

Module Title : Course RH254 : Red Hat Enterprise Linux System Administration III

Duration : 4 days

Course Description

Red Hat® System Administration III (RH254), 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, students who have already earned the RHCSA certification will be exposed to all competencies covered by the Red Hat Certified Engineer (RHCE) exam (EX300).

Note: *This course does not cover all RHCSA tasks. Students who need a review of RHCSA skills are encouraged to attend [RHCSA Rapid Track Course \(RH199\)](#).*

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. Students in this course should have earned their RHCSA or have equivalent skills.

Prerequisites

- RHCSA certification or equivalent experience
- For candidates who have not earned their RHCSA certification, confirmation of the correct skills and knowledge can be obtained by passing the online skills assessment.

Course Content Summary:

- Network port security and link aggregation
- iSCSI initiator and target configuration
- DNS troubleshooting and caching name server
- Providing NFS and SMB file servers
- Apache HTTPD web server management
- MariaDB SQL database configuration
- Postfix SMTP nullclient for servers
- Bash scripting for automation
- Read the entire course outline for more details.

Course 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.

Comprehensive review

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