Document Generated: 11/03/2026

Learning Style: Virtual Classroom

Technology: Linux Foundation

Difficulty: Advanced

Course Duration: 4 Days

Linux for System Engineers (LFS311)



About this course:

The need for sysadmins with advanced administration and networking skills has never been greater, and competition for people with experience is fierce. Whether you're looking for expert test prep for the Linux Foundation Certified Engineer certification, need training to help transition to Linux from other platforms, or you're just brushing up on these vital admin and networking skills, this course will teach you what you need to know.

This course is excellent preparation for the Linux Foundation Certified Engineer (LFCE) exam.

This course will teach you everything you need to know to be an advanced systems administrator and to prepare for the Linux Foundation Certified Engineer certification.

This course is designed to work with a wide range of Linux distributions, so you will be able to apply these concepts regardless of your distro.

The average salary of a Linux Systems Engineer is **$77,166** per year.

Course Objective:

You'll learn:

- How to design, deploy and maintain a network running under Linux.
- How to administer the network services.
- The skills to create and operate a network in any major Linux distribution.
- How to securely configure the network interfaces.
- How to deploy and configure file, web, email and name servers.

Audience:

- Linux Systems Engineers

Prerequisite:

- This course is designed for system administrators and IT professionals who need to gain a hands-on knowledge of Linux network configuration and services as well as related topics such as basic security and performance.

Course Outline:

Introduction

- Linux Foundation
- Linux Foundation Training
- Linux Foundation Certifications
- Linux Foundation Digital Badges
- Laboratory Exercises, Solutions and Resources
- E-Learning Course: LFS211

- Distribution Details
- Labs

Linux Networking Concepts and Review

- OSI Model Introduction and Upper Layers
- OSI Model Transport Layer
- OSI Model Network Layer
- OSI Model Lower Layers
- Network Topology
- Domain Name System
- System Services
- Managing System Services
- Labs

Network Configuration

- Runtime Network Configuration
- Boot Time Network Configuration
- DNS Client
- Intro to OpenVPN
- Labs

Network Troubleshooting and Monitoring

- Network Troubleshooting
- Client-Side Troubleshooting
- Server-Side Troubleshooting
- Network Monitoring
- Labs

Remote Access

- Remote Access History
- Intro to Cryptography
- Secure Remote Access
- Remote Graphics
- Labs

Domain Name Service

- Overview Of DNS
- BIND (named) Server
- BIND Zone Configuration
- DNS views
- Labs

HTTP Servers

- Apache

- Apache Configuration
- Apache Virtual Hosts
- Apache Security
- Labs

Advanced HTTP Servers

- Mod Rewrite
- Mod Alias
- Mod Status
- Mod Include
- Mod Perl
- Performance Considerations
- HTTP Balancer
- Labs

Email Servers

- Email Overview
- Postfix
- Dovecot
- Labs

File Sharing

- FTP
- vsftpd
- rsync
- SSH Based Protocols
- Other Protocols
- Labs

Advanced Networking

- Routing
- VLANs
- DHCP
- NTP
- Labs

HTTP Caching

- Overview
- Squid Configuration
- Labs

Network File Systems

- NFS
- SMB/CIFS

- Other Network File Systems
- Mounting Network File Systems
- Labs

Introduction to Network Security

- Security Concepts
- Security Practices
- Security Tools
- Labs

Firewalls

- TCP Wrappers
- netfilter Concepts
- Iptables Command
- Managing IPtables
- Advanced Firewalls
- Network Address Translation
- nft Concepts
- Labs

LXC Virtualization Overview

- Linux Containers (LXC)
- Labs

High Availability

- Overview
- DRBD
- Labs

Database

- Introduction
- Database Management Systems
- Structured Query Language (SQL)
- Labs

System log

- Overview
- Remote Logging: Client
- Remote Logging: Server
- Labs

Package Management

- Installing from Source

- Package Management
- Packaging System Benefits
- Main Package Management Systems
- Role of Linux Distributions
- Building RPM Packages
- RPM Spec File Sections
- RPM Spec File Example
- Building Debian Packages
- Labs

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