

300- RHCE Rapid Track

Please Note: Technical content subject to change without notice. Significant changes in course content will generally be available in posted outlines at least two months prior to being implemented in scheduled courses, to allow enrolled students adequate prep time. Reload this page regularly to insure up-to-date information.

Unit 1: Hardware and Installation

- Hardware Compatibility
- CPU and Memory
- Devices
- Bus Support
- The Red Hat Installer
- Configuring Hard Drives and Filesystems
- Software RAID and LVM
- Security Configuration: Firewalls and SELinux
- Post-installation Configuration
- Validating the Installation

Unit 2: The Boot Process

- Sequence of the Boot Process
- BIOS Initialization
- The GRUB Boot Loader
- Kernel Initialization
- init and /etc/inittab
- Run Levels
- Controlling Services

Unit 3: Linux Filesystem Administration

- Partitioning Hard Disks
- Creating Filesystems
- Understanding Journaling Filesystems
- Mounting Filesystems: The mount Command and /etc/fstab
- The Automounter
- ext2/3 Filesystem Attributes
- Access Control Lists
- Understanding and Controlling SELinux

Unit 4: RPM and Kickstart

- Installing, Updating, and Removing Software
- RPM Queries and Verification
- Automatic Dependency Resolution
- Red Hat Network
- Remote Administration
- Configuring a Network Installation Server

- Using Kickstart to Automate Installation

Unit 5: User Administration

- Creating User Accounts
- Maintaining User Accounts
- Creating and Maintaining Groups
- The User Private Group Model
- Creating Group Directories: the SGID Mode
- The Initial User Environment
- Pluggable Authentication Modules
- Network Authentication Configuration: NIS and LDAP
- Configuring Quotas

Unit 6: System Administration Tools

- Configuring the Network with ifup and ifdown
- Interface Configuration Files
- The CUPS Printing System
- Queue Management Using CUPS
- Automating System Administration: The cron Subsystem
- Understanding, Maintaining, and Monitoring System Logs
- Network Installation Servers
- Using Kickstart to Automate Installations

Unit 7: Kernel Services and Configuration

- Understanding Kernel Modules
- The /proc Filesystem
- Advanced partitioning: Software RAID
- Advanced partitioning: Logical Volume Management
- Converting LVM1 Partitions to LVM2

Unit 8: The HTTP Service

- The Apache Web Server
- Virtual Hosts
- Apache Access Configuration
- The Squid Web Proxy Cache

Unit 9: Network File Sharing Services

- Configuring an NFS Server
- Client-side NFS
- The File Transfer Protocol and vsftpd
- Samba Services
- Configuring File and Print Services with Samba
- Samba and Security: Authentication Methods and Passwords
- Samba Client Tools

Unit 10: Domain Name Service

- Understanding DNS: Zones, Domains, and Delegation
- The Berkeley Internet Name Domain (BIND)
- Running BIND in a chrooted Environment
- Zone Creation and Zone Files
- Delegating Subdomains
- BIND Utilities

Unit 11: Electronic Mail

- Understanding E-mail: Mail Transport Agents, Mail Delivery Agents, and Mail User Agents
- Sendmail Configuration Files
- Using the m4 Macro Language to Create The sendmail.mc File
- Debugging Sendmail
- Using alternatives to Select an E-mail System
- Postfix: an Alternative Mail Transport Agent
- Configuring Postfix

Unit 12: xinetd, OpenSSH, and DHCP

- Understanding the xinetd Daemon
- Configuring the xinetd Daemon
- Configuring xinetd-based Services
- The OpenSSH Server
- The DHCP Server

Unit 13: The X Window System

- X11 and the Server/Client Relationship
- The Xorg Server Design and Configuration
- Xorg Server Startup
- Xorg Server Configuration Utilities
- Running Remote Applications

Unit 14: Securing Services

- Using tcp_wrappers to Secure Services
- Daemon and Client Specifications for tcp_wrapper Rules
- Packet Filtering Using netfilter
- Firewalling and Data Flow
- Creating netfilter Rules
- Connection Tracking
- Network Address Translation
- netfilter Rule Persistence

Unit 15: Troubleshooting

- Troubleshooting Strategies
- Things to Check
- Filesystem Corruption and Checking
- Recovery Runlevels
- The Rescue Environment