

Red Hat® Certified System Administrator (RHCSA)

RHCSA 7 Requirements and Syllabus

In preparation to earn the Red Hat Certified System Administrator (RHCSA),

Red Hat recommends the following:

For System Administrators / Freshers

- [Red Hat System Administration I \(RH124\)](#)
- [Red Hat System Administration II \(RH134\)](#)

Prerequisites for this course

There are no formal prerequisites for this course; however, previous operating system administration experience will be very beneficial.

The RHCSA certification is designed for:

- Experienced Red Hat Enterprise Linux system administrators seeking validation of their skills
- Students who have attended Red Hat System Administration I and II and are on the path to earn RHCSA certification
- Experienced Linux system administrators who require a certification either by their organization or based on a mandate (DOD 8570 directive)
- IT professionals who are on the path to earn a Red Hat Certified Engineer (RHCE®) certification
- RHCEs who are non-current or who are about to become non-current and wish to re-certify as RHCEs

REQUIREMENTS :

A Red Hat® Certified System Administrator (RHCSA) is able to perform the following tasks:

- Understand and use essential tools for handling files, directories, command-line environments, and documentation
- Operate running systems, including booting into different run levels, identifying processes, starting and stopping virtual machines, and controlling services
- Configure local storage using partitions and logical volumes
- Create and configure file systems and file system attributes, such as permissions, encryption, access control lists, and network file systems
- Deploy, configure, and maintain systems, including software installation, update, and core services
- Manage users and groups, including use of a centralized directory for authentication
- Manage security, including basic firewall and SELinux configuration

Ways To Train/Test

Classroom, or at Your Site.

Part 1: Red Hat System Administration I (RH124)

The core system administration tasks needed for Red Hat Enterprise Linux

This course relates to Red Hat® Enterprise Linux® 7. Red Hat System Administration I (RH124) is designed for IT professionals without previous Linux administration experience. The course focuses on providing students with Linux administration "survival skills" by focusing on core administration tasks.

COURSE OVERVIEW

Red Hat System Administration I provides a foundation for students wishing to become full-time Linux system administrators by introducing key command line concepts and other enterprise-level tools. These concepts are further developed in the follow-on course, Red Hat System Administration II (RH134).

Course content summary

- Introduction to the command line
- Managing physical storage
- Learning how to install and configure software components and services
- Establishing network connections and firewall access
- Monitoring and managing processes
- Managing and securing files
- Administrating users and groups
- Accessing Linux file systems
- Installing and using virtualized systems
- Reviewing the system log files and journal

Red Hat System Administration I (RH124) course outline

- **Access the command line**

Log in to a Linux system and run simple commands using the shell.

- **Manage files from the command line**

Copy, move, create, delete, and organize files from the bash shell prompt.

- **Get help in Red Hat Enterprise Linux**

Resolve problems by using online help systems and Red Hat support utilities.

- **Create, view, and edit text files**

Create, view, and edit text files from command output or in an editor.

- **Manage local Linux users and groups**

Manage local Linux users and groups, and administer local password policies.

- **Control access to files with Linux file system permissions**

Set Linux file system permissions on files and interpret the security effects of different permission settings.

- **Monitor and manage Linux processes**

Obtain information about the system, and control processes running on it.

- **Control services and daemons**

Control and monitor network services and system daemons using systemd

- **Configure and secure OpenSSH service**

Access and provide access to the command line on remote systems securely using OpenSSH

- **Analyze and store logs**

Locate and accurately interpret relevant system log files for troubleshooting purposes.

- **Manage Red Hat Enterprise Linux networking**

Configure basic IPv4 networking on Red Hat Enterprise Linux systems.

- **Archive and copy files between systems**

Archive files and copy them from one system to another.

- **Install and update software packages**

Download, install, update, and manage software packages from Red Hat and yum package repositories.

- **Access Linux file systems**

Access and inspect existing file systems on a Red Hat Enterprise Linux system.

- **Use virtualized systems**

Create and use Red Hat Enterprise Linux virtual machines with KVM and libvirt.

- **Comprehensive review**

Practice and demonstrate the knowledge and skills learned in this course.

Part 2: Red Hat System Administration II (RH134)

The core system administration tasks needed for Red Hat Enterprise Linux

This course is specifically designed for students who have completed Red Hat® System Administration I (RH124). Red Hat System Administration II (RH134) focuses on the key tasks needed to become a full time Linux® administrator.

Course overview

This course goes deeper into enterprise Linux administration including file systems and partitioning, logical volumes, SELinux, firewalling, and troubleshooting. Attending both Red Hat System Administration I and Red Hat System Administration II can help you in your preparation for the **Red Hat Certified System Administrator exam (EX200)**.

COURSE CONTENT SUMMARY

- Introduction to the command line
- Managing physical storage
- Learning how to install and configure software components and services
- Establishing network connections and firewall access
- Monitoring and managing processes
- Managing and securing files
- Administrating users and groups
- Accessing Linux file systems
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Red Hat System Administration II (RH134) course Outline

- **Automate installation with Kickstart**

Automate the installation of Red Hat Enterprise Linux systems with Kickstart.

