Linux System Administration: Part 1

- 5 Days
- Lecture and Hands-on Labs

Course Overview

Linux System Administrator Part One (RH124) is tailored for IT professionals who are new to Linux, aiming to provide them with foundational system administration skills. By concentrating on core administration tasks and introducing essential command-line concepts and enterprise-level tools, the course sets the groundwork for students aspiring to become full-time Linux system administrators. As the initial installment of a two-course series, RH124 lays the essential groundwork, while the subsequent course, Linux System Administrator Part Two (RH134), further expands on these concepts, guiding participants from basic knowledge to full capability in Linux administration.

This is the course equivalent of Red Hat Administration I.

Review this course online at https://www.alta3.com/courses/rh124

Who Should Attend

- Technical professionals in Linux
- Linux professionals looking to learn about Linux enterprise or cloud systems administration

What You'll Learn

- Explore Linux and the ecosystem surrounding Red Hat Enterprise Linux.
- Execute commands and inspect shell environments.
- Administer, arrange, and safeguard files.
- Oversee user accounts, groups, and their security protocols.
- Supervise and audit systemd services.
- Establish remote connections via web console and SSH.
- Set up network interfaces and configurations.
- Handle software management with DNF.

Outline

Understand and Use Essential Tools

- Lecture: Bash Shell Mastery
- Lecture + Lab: Log in and switch users
- Lecture + Lab: Use grep and regular expressions to analyze text
- Lecture + Lab: Use regular expressions for advanced grep
- Lecture + Lab: Vim: Create and edit text files
- Challenge: Editing with VIM
- Lecture + Lab: Locate, read, and use system documentation
- Lecture + Lab: Create, delete, copy, and move files and directories
- Lecture + Lab: Finding files and directories

- Lecture + Lab: Create hard and soft links

Manage Users and Groups

- Lecture + Lab: Create, delete, and modify local user accounts
- Lecture + Lab: Change passwords and adjust password aging
- Lecture + Lab: Create/delete/modify groups and configure superuser access

Manage Security

- Lecture + Lab: List, set, and change standard ugo/rwx permissions
- Lecture + Lab: Diagnose and correct file permission problems
- Lecture + Lab: Manage default file permissions
- Lecture + Lab: Create and configure set-GID directories for collaboration
- Lecture + Lab: Use boolean settings to modify SELinux

Operate Running Systems

- Lecture + Lab: Start, stop, and check the status of services
- Lecture + Lab: Adjusting Process Priority using nice, and renice
- Lecture + Lab: Configuring System Tuning Profiles with tuned
- Lecture: Boot Process Management
- Lecture + Lab: Booting into Different System Targets (multi-user, graphical, rescue)
- Lecture + Lab: Interrupting the Boot Process for Recovery

Deploy, Configure, and Maintain Systems

- Lecture + Lab: Install and update software packages
- Lecture + Lab: Managing Flatpak applications
- Lecture + Lab: Configure autofs
- Lecture: Automating and Scheduling Tasks
- Lecture + Lab: One Time Scheduling with at
- Lecture + Lab: Recurring Tasks with cron and crontab
- Lecture + Lab: Configuring Time Synchronization

Configure Local Storage and File Systems

- Lecture + Lab: List, create, delete partitions on MBR and GPT disks
- Lecture + Lab: Create, mount, unmount, and use file systems
- Lecture + Lab: Adding swap

Manage Basic Networking

- Lecture + Lab: Access remote systems using SSH
- Lecture + Lab: Configure key-based authentication for SSH
- Lecture + Lab: Configure IP addresses and hostnames

Crush the RHCSA Exam!

- ☐ Getting Started
- ☐ Create Users
- ☐ Password Policy
- ☐ Switch User
- ☐ Sudo Config
- ☐ Find Files
- ☐ Grep

- ☐ Default File
- ☐ File Permissions
- ☐ Fix Permissions
- ☐ Directory Inheritance
- ☐ Create Symlink
- ☐ SELinux Boolean
- ☐ Network Config
- ☐ Add Repository
- ☐ Create Partition
- ☐ Swap Partition
- ☐ Service Setup
- ☐ Tuned
- ☐ Renice
- ☐ Configure NTP
- ☐ at

Prerequisites

- Basic technical skills