

**Course Description:** This is a course for users of Linux (or UNIX) who want to start building skills in systems administration on Red Hat Enterprise Linux to a level where they can attach and configure a workstation on an existing network. This course provides intensive hands-on training on Red Hat Enterprise Linux 5.4, and includes the RHCT Certification Lab Exam on the last day.

**Who Should Attend:** Linux or UNIX users who understand the basics of Red Hat Linux and desire further technical training to begin the process of becoming a system administrator will benefit from this course.

**Prerequisites:** Students should have taken RH033 Red Hat Linux Essentials or have equivalent experience with Red Hat Linux.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Prove competency by passing the RHCT Exam, a realistic performance-based lab exam.
- Install, configure, and attach a new Red Hat Linux system to an existing production network.

## Course Outline:

### Unit 1 - Administrative Access

Configure and access various consoles directly, remotely with ssh, and with virt-manager. Configure privilege escalation with sudo.

### Unit 2 - Package Management

Manage software on system using yum, Red Hat Network, and rpm.

### Unit 3 - System Services and Security

Configure and manage system logging, time synchronization, printers, and task automation. Troubleshoot SELinux.

### Unit 4 - System Initialization

Define boot process, recover system, and manage service startup.

### Unit 5 - Kernel Monitoring and Configuration

Explore kernel modules and variants, tune kernel parameters, manage devices, and monitor processes and resources.

### Unit 6 - Network Configuration

Configure dynamic and static network settings for IPv4 and filter packets.

### Unit 7 - Filesystem Administration

Review filesystem management concepts, removable media and configure NFS shares with autofs.

### Unit 8 - Additional Storage

Expand storage by adding new filesystems and swap space.

### Unit 9 - User Administration

Create, modify and delete users, groups, and policy. Protect users and groups with quotas.

### Unit 10 - Filesystems for Group Collaboration

Establish collaborative group directories. Protect users and groups with ACLs.

### Unit 11 - Centralized User Administration

Revisit user administration by connecting to network directory services like NIS and LDAP.

### Unit 12 - Software RAID

Manage filesystems using Software RAID and recover an array.

### Unit 13 - Logical Volume Management

Manage filesystems using Logical Volume Management. Resize filesystems and protect them with LVM Snapshots.

### Unit 14 - Virtualization and Automated Installation

Perform automated installations of Red Hat Enterprise Linux. Create para-virtualized user domains in Xen.

### Unit 15 - Troubleshooting with Rescue Mode

Explore troubleshooting methodologies. Utilize the rescue environment of anaconda.