Training: The Linux Foundation
LFS303 Linux for Cloud Technicians

TRAINING GOALS:

Linux & cloud are two are of the most in-demand skills in IT. This course provides essential knowledge for configuring and managing Linux systems and containers, expanding on the standard administration knowledge and incorporating critical tasks and operations commonly used in cloud environments. Whether you're looking for training to help start a new Linux IT career, or you're just brushing up on your skills, this instructor-led course will teach you what you need to know.

What You'll Learn

This course prepares you to connect to a system and perform critical customization and configuration tasks for cloud and non-cloud instances. You will have the opportunity to manage networking, system services, user account creation and administration, and much more; you will also familiarize yourself with virtualization, containers, and DevOps concepts; and gain important skills, like text file processing, file operations, bash scripting, use of git, troubleshooting, etc., which will come in handy when administering multiple systems in the cloud efficiently.

Who Is It For

This course is designed for individuals who want to expand their knowledge of Linux system configuration, administration, and command line environment. Whether you are working in a cloud environment now or in the future, these skills are necessary for system use and configuration. Learners will benefit from having a basic knowledge of Linux before taking this course.

CONSPECT:

- Introduction
  - Linux Foundation
  - Linux Foundation Training
  - Linux Foundation Certifications
  - Linux Foundation Digital Badges
  - Laboratory Exercises, Solutions and Resources
  - Things Change in Linux and Open Source Projects
  - E-Learning Course: LFS203
  - Distribution Details
  - Labs

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- System Configuration from the Graphical Interface
  - GUI or Command Line?
  - System Settings
  - Display Settings
  - Network Manager
  - NTP (Network Time Protocol)
  - Graphical Software Package Management
  - Console
  - X Window System and Desktop Manager
  - Labs
- Boot Process and System Initialization
  - Bootloader
  - Linux Kernel and initramfs
  - init and Services
  - systemd
  - systemctl
  - Labs
- Command-line Operations
  - Command Line Operations and Options
  - Logging In and Out, Rebooting and Shutting Down
  - Setting Time and Date
  - Locating Applications
  - Directories and Paths
  - Wildcards
  - Searching for Files
  - Command Prompt
  - Package Management
  - Labs
- User Accounts and Environment
  - User Accounts
  - Groups
  - Group Management
  - Shell Startup Files
  - Management of User Accounts
  - Passwords
  - File Ownership and Permissions

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- SSH
- Environment Variables
- Key Shortcuts
- Command History
- Command Aliases
- Labs

- Text Operations
  - cat
  - echo
  - sed
  - awk
  - Miscellaneous Text Utilities
  - Sorting, Cutting, Pasting, Joining, Splitting
  - Regular Expressions and grep
  - Labs
- File Operations
  - Filesystems
  - Partitions and Mount Points
  - Network File System (NFS)
  - rsync
  - Working with Files
  - Comparing Files
  - File Types
  - Compressing Data
  - Labs
- Bash Shell Scripting
  - Scripts
  - Features
  - Functions
  - Command Substitutions and Arithmetic
  - If Conditions and Tests
  - Looping Structures
  - Case Structure
  - Debugging
  - Creating Temporary Files and Directories
  - Labs

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- Networking
  - Addressing
  - Networking Interfaces and Configuration
  - Networking Utilities and Tools
  - Labs
- Working With Linux Filesystems
  - Filesystem Basics
  - Virtual Filesystem (VFS)
  - Hard and Soft Links
  - Available Filesystems
  - Creating and formatting filesystems
  - Checking and Repairing Filesystems
  - Filesystem Usage
  - Disk Usage
  - Mounting filesystems
  - NFS
  - Mounting at Boot and /etc/fstab
  - Labs
- Virtualization Overview
  - Introduction to Virtualization
  - Hosts and Guests
  - Emulation
  - Hypervisors
  - libvirt
  - QEMU
  - KVM
  - Labs
- Containers Overview
  - Containers
  - Application Virtualization
  - Containers vs Virtual Machines
  - Docker
  - Docker Commands
  - Podman
  - Labs
- Basic Troubleshooting

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- Troubleshooting Levels
- Troubleshooting Techniques
- Networking
- File Integrity
- Boot Process Failures
- Filesystem Corruption and Recovery
- Virtual Consoles
- Labs

- Introduction to GIT
  - Revision Control
  - Know Where the Code is Coming From: DCO and CLA
  - Available Revision Control Systems
  - Graphical Interfaces
  - Documentation
  - Labs
- Using Git: an Example
  - Basic Commands
  - A Simple Example
  - Signing Off on Commits
  - master vs main
  - Labs
- DevOps and GitOps
  - Introduction
  - Evolution of Application Development
  - Breaking the silos
  - Merging Functions
  - DevOps tools

REQUIREMENTS:

While the course has no required prerequisites, basic knowledge of Linux and the command line will enhance the learning experience.

Difficulty level



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CERTIFICATE:

The participants will obtain certificates signed by The Linux Foundation.

TRAINER:

Certified The Linux Foundation Trainer.

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