – Deploying and managing Docker containers, Kubernetes, and virtualization technologies.
- Troubleshooting & Performance Monitoring – Diagnosing system errors, optimizing performance, and ensuring system reliability.

Who is it for?

- IT Professionals looking to expand their expertise in Linux administration.
- System Administrators managing Linux environments in enterprise or cloud settings.
- Cybersecurity Analysts securing Linux systems against threats and vulnerabilities.
- DevOps Engineers automating deployments, managing cloud-based infrastructures, and working with containers.
- Network Administrators needing Linux skills for server and network management.

Who Would Benefit?

- New IT professionals looking to build a strong foundation in Linux.
- Experienced administrators wanting to enhance their skills in security, automation, and DevOps.
- Certification seekers aiming to validate their Linux expertise for career growth.
- Organizations needing skilled Linux professionals to support cloud and on-premise infrastructure.

Prerequisites

No formal prerequisites, but familiarity with IT concepts is helpful. Recommended Experience: At least 12 months of hands-on Linux experience or equivalent training. Basic understanding of networking, system administration, and command-line interfaces.

Course Outline

Module 1: Introduction to Linux and System Administration

•Linux distributions, command-line interface (CLI), system installation, and package management.

Module 2: Managing Users, Groups, and Permissions

•User authentication, access control, file permissions, and sudo privileges.

Module 3: Linux Filesystems & Storage Management

•Disk partitions, logical volume management (LVM), file system maintenance, and RAID configuration.

Module 4: Process Management and System Monitoring

•Job scheduling (cron, systemd timers), resource utilization, and log analysis.

Module 5: Networking and Security

•Configuring IP addresses, DNS, firewalls (iptables/nftables), and SSH security best practices.

Module 6: Scripting & Automation

- Bash scripting, task automation, and version control with Git.

Module 7: Containers & Virtualization

- Deploying and managing Docker containers, working with Kubernetes, and virtualization technologies.

Module 8: Troubleshooting & Performance Optimization

- Diagnosing system issues, log analysis, and performance tuning.

Exam Details

- Exam Code: XK0-005
- Number of Questions: Up to 90
- Question Types: Multiple-choice & performance-based
- Duration: 90 minutes
- Passing Score: 720 (on a scale of 100 to 900)

The CompTIA Linux+ certification is ideal for IT professionals looking to master Linux administration, security, and automation. With a strong focus on hands-on skills and industry-relevant practices, this course equips learners with the expertise to deploy, manage, and secure Linux environments in modern IT infrastructures.