

Red Hat System Administration III

Learn via: **Classroom**

Duration: **4 Day**

Overview

Red Hat System Administration III, related to Red Hat Enterprise Linux 7, is designed for experienced Linux system administrators who hold a Red Hat Certified System Administrator (RHCSA) certification or equivalent skills and who want to broaden their ability to administer Linux systems at an enterprise level.

The course is focused on deploying and managing network servers running caching Domain Name Service (DNS), MariaDB, Apache HTTPD, Postfix SMTP nullclients, network file sharing with Network File System (NFS) and Server Message Block (SMB), iSCSI initiators and targets, advanced networking and firewall configurations, and the use of Bash shell scripting to help automate, configure, and troubleshoot the system. Through lectures and hands-on labs, delegates who have already earned the RHCSA certification will be exposed to all competencies covered by the Red Hat Certified Engineer (RHCE) exam EX300

Please Note: This course does not cover all RHCSA tasks. Delegates who need a review of RHCSA skills are encouraged to attend RHCSA Rapid Track Course (RH199).

Target Audience:

Red Hat System Administration III is intended for experienced Linux administrators wishing to learn enterprise-level automation techniques through scripting, how to deploy and secure network services, and how to manage other key security features of Red Hat Enterprise Linux. Delegates in this course should have earned their RHCSA or have equivalent skills.

Prerequisites

- RHCSA certification or equivalent experience

What You Will Learn

Impact on the organization

This course is intended to develop the skills needed to improve infrastructure performance, increase system utilization and security, and responsiveness to system failures by introducing advanced administration tasks and techniques. The result should be improved infrastructure security, lower costs of infrastructure services, more robust IT infrastructure, faster deployment of open source technologies, and improved quality of infrastructure services and products.

Impact on the individual

As a result of attending this course, students should be able to perform the key tasks needed as a full time Linux system engineer or consultant. This course introduces enterprise Linux advanced administration topics, including service and daemon control, network configuration and troubleshooting, NFS and SAMBA file server configuration, Apache HTTP web server management, MariaDB SQL database configuration, Postfix SMTP configuration, DNS troubleshooting, and bash scripting.

Students should be able to demonstrate the following skills:

- Control services and daemons.
- Manage networking.
- Configure link aggregation, bridging, teaming, and bonding.
- Configure filters with firewalls.
- Permit and reject access to network services using SELinux.
- Manage DNS servers.
- Configure SMTP email delivery.
- Provide iSCSI block storage.
- Configure NFS and SAMBA file-based storage.
- Configure MariaDB SQL database.
- Configure Apache HTTPD with TLS-enabled virtual hosts.
- Write simple bash automation scripts.

Training Outline

CONTROL SERVICES AND DAEMONS

Review how to manage services and the boot-up process using systemctl.

MANAGE IPV6 NETWORKING

Configure and troubleshoot basic IPv6 networking on Red Hat Enterprise Linux systems.

CONFIGURE LINK AGGREGATION AND BRIDGING

Configure and troubleshoot advanced network interface functionality including bonding, teaming, and local software bridges.

CONTROL NETWORK PORT SECURITY

Permit and reject access to network services using advanced SELinux and firewalld filtering techniques.

MANAGE DNS FOR SERVERS

Set and verify correct DNS records for systems and configure secure DNS caching.

CONFIGURE EMAIL DELIVERY

Relay all email sent by the system to an SMTP gateway for central delivery.

PROVIDE BLOCK-BASED STORAGE

Provide and use networked iSCSI block devices as remote disks.

PROVIDE FILE-BASED STORAGE

Provide NFS exports and SMB file shares to specific systems and users.

CONFIGURE MARIADB DATABASES

Provide a MariaDB SQL database for use by programs and database administrators.

PROVIDE APACHE HTTPD WEB SERVICE

Configure Apache HTTPD to provide Transport Layer Security (TLS)-enabled websites and virtual hosts.

WRITE BASH SCRIPTS

Write simple shell scripts using Bash.

BASH CONDITIONALS AND CONTROL STRUCTURES

Use Bash conditionals and other control structures to write more sophisticated shell commands and scripts.

CONFIGURE THE SHELL ENVIRONMENT

Customize Bash startup and use environment variables, Bash aliases, and Bash functions.

LINUX CONTAINERS PREVIEW

Preview the capabilities of Linux containers, Docker, and other related technologies in Red Hat Enterprise Linux 7.

COMPREHENSIVE REVIEW

Practice and demonstrate knowledge and skills learned in Red Hat System Administration III.