

XK0-006: CompTIA Linux+

Administer, secure and automate Linux systems from the command line, and prepare for the CompTIA Linux+ exam.

DURATION

5 days · 40 hours

LEVEL

Intermediate

CURRICULUM

14 modules · 8 labs

DELIVERYLive online, Onsite,
Corporate

Course overview

Linux runs most of the world's servers, cloud instances and containers, so administrators who are comfortable at the shell are in steady demand. CompTIA Linux+ is a distribution-neutral certification that validates those everyday skills. This five-day course prepares you for the current Linux+ exam while building habits you will use on any Linux system.

Day one covers system management: the boot process, file systems, storage and logical volumes, processes and package management. Day two focuses on services and user management, including users, groups and permissions, systemd services, networking and remote access. Day three is about security: authentication, file and SELinux or AppArmor controls, firewalls, SSH hardening and logging. Day four introduces automation and orchestration, with shell scripting, scheduled tasks, Git, configuration management and container basics. Day five is devoted to troubleshooting storage, network, service and performance problems, followed by exam preparation.

Every concept is practised on live Linux virtual machines. You will partition and mount storage, manage services and users, harden SSH, configure a firewall, write and debug shell scripts, run containers and diagnose a series of deliberately broken systems. The emphasis is on understanding what each command does and why, so you can adapt to different distributions.

This course is aligned to the CompTIA Linux+ exam. CompTIA has recently refreshed this exam, so confirm the current exam code, objectives and voucher price on the CompTIA website before booking.

Highlights

- 40 hours of live, trainer-led sessions
- Every session at the Linux command line
- Covers system management, services, security and automation
- Shell scripting, Git and container basics
- Troubleshooting labs and mock exam

What's included

- Trainer with hands-on Linux administration experience
- Live Linux virtual machines for every learner
- Storage, services, security and automation labs
- Shell scripting from first script to error handling
- Git and container fundamentals
- Troubleshooting scenarios and mock exam
- Course completion certificate from Ace Skills Consulting

Who this course is for

Who should attend

- Junior Linux and system administrators
- Windows administrators adding Linux skills
- Cloud and DevOps engineers new to Linux
- Support engineers working with Linux servers
- Network+ or A+ holders progressing to systems work

Prerequisites

- Basic IT knowledge and comfort with a terminal is helpful
- Some Linux exposure is recommended but not required

Detailed curriculum — 5 days, 40 hours, 14 modules, 8 hands-on labs

Day 1 System Management

8 hours

1.1 Linux fundamentals

- Boot process and bootloaders
- File system hierarchy
- Kernel and modules
- Shell basics and help

1.2 Storage

- Partitions and file systems
- Mounting and fstab
- Logical volume management
- Disk usage monitoring

LAB Create and extend logical volumes · 50 min

1.3 Processes and packages

- Process management and signals
- Repositories and updates
- Package managers: dnf and apt

LAB Install, update and remove packages · 30 min

Day 2 Services and User Management

8 hours

2.1 Users and permissions

- Users and groups
- Special permissions and ACLs
- File permissions and ownership
- sudo configuration

LAB Set up users, groups and shared directories · 40 min

2.2 Services

- systemd units and targets
- Journald and logs
- Starting, enabling and inspecting services

2.3 Networking

- Network configuration tools
- Remote access with SSH
- Hostname and name resolution
- File transfer tools

LAB Configure networking and key-based SSH · 40 min

Day 3 Security

8 hours

3.1 Authentication and access

- PAM concepts
- Multi-factor options
- Password policies
- Certificates and keys

3.2 Mandatory access control

- SELinux modes and contexts
- AppArmor profiles
- Troubleshooting denials

3.3 Hardening and monitoring

- Firewall configuration
- SSH hardening
- Audit and log review
- Vulnerability patching

LAB Harden a server: firewall, SSH and SELinux · 55 min

Day 4 Automation, Orchestration and Scripting

8 hours

4.1 Shell scripting

- Variables, conditionals and loops
- Exit codes and error handling
- Text processing with grep, sed and awk

LAB Write a backup script with logging · 50 min

4.2 Scheduling and version control

- cron and systemd timers
- Git fundamentals
- Branching and collaboration

4.3 Configuration management and containers

- Configuration management concepts
- Infrastructure as code basics
- Container images and runtimes

LAB Build and run a container image · 40 min

Day 5 Troubleshooting and Exam Readiness

8 hours

5.1 Troubleshooting

- Boot and storage issues
- Network connectivity issues
- Service and permission issues
- Performance analysis

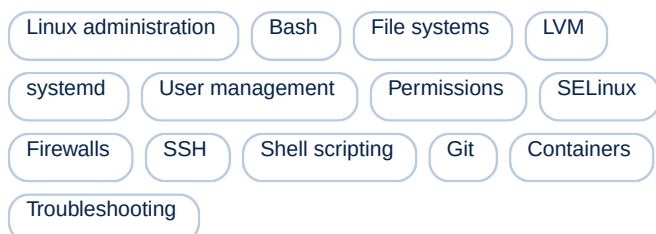
LAB Diagnose and repair broken systems · 60 min

5.2 Exam readiness

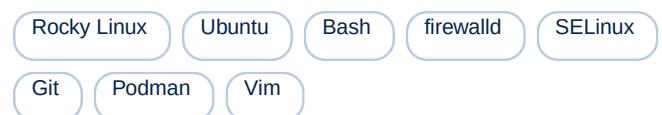
- Performance-based question practice
- Mock exam and review
- Study plan

Skills and tools

Skills you will build



Tools used in class



Certification exam

This course is aligned to the exam below and prepares you for it. The exam itself is booked and taken with the vendor.

Exam

CompTIA Linux+

Exam code XK0-006

Official page <https://www.comptia.org/certifications/linux>

Exam skill areas covered

Server and User Management
Network Configuration and Scripting

Exam details are pending verification. Confirm the current exam code, format and fee on the official vendor page before booking.

Frequently asked questions

Which Linux distribution do you use?

Labs use both a Red Hat-family and a Debian-family distribution, so you learn the differences that the exam and real jobs expect.

Should I take Linux+ or RHCSA?

Linux+ is distribution-neutral and suits broad roles; RHCSA is a hands-on Red Hat exam. Many administrators take Linux+ first and RHCSA later.

Is the exam voucher included?

Only when the batch shows the "Exam voucher included" badge. Otherwise you buy the voucher directly from CompTIA.

Do I need to know scripting already?

No. Scripting is taught from the basics on day four.

Book a batch or talk to an advisor

Course page: aceskillsconsulting.com/course/xk0-006-comptia-linux-plus · Email: info@aceskillsconsulting.com

Chennai office

Guindy, Chennai, Tamil Nadu

Delhi office

B-95, Old Post Office Street, Shakarpur

New Delhi 110092

Office: 98180 12523

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