



Linux System Administrator Part Two

- 5 Days
- Lecture and Hands-on Labs

Course Overview

Linux System Administrator Part Two (RH134) progresses the RHCSA certification journey for IT practitioners who have completed Red Hat System Administration I. It delves further into essential Linux administration capabilities, focusing on advanced storage setup, the deployment and installation of Red Hat Enterprise Linux, securing systems via SELinux, handling scheduled tasks, overseeing the startup sequence and system diagnostics, elementary performance optimization, and enhancing command-line efficiency through scripting and automation. This curriculum is designed with the assumption that participants have undergone Linux System Administrator Part One (RH124).

This is the course equivalent of Red Hat Administration II. Review this course online at <https://www.alta3.com/courses/rh134>

Who Should Attend

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

What You'll Learn

- Deploy Red Hat Enterprise Linux through scalable installation techniques.
- Navigate and secure files, file systems, and network configurations.
- Implement automation and scripting via the shell.
- Organize and administer storage solutions, including logical volumes and file systems.
- Enhance and regulate security measures and access controls.
- Oversee system boot procedures and service management.
- Operate and manage containerized services on a Red Hat Enterprise Linux environment.

Outline




Improve Command Line Productivity

- Bash Shell Mastery
- Advanced Command Line Operations and Redirection
- Text Processing with grep, awk, and sed
- Vim: A Modal Text Editor
- Bash Shell Conditional Logic, Loops, Variables and Arguments





Scheduling Tasks

- Automating and Scheduling Tasks
- One Time Scheduling with at
- Recurring Tasks with cron and crontab
- Scheduling Complex Sequences with systemd Timers






Analyze and Store Logs

-  Understanding System Logs
-  Using journalctl to Query the systemd Journal
-  Configuring Log Rotation with logrotate and Preserving Logs






Archiving and Transferring Files

-  File Compression and Archiving
-  Creating and Extracting Archives with tar, gzip, bzip2, and xz
-  Securely Copying Files Between Systems using scp, rsync, and sftp
-  Managing File Permissions during Transfers






System Performance Tuning

-  Performance Monitoring and Management
-  Identifying Resource-Intensive Processes with top, htop, and ps
-  Adjusting Process Priority using nice, and renice
-  Configuring System Tuning Profiles with tuned
-  Managing CPU and Memory Usage for Applications






SELinux Security Management

-  SELinux Basics
-  Understanding SELinux Modes
-  Managing SELinux Contexts for Files and Processes
-  Viewing and Interpreting SELinux Logs (audit.log)
-  Restoring File Contexts with restorecon






Logical Volume Management

-  LVM Management
-  Creating, Extending, and Removing Logical Volumes
-  Managing Physical Volumes and Volume Groups
-  Resizing File Systems with resize2fs, and xfs_growfs
-  Configuring File Systems to Mount at Boot using fstab




Network-Attached Storage

-  NFS Configuration
-  Setting up an NFS Server and Sharing Directories
-  Configuring Clients to Mount NFS Shares
-  Persistent Mounts using autofs
-  Troubleshooting NFS Connectivity Issues






Controlling the Boot Process

-  Boot Process Management
-  Understanding GRUB2 bootloader configuration
-  Booting into Different System Targets (multi-user, graphical, rescue)
-  Interrupting the Boot Process for Recovery
-  Troubleshooting Boot Failures








Network Security Management

-  Firewall and SELinux for Network Security
-  Configuring Firewalld Rules using firewall-cmd
-  Securing Services with Custom Firewall Zones
-  SELinux Rules for Network Ports and Services
-  Troubleshooting Firewall and SELinux Network-Related Issues

Installing Red Hat Enterprise Linux

-  RHEL Installation
-  Setting up installation media and bootable USB drives
-  Custom Partitioning and LVM Setup During Installation
-  Network Configuration during Installation
-  Post-Installation Steps: User Accounts, Initial Updates, and Configurations

Running Containers

-  Container Management
-  Installing and Configuring Podman for Container Management
-  Obtaining Container Images from Public Registries
-  Running Containers and Managing their Lifecycle (Start, Stop, Remove)
-  Running Lightweight Services Inside Containers
-  Configuring Containers to Run as systemd Services
-  Attaching Persistent Storage to Containers

Prerequisites

- Basic technical skills
- Complete RH124