- **Use regular expressions with grep**

Write regular expressions that, when partnered with grep, will allow you to quickly isolate or locate content within text files.

- **Create and Edit text files with vim**

Introduce the vim text editor, with which you can open, edit, and save text files.

- **Schedule future Linux tasks**

Schedule tasks to automatically execute in the future.

- **Manage priority of Linux processes**

Influence the relative priorities at which Linux processes run.

- **Control access to files with access control lists (ACL)**

Manage file security using POSIX access control lists.

- **Manage SELinux security**

Manage the Security Enhanced Linux (SELinux) behavior of a system to keep it secure in case of a network service compromise.

- **Connect to network-defined users and groups**

Configure systems to use central identity management services.

- **Add disks, partitions, and file systems to a Linux system**

Manage simple partitions and file systems.

- **Manage logical volume management (LVM) storage**

Manage logical volumes from the command line.

- **Access networked attached storage with network file system (NFS)**

Access (secure) NFS shares.

- **Access networked storage with SMB**

Use autofs and the command line to mount and unmount SMB file systems.

- **Control and troubleshoot the Red Hat Enterprise Linux boot process**

- **Limit network communication with firewall**

Configure a basic firewall.

- **Comprehensive review**

Practice and demonstrate knowledge and skills learned in this course.

Recommended next exam or course

Red Hat Certified System Administration exam (EX200)

Red Hat System Administration III (RH254)

Red Hat System Administration III with exam (RH255)

Red Hat Performance Tuning (RH442)

Red Hat Server Hardening (RH413)

Why EntersoftLabs:

- One on One Practical Oriented Hands-On Training ([No slideshow](#)).
- Training Classes would be handled by **Red Hat Certified Instructors (RHCI)**.
- Limited Batch Size and Real Time Expert Trainers.
- [Interactive and Involved Learning Methodologies](#).
- State of Art Technology.
- 99.99% Pass Guaranteed Training Program.

Red Hat Certification

Get certified. Hire certified.

Employers around the world trust Red Hat Certification

Red Hat® certifications are different from other IT certifications.

The Red Hat® certification program is a way to validate skills based on demanding, hands-on testing. To earn a Red Hat certification, you must pass a hands-on, practical exam in which you complete real-world tasks using our technologies rather than just being asked questions about the technology.

Red Hat® certification program helps you prove your skills and build your career. It also gives employers a meaningful way to find and develop qualified professionals.

More than 90% of Fortune Global 500 companies use Red Hat products and solutions.

Certified on Red Hat Enterprise Linux and find out what's possible tomorrow, today.

EntersoftLabs offers the following Red Hat certifications to validate the skills and knowledge of IT professionals who use Red Hat products.

Red Hat Sytem, Network & Security Administration

- Red Hat Certified System Administrator (RHCSA)
- Red Hat Certified Engineer (RHCE)

Red Hat Security

- Red Hat Certificate of Expertise in Server Hardening (RH413)

Cloud Computing, Virtualization & Storage

- Red Hat OpenStack Administration (CL210)
- Red Hat Enterprise Virtualization Administrator (RH318)
- Red Hat Storage Administration (RH236)

Red Hat Certified Architect (RHCA)

- Red Hat Enterprise Virtualization Administrator (RH318)
- Red Hat Certificate of Expertise in Server Hardening (RH413)
- Red Hat Certificate of Expertise in Deployment and Systems Management (RH401)
- Red Hat Certificate of Expertise in Clustering and Storage Management (RH436)
- Red Hat Certificate of Expertise in Performance Tuning (RH442)

Benefits of a Red Hat certification:

Earning a Red Hat certification gives you –

Recognition in the industry

- Proof of knowledge and skills.
- Use of the certification logo on CV
- Ability to access multiple Red Hat Certificated Professional (RHCP) online communities (like Facebook and LinkedIn).
- Certification verification tool for employers.
- Increased customer confidence.

Access to Red Hat Certification Central website, where you can:

- Download a certification logo.
- Participate in RHCP forums.
- List your online profile under your certification number.
- Special offers on training and events.

Red Hat® Certified System Engineer (RHCE)

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.

RHCE 7 Requirements and Syllabus

RHCE 7 Prerequisites

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.

- **RHCSA certification or equivalent experience**

RHCE 7 Course overview

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 firewalld 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\(RH124 & RH134\)](#) / [RHCSA Rapid Track Course \(RH199\)](#).

RHCE 7 Syllabus

- **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
- **Linux containers preview**
Preview the capabilities of Linux containers, Docker, and other related technologies in Red Hat Enterprise Linux 7
- **Comprehensive review**
Practice and demonstrate knowledge and skills learned in Red Hat System Administration III

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Recommended next exam or course

Red Hat Certified Engineer exam (EX300)

Red Hat Enterprise Virtualization (RH318)

Red Hat Enterprise Deployment and Systems Management (RH401)

Red Hat Enterprise Clustering and Storage Management (RH436)

Red Hat Enterprise System Monitoring and Performance Tuning exam (EX442)

Red Hat Server Hardening (RH413)

Red Hat OpenStack Administration (CL210)

Red Hat OpenShift Administration (CL280)

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