

## Red Hat - Linux

### EX294: Red Hat Certified Engineer (RHCE) exam for Red Hat Enterprise Linux 8

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- 4 Hours

## Upcoming Dates

## Course Description

The performance-based Red Hat Certified Engineer (RHCE) exam for Red Hat Enterprise Linux 8 (EX294) tests your knowledge and skill in managing multiple systems using Red Hat® Ansible® Engine and executing common system administration tasks across a number of systems with Ansible. The skills tested in this exam are the foundation for system administration across many Red Hat products.

By passing this exam, you become an RHCE®, which also counts toward becoming a Red Hat Certified Architect (RHCA®).

This exam is based on Red Hat Enterprise Linux® 8 and Red Hat Ansible Engine 2.8.

## Preparation

Red Hat encourages you to consider taking Red Hat System Administration I (RH124), Red Hat System Administration II (RH134), and Red Hat System Administration III: Linux Automation with Ansible (RH294) to help prepare. Attendance in these classes is not required; students can choose to take just the exam.

While attending Red Hat classes can be an important part of your preparation, attending class does not guarantee success on the exam. Previous experience, practice, and native aptitude are also important determinants of success.

Many books and other resources on system administration for Red Hat products are available. Red Hat does not endorse any of these materials as preparation guides for exams. Nevertheless, you may find additional reading helpful to deepen your understanding.

## Exam format

This hands-on, practical exam requires you to use Red Hat Ansible Engine to perform real-world tasks. You will be provided with multiple systems and will be required to install and configure Ansible Engine and then use it to perform standard system administration tasks similar to what you would do on the job.

You will be required to create Ansible Playbooks and use those playbooks to configure systems for specific roles and behaviors. Your work will be evaluated by applying the playbooks created during the exam against freshly installed systems and verifying that those systems and services work as specified.

During the exam, you will be provided a list of tasks to accomplish related to the exam objectives. In most cases, the tasks will be described in terms of a specific end state that you must achieve. Your exam will be evaluated on whether your systems meet the criteria specified.

Internet access is not provided during the exam, and you will not be permitted to bring any hard copy or electronic documentation into the exam. This prohibition includes notes, books, or any other materials. For most exams, the documentation that ships with the product is available during the exam.

## Scores and reporting

Official scores for exams come exclusively from Red Hat Certification Central. Red Hat does not authorize examiners or training partners to report results to candidates directly. Scores on the exam are usually reported within 3 U.S. business days.

Exam results are reported as total scores. Red Hat does not report performance on individual items, nor will it provide additional information upon request.

## Course Outline

As an RHCE exam candidate, you should be able to handle all responsibilities expected of a Red Hat Certified System Administrator, including these tasks:

### Be able to perform all tasks expected of a Red Hat Certified System Administrator

- Understand and use essential tools
- Operate running systems
- Configure local storage
- Create and configure file systems
- Deploy, configure, and maintain systems
- Manage users and groups
- Manage security

### Understand core components of Ansible

- Inventories
- Modules
- Variables
- Facts
- Plays
- Playbooks
- Configuration files
- Use provided documentation to look up specific information about Ansible modules and commands

### Install and configure an Ansible control node

- Install required packages
- Create a static host inventory file
- Create a configuration file
- Create and use static inventories to define groups of hosts
- Manage parallelism

### Configure Ansible managed nodes

- Create and distribute SSH keys to managed nodes
- Configure privilege escalation on managed nodes
- Validate a working configuration using ad hoc Ansible commands

### Script administration tasks

- Create simple shell scripts
- Create simple shell scripts that run ad hoc Ansible commands

### Create Ansible plays and playbooks

- Know how to work with commonly used Ansible modules
- Use variables to retrieve the results of running a command
- Use conditionals to control play execution
- Configure error handling
- Create playbooks to configure systems to a specified state

## Use Ansible modules for system administration tasks that work with:

- Software packages and repositories
- Services
- Firewall rules
- File systems
- Storage devices
- File content
- Archiving
- Scheduled tasks
- Security
- Users and groups

## Work with roles

- Create roles
- Download roles from an Ansible Galaxy and use them

## Use advanced Ansible features

- Create and use templates to create customized configuration files
- Use Ansible Vault in playbooks to protect sensitive data

Create and use templates to create customized configuration files Work with Ansible variables and facts Create and work with roles Download roles from an Ansible Galaxy and use them Manage parallelism Use Ansible Vault in playbooks to protect sensitive data Use provided documentation to look up specific information about Ansible modules and commands

As with all Red Hat performance-based exams, configurations must persist after reboot without intervention.

## Audience

- Experienced Red Hat Enterprise Linux system administrators seeking validation of their skills or require a certification either by their organization or based on a mandate (DoD 8570 directive)
- Students who have taken Red Hat System Administration III: Linux Automation with Ansible (RH294) and are on the path to becoming a Red Hat Certified Engineer (RHCE)
- Students who are on the path to becoming a Red Hat Certified Architect (RHCA)
- Systems administrators who want to demonstrate competency in managing multiple systems
- IT professionals who work in a DevOps environment and want to demonstrate competency in automating part of their workload
- Red Hat Certified Engineers who are noncurrent or who are about to become noncurrent and wish to recertify as RHCEs

## Prerequisites

- Have either taken both Red Hat System Administration I (RH124) and Red Hat System Administration II (RH134) or RHCSA Rapid Track Course (RH199), or have comparable work experience as a system administrator on Red Hat Enterprise Linux
- Have taken Red Hat System Administration III: Linux Automation with Ansible (RH294) or have comparable work experience
- Review the Red Hat Certified System Administrator (RHCSA) exam (EX200) objectives
- Review the Red Hat Certified Engineer (RHCE) exam for Red Hat Enterprise Linux 8 (EX294) objectives

## What You Will Learn