

# Linux System Administrator Training

The Linux Foundation Authorized Training · Applied Technology Academy

This course provides the essential knowledge and hands-on skills required to administer Linux systems in enterprise, cloud, and DevOps environments. It prepares learners to configure, manage, and troubleshoot Linux systems and focuses on practical, real-world administration tasks. Ideal for system administrators upgrading their skills, IT professionals transitioning to Linux roles, and those preparing for the LFCS certification exam.

| LEVEL           | DURATION      | EXPERIENCE                | AVERAGE SALARY   | LABS       |
|-----------------|---------------|---------------------------|------------------|------------|
| <b>Beginner</b> | <b>5 Days</b> | <b>Linux Fundamentals</b> | <b>\$120,000</b> | <b>Yes</b> |

## Course Overview

- Install and configure Linux systems
- Manage users, groups, and system permissions
- Configure devices, file systems, and storage
- Maintain system services, networking, and security
- Manage software packages across major distributions
- Monitor system performance and logs
- Use shell scripting to automate administrative tasks
- Troubleshoot common Linux system issues
- Prepare effectively for the LFCS exam

## Course Outline

- **Module 1: Introduction to Linux Administration**
  - Review of Linux distributions and architecture
  - Administrative responsibilities and tools
  - Command-line efficiency and essential utilities
- **Module 2: System Installation & Configuration**
  - Installation procedures and initial setup
  - Disk layout options and bootloaders
  - System startup process and systemd management
- **Module 3: User & Group Administration**
  - Creating, modifying, and deleting users and groups
  - Password policies and account restrictions
  - Managing sudo privileges and access control

- **Module 4: Permissions, Ownership & Security Controls**
  - File and directory permissions (rwx)
  - Advanced permissions: ACLs, special bits
  - Basic security hardening practices
- **Module 5: Storage, Partitions & File Systems**
  - Creating and managing partitions
  - Formatting and mounting file systems
  - Swap, LVM, and RAID configuration
  - Auto-mounting with fstab
- **Module 6: Package Management**
  - Using package managers (apt, yum, dnf, zypper)
  - Repository configuration and updates
  - Installing, removing, and verifying software
- **Module 7: Process & System Monitoring**
  - Viewing and controlling processes
  - Job scheduling (cron, systemd timers)
  - Resource monitoring with top, htop, sar
- **Module 8: Networking & System Services**
  - Network configuration and troubleshooting
  - Managing services with systemd
  - Firewalls and basic security filtering
- **Module 9: Device Management & Kernel Components**
  - Kernel modules and system configuration
  - Managing devices and udev
  - Sysctl tuning and persistent settings
- **Module 10: Logging & System Maintenance**
  - Understanding system logs and journalctl
  - Log rotation and storage management
  - Backup and restore strategies
- **Module 11: Shell Scripting & Automation**
  - Writing and executing shell scripts
  - Variables, loops, conditionals
  - Automating routine administrative tasks
- **Module 12: Troubleshooting & LFCS Exam Preparation**
  - Diagnosing common system issues
  - Networking, storage, and process troubleshooting

- Practice scenarios aligned with LFCS domains

## **Intended Audience**

- Aspiring Linux system administrators seeking hands-on, practical skills
- IT professionals responsible for managing Linux servers in production environments
- Support technicians transitioning into Linux administration roles
- DevOps, cloud, and cybersecurity professionals who require strong Linux fundamentals
- Students preparing for the Linux Foundation Certified System Administrator (LFCS) exam
- Anyone with basic Linux knowledge wanting deeper administrative experience

## **Prerequisites**

- Basic familiarity with Linux recommended
- Completion of a Linux Fundamentals course or equivalent experience helpful

## **Follow-On Courses**

- Linux Foundation Certified Engineer (LFCE)
- Kubernetes Administrator (CKA)
- Kubernetes for Developers (CKAD)

**Ready to enroll?** Call 800.674.3550 or email Info@AppliedTechAc.com — private team cohorts, GSA MAS purchasing, military credentialing funding, VA GI Bill and VR&E and student financing available.