RH254 Red Hat System Administration III
Course Summary

Description
Red Hat System Administration III (RH254) is designed for experienced Linux administrators who require networking and security administration skills. With a heavy emphasis on practical, hands-on labs, this course is tightly aligned with experienced Linux administrators' job tasks and the skills required for advancement. Focus is placed on enhancing the students' automation skills to securely configure, deploy and manage network services including DNS, Apache, SMTP, and network file sharing. In addition, this course emphasizes security, including monitoring, packet filtering, access controls, and SELinux. At the completion of this course, students already familiar with the RHCT/RHCSA administration skills will have exposure to all competencies tested by the RHCSA and RHCE exams.

Objectives
At the end of this course, students will be able to:

- Enhance user security
- Use disk management with iSCSI
- Use system and network activity monitoring
- Use network management and packet filtering
- Understand software management
- Understand web service management
- File sharing across platforms
- Understand basic SMTP management

Topics
- Getting Started with the Classroom Environment
- Enhance User Security
- Bash Scripting and Tools
- File Security with GnuPG
- Software Management
- Network Monitoring
- Route Network Traffic
- Secure Network Traffic
- NTP Server Configuration
- Filesystems and Logs
- Centralized and Secure Storage
- SSL-encapsulated Web Services
- Web Server Additional Configuration
- Basic SMTP Configuration
- Caching-Only DNS Server
- File Sharing with NFS
- File Sharing with CIFS
- File Sharing with FTP
- Troubleshooting Boot Process

Audience
- Senior Linux system administrators who require networking and security administration skills
- Linux IT professionals who currently have RHCT/RHCSA certification, and are interested in earning an RHCE certification
- Linux IT professionals that can demonstrate the competencies needed to earn an RHCT/RHCSA, but have not passed the RHCSA exam provided with the Red Hat System Administration II course

Prerequisites
- RHCSA Rapid Track Course (RH200) or Red Hat System Administration I & II
- Equivalent experience to the RHCSA Rapid Track Course
- Skills required to earn an RHCT/RHCSA certification

Duration
Four days

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Course Outline

I. Getting Started with the Classroom Environment
- A. Given a virtualized environment, begin to administrate multiple systems using prerequisite skills

II. Enhance User Security
- A. Configure system to use Kerberos to verify credentials and grant privileges via sudo

III. Bash Scripting and Tools
- A. Automate system administration tasks utilizing Bash scripts and text-based tools

IV. File Security with GnuPG
- A. Secure files with GnuPG

V. Software Management
- A. Use yum plugins to manage packages; understand the design of packages; build a simple package

VI. Network Monitoring
- A. Profile running services, then capture and analyze network traffic

VII. Route Network Traffic
- A. Configure system to route traffic and customize network parameters with sysctl

VIII. Secure Network Traffic
- A. Secure network traffic through SSH port forwarding and iptables filtering/network address translation (NAT)

IX. NTP Server Configuration
- A. Configure an NTP server

X. Filesystems and Logs
- A. Manage local filesystem integrity
- B. Monitor systems over time and system logging

XI. Centralized and Secure Storage
- A. Access centralized storage (iSCSI) and encrypt filesystems

XII. SSL-encapsulated Web Services
- A. Understand SSL certificates and deploy an SSL-encapsulated web service

XIII. Web Server Additional Configuration
- A. Configure a web server with virtual hosts, dynamic content and authenticated directories

XIV. Basic SMTP Configuration
- A. Configure an SMTP server for basic operation (null client, receiving mail, smarthost relay)

XV. Caching-Only DNS Server
- A. Understand DNS resource records and configure a caching-only name server

XVI. File Sharing with NFS
- A. Configure file sharing between hosts with NFS

XVII. File Sharing with CIFS
- A. Configure file and print sharing between hosts with CIFS

XVIII. File Sharing with FTP
- A. Configure file sharing with anonymous FTP

XIX. Troubleshooting Boot Process
- A. Understand the boot process and recover unbootable systems with rescue mode

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