

RHCE Certification lab (RH299)

Duration: 4 days

Course Description:

The RHCE® Certification lab (RH299) is designed for students seeking a hands-on, lab-based review prior to taking the Red Hat Certified Engineer (RHCE) exam. Students taking this course should have already completed their classroom training and simply be preparing to take or retake the exam.

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

Audience:

- 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, II, and III or equivalent) and would like additional hands-on practice prior to taking the RHCE exam III (RH254) course is recommended.

Prerequisites:

To qualify for this course, students must:

- Students should have already completed Red Hat System Administration I, II, and III 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.

Course content:

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.