



RH299: RHCE Certification Lab

Red Hat

- **Nível:** Avançado
 - **Duração:** 27h
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Sobre o curso

Prepare for the Red Hat Certified Engineer exam (EX300)

The RHCE® Certification lab Classroom Training (RH299) is a facilitated lab environment for students to work at their own pace through a hands-on review prior to taking the Red Hat Certified Engineer (RHCE) exam (EX300).

Students attending this lab should have already completed their classroom training and simply be preparing to take or retake the exam. The delivery is focused primarily on lab time.

During the 4-day lab, students will work on their own through the complete set of labs from both the RHCSA (Red Hat Certified System Administrator) Rapid Track (RH199) and Red Hat System Administration III (RH254). The RHCE Certification Lab includes a few lectures designed to review key technologies such as systemd, firewalld, and IPv6. For the classroom and virtual classroom versions of this lab, a facilitator will be available throughout the week to assist students as they work through the exercises.

Lab content summary

- Managing and troubleshooting systemd services during the boot process
- Network configuration and basic troubleshooting
- Managing local storage, creating and using file systems
- Firewall management with firewalld
- Automating installation of Red Hat Enterprise Linux® using kickstart
- Manage SELinux settings
- Using NFS and Samba shared filesystems
- iSCSI initiator and target configuration
- Domain Name System (DNS) troubleshooting and caching name server
- Providing Network File System (NFS) and Server Message Block (SMB) file servers
- Apache HTTPD web server management

- MariaDB SQL database configuration
 - Postfix Simple Mail Transfer Protocol (SMTP) nullclient for servers
 - Bash scripting for automation
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Destinatários

- RHCEs on Red Hat Enterprise Linux 6 or earlier who wish to recertify on Red Hat Enterprise Linux 7
 - Students who previously attempted the RHCE exam, did not pass, and wish to retake the exam
 - Students who have completed the RHCE track courses (Red Hat System Administration I (RH124), Red Hat System Administration II (RH134), and Red Hat System Administration III (RH254) or equivalent) and would like additional hands-on practice prior to taking the RHCE exam
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Pré-requisitos

To qualify for this course, students must:

- Students should have already completed Red Hat System Administration I (RH124), Red Hat System Administration II (RH134), and Red Hat System Administration III (RH254) or equivalent training.
 - It is highly recommended students take our online [skills assessment](#) prior to enrolling in this course.
 - Extensive UNIX administration experience by itself is not adequate for most students.
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Programa

Subjects covered this outline are from [Red Hat System Administration I \(RH124\)](#), [Red Hat System Administration II \(RH134\)](#), and [Red Hat System Administration III \(RH254\)](#), but all may not be covered in your lab session.

- Local and remote logins
- File system navigation
- Users and groups
- File permissions
- SELinux permissions
- Process management
- Updating software packages
- Creating and mounting file systems
- Service management and boot troubleshooting
- Network configuration
- System logging and ntp

- Logical volume management
- Scheduled processes
- Mounting network file systems
- Firewall configuration
- Virtualization and kickstart
- Managing IPv6 networking
- Configuring link aggregation and bridging
- Controlling network port security
- Managing DNS for Servers
- Configuring E-mail Delivery
- Providing block-based storage
- Providing file-based storage
- Configuring MariaDB databases
- Providing Apache HTTPD Web Service
- Writing Bash scripts
- Bash conditionals and control structures
- Configuring the shell environment

NOTE: Course outline is subject to change as technology changes and as the nature of the underlying job evolves.

Subjects covered this outline are from [Red Hat System Administration I \(RH124\)](#), [Red Hat System Administration II \(RH134\)](#), and [Red Hat System Administration III \(RH254\)](#), but all may not be covered in your lab session.

Local and remote logins

Review methods for accessing the system and engaging Red Hat Support.

File system navigation

Copy, move, create, delete, link, and organize files while working from the Bash shell prompt.

Users and groups

Manage Linux users and groups and administer local password policies.

File permissions

Control access to files and directories using permissions and access control lists (ACLs).

SELinux permissions

Manage the SELinux behavior of a system to keep it secure in case of a network service compromise.

Process management

Evaluate and control processes running on a Red Hat Enterprise Linux system.

Updating software packages

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

Creating and mounting file systems

Create and manage disks, partitions, and filesystems from the command line.

Service management and boot troubleshooting

Control and monitor system daemons and troubleshoot the Red Hat Enterprise Linux boot process.

Network configuration

Configure basic IPv4 networking on Red Hat Enterprise Linux systems.

System logging and ntp

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

Logical volume management

Create and manage logical volumes from the command line.

Scheduled processes

Schedule tasks to automatically execute in the future.

Mounting network file systems

Use autofs and the command line to mount and unmount network storage with NFS and SMB.

Firewall configuration

Configure a basic firewall.

Virtualization and kickstart

Automate the installation of Red Hat Enterprise Linux on virtual machines with kernel-based virtual machine (KVM) and libvirt.

Managing IPv6 networking

Configure and troubleshoot basic IPv6 networking on Red Hat Enterprise Linux systems.

Configuring link aggregation and bridging

Configure and troubleshoot advanced network interface functionality including bonding, teaming, and local software bridges.

Controlling network port security

Permit and reject access to network services using advanced SELinux and firewalld filtering techniques.

Managing DNS for Servers

Set and verify correct DNS records for systems and configure secure-caching DNS.

Configuring E-mail Delivery

Relay all e-mail sent by the system to a SMTP gateway for central delivery.

Providing block-based storage

Provide and use networked iSCSI block devices as remote disks.

Providing file-based storage

Provide NFS exports and SMB file shares to specific systems and users.

Configuring MariaDB databases

Provide a MariaDB SQL database for use by programs and database administrators.

Providing Apache HTTPD Web Service

Configure Apache HTTPD to provide Transport Layer Security (TLS)-enabled websites and virtual hosts.

Writing 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.

Configuring the shell environment

Customize Bash startup and use environment variables, Bash aliases, and Bash functions.

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