Training: The Linux Foundation
LFS430 Linux Enterprise Automation

TRAINING GOALS:

Automation is essential to running Linux in the enterprise effectively. Automation lets you minimize costs by reducing manual operations, helps ensure compliance across the data center, standardizes your software infrastructure and accelerates deployments for your bare-metal and cloud infrastructures. This course will teach you how to use automation to achieve these outcomes.

This course is designed for IT professionals who are responsible for automating enterprise Linux systems.

In this course, you will learn how to participate in architectural decisions involving data center automation, and to understand advanced system administration concepts and techniques that take scalability, reproducibility and efficiency into account. The course also covers how to provision physical (bare-metal) and virtual hosts in a consistent and scalable way, deploy configuration management tools in an heterogeneous Linux environment, package software releases on both RPM and DPKG based systems, plan, build and customize OS releases in your environment and more.

This course prepares you with everything you need to know to implement Linux automation tools in an enterprise environment.

CONSPECT:

- **Introduction**
  - Linux Foundation
  - Linux Foundation Training
  - Linux Foundation Certifications
  - Linux Foundation Digital Badges
  - Laboratory Exercises, Solutions and Resources
  - Distribution Details
  - Labs
- **Enhanced Systems Administration**
  - What Makes A Good Systems Administrator
  - “Soft” Skills and Tools
  - Hard Skills And Tools
  - Other Concerns
  - Labs

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- **Software Management**
  - Manual Software Lifecycle
  - Package Management
  - Creating Your Own Packages
  - Creating Debian Packages
  - Creating RPM Packages
  - Creating Packages of Third Party Software
  - Rebuilding OS supplied Packages
  - Advanced Packaging Tips
  - GPG Sign Your Packages
  - Labs
- **Packaging Automation**
  - Preparing Packages for Automatic Building
  - Automation Frameworks
  - Labs
- **Software Distribution**
  - Introduction to Software Distribution
  - Repository Management
  - Creating Repositories
  - Using Third Party Repositories
  - Mirroring Repositories
  - Labs
- **Installation Tree Management**
  - CentOS Installation Trees
  - Debian/Ubuntu Install Trees
  - Labs
- **Automating Installation**
  - Automating Installation
  - Automating Installation with Kickstart
  - Using Kickstart Files
  - Debian Preseed
  - Further Automation
  - Labs
- **Installation Tools: Cobbler**
  - Cobbler Overview
  - Cobbler Setup

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- Using Cobbler
- Advanced Cobbler
- Other Tools
- Labs

- **Configuration Management Overview**
  - What is Configuration Management
  - Configuration Management Methods
  - Overview of Configuration Management Tools
  - Labs
- **Configuration Management with Puppet**
  - Puppet Overview
  - Puppet Terminology
  - Puppet Setup
  - Puppet Configuration
  - Puppet Operations
  - Advanced Puppet Concepts
  - Labs
- **Configuration Management with Salt**
  - Salt Overview
  - Salt Terminology
  - Salt Setup
  - Salt Configuration
  - Salt Operations
  - Advanced Salt Concepts
  - Labs
- **Configuration Management with Chef**
  - Chef Overview
  - Chef Setup
  - Using Chef Workstation
  - Labs
- **Configuration Management with Ansible**
  - Ansible Overview
  - Ansible Setup
  - Ansible Configuration
  - Ansible Operations
  - Advanced Ansible Concepts

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- Labs
- **Spacewalk Server**
  - Installing Spacewalk Server
  - Deploying Spacewalk Clients
  - Managing Changes with Spacewalk
  - Scripting with the Spacewalk API
  - Labs
- **Channel Management with Spacewalk**
  - Spacewalk API
  - Example Workflow
  - Labs

Difficulty level

CERTIFICATE:

The participants will obtain certificates signed by The Linux Foundation

TRAINER:

The Linux Foundation Certified Trainer

ADDITIONAL INFORMATION:

Live Online (Virtual) or Live (Classroom)
4 days of Instructor-led class time
Hands-on Labs & Assignments
Resources & Course Manual
Certificate of Completion
Digital Badge

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