RH253 Red Hat Linux Networking & Security Administration

Course Summary

For Linux- and/or UNIX- systems administrators who want to build skills at configuring common network services and security administration using Red Hat Enterprise Linux. See complete details below.

RH253 Red Hat Linux Networking & Security Administration Description

Goal:

To become a system administrator who can setup a Red Hat Enterprise Linux server and configure common network services and security at a basic level.

Audience:

Linux or UNIX system administrators who already have some real world experience with Red Hat Enterprise Linux systems administration and want a first course in networking services and security.

Prerequisites:

- RH133 Red Hat Linux System Administration or equivalent experience with Red Hat Enterprise Linux. To assist you in determining whether you have equivalent experience, take the RH133 Pre-assessment Questionnaire.
- LAN/WAN fundamentals or equivalent; Internetworking with TCP/IP or equivalent.

Prepares for:

- RH300 RHCETM Training and Certification Course (5-day)
- RH302 Red Hat Certified Engineer™ Exam-Only (if participant also has significant on the job experience with Red Hat Enterprise Linux).
- RHS333 Red Hat Enterprise Security: Network Services

Unit 1: Introduction to System Services

- Service Management
- Types of Services
- Fault Analysis

- SELinux control and contexts
- **Hands-on lab:** Introduction to System Services

Unit 2: Securing Networks

- Packet Filtering Capabilities
- Netfilter Architecture
- Chain Operations
- Connection Tracking
- Network Address Translation (NAT)
- **Hands-on lab:** Securing Networks

Unit 3: Organizing Networked Systems

- DNS Basics
- Internet DNS Hierarchy
- Name Server Hierarchy
- Berkeley Internet Name Domain (BIND)
- Chrooted BIND
- rndc
- Zone Files
- Delegating Subdomains
- BIND Syntax Utilities
- Advanced BIND features
- Configuring the DHCP server
- **Hands-on lab:** Organizing Networked Systems

Unit 4: Network File Sharing Services

- Configuring NFS services
- Configuring FTP services
- Samba Services
- **Hands-on lab:** Network File Sharing Services

Unit 5: Electronic Mail Services

- Operational Overview
- Security and "Anti-Spam" Features
- sendmail Configuration with the m4 Macro Language
- sendmail Client Configuration
- Debugging sendmail
- Postfix
- Configuring postfix
- Additional postfix Configuration
- **Hands-on lab:** Electronic Mail Services

Unit 6: The HTTP Service

- Apache Features
- Apache Server Configuration
- Virtual Hosts
- Apache Namespace Configuration
- Using .htaccess Files
- CGI
- Apache Encrypted Web Server
- Squid Web Proxy Cache
- **Hands-on lab:** The HTTP Service

Unit 7: Security Concerns and Policy

- Definitions of Security
- Basic Network Security
- Diagnostic Utilities
- Remote Service Detection
- Security Policy
- Response Strategies and Resources
- **Hands-on lab:** Security Concerns and Policy

Unit 8: Authentication Services

- Authentication and Account Basics
- PAM Operation
- Core PAM Modules
- Authentication Modules
- Password Security
- Authentication Troubleshooting
- NIS Server Configuration
- NIS Client Configuration
- NIS Troubleshooting
- **Hands-on lab:** Authentication Services

Unit 9: System Monitoring

- Introduction to System Monitoring
- File System Analysis
- System Log Files
- syslogd and klogd configuration
- Log File Analysis
- Monitoring and Limiting Processes
- System Activity Reporting
- **Hands-on lab:** System Monitoring

Unit 10: Securing Services

- System V Startup Control
- Securing the Service
- tcp_wrappers Configuration
- xinetd Access Control
- Advanced Security Options
- **Hands-on lab:** Securing Services

Unit 11: Securing Data

- The Need For Encryption
- Cryptographic Building Blocks
- Symmetric Encryption
- Asymmetric Encryption
- Public Key Infrastructures
- Digital Certificates
- Generating Digital Certificates
- OpenSSH Overview
- OpenSSH Authentication
- The OpenSSH server and clients
- Protecting Your Keys
- **Hands-on lab:** Securing Data