RH-EX300 Red Hat Certified Engineer (RHCE) exam for Red Hat Enterprise Linux 7

Exam description

The performance-based Red Hat Certified Engineer (RHCE) exam for Red Hat Enterprise Linux 7 (EX300) tests to determine if your knowledge, skill, and ability meet those required of a senior system administrator responsible for Red Hat® Enterprise Linux® systems. Red Hat Certified System Administrator (RHCSA®) certification is required to earn RHCE® certification.

This exam and the exam objectives provided here are based on the Red Hat Enterprise Linux 7 version of the exam.

An RHCE certification is earned by a Red Hat Certified System Administrator (RHCSA) who has demonstrated the knowledge, skill, and ability required of a senior system administrator responsible for Red Hat Enterprise Linux systems.

Audience for this exam

- Experienced Linux IT professionals who currently have RHCSA certification and are interested in earning an RHCE certification
- Experienced Red Hat Enterprise Linux system administrators seeking validation of their skills
- Students who have attended the Red Hat System Administration I, II, and III courses or the RHCE Certification lab
- Experienced Linux system administrators who require a certification either by their organization or based on a mandate (DOD 8570 directive)
- An RHCE who is noncurrent and has passed the RHCSA exam

Prerequisites for this exam

- RHCE Rapid Track Course, System Administration I, II, or III or equivalent experience
- Real-world system administration experience

Not sure if you have the correct skill-set knowledge? Find out by passing the online skills assessment. Read the RHCE exam objectives for more information on skills requirements.

Study points for the exam

RHCE exam candidates should consult the RHCSA exam objectives and be capable of RHCSA-level tasks, as some of these skills may be required in order to meet RHCE exam objectives. Red Hat reserves the right to add, modify, and remove objectives. Such changes will be made public in advance through revisions to this document.

RHCE exam candidates should be able to accomplish the following without assistance. These have been grouped into several categories.

System configuration and management

- Use network teaming or bonding to configure aggregated network links between two Red Hat Enterprise Linux systems
- Configure IPv6 addresses and perform basic IPv6 troubleshooting
- Route IP traffic and create static routes
- Use firewalld and associated mechanisms such as rich rules, zones and custom rules, to implement packet filtering and configure network address translation (NAT)
- Configure a system to authenticate using Kerberos
- Configure a system as either an iSCSI target or initiator that persistently mounts an iSCSI target
- Produce and deliver reports on system utilization (processor, memory, disk, and network)
- Use shell scripting to automate system maintenance tasks

Network services

Network services are an important subset of the exam objectives. RHCE candidates should be capable of meeting the following objectives for each of the network services listed below:

- Install the packages needed to provide the service
- Configure SELinux to support the service
- Use SELinux port labeling to allow services to use non-standard ports
- Configure the service to start when the system is booted
- Configure the service for basic operation
- Configure host-based and user-based security for the service

HTTP/HTTPS

- Configure a virtual host
- Configure access restrictions on directories
- Deploy a basic CGI application
- Configure group-managed content
- Configure TLS security

DNS

- Configure a caching-only name server
- Troubleshoot DNS client issues

NFS

- Provide network shares to specific clients
- Provide network shares suitable for group collaboration
- Use Kerberos to control access to NFS network shares

SMB

- Provide network shares to specific clients
- Provide network shares suitable for group collaboration

SMTP

- Configure a system to forward all email to a central mail server

SSH

- Configure key-based authentication
- Configure additional options described in documentation

NTP

- Synchronize time using other NTP peers

Database services

- Install and configure MariaDB
- Backup and restore a database
- Create a simple database schema
- Perform simple SQL queries against a database

Preparation

To earn the RHCE credential, one must also pass the Red Hat Certified System Administrator (RHCSA) exam. Someone can enroll in and take the RHCE exam without first having passed the RHCSA exam, but RHCE certification will not be issued until both credentials are earned by a candidate. In the event that a candidate has not yet earned RHCSA, Red Hat will retain the candidate's RHCE exam record and will attach that record to a candidates' RHCSA record once it is earned at a later date.

Red Hat encourages all candidates for RHCE to consider taking one or more of its official training courses to help prepare. Attendance in these classes is not required, and one can choose to take just an exam. Many successful candidates who have come to class already possessing substantial skills and knowledge report that the class made a positive difference for them.

To help you determine the best courses to take, Red Hat provides online skills assessment.

While attending Red Hat's classes can be an important part of one's 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's products are available. Red Hat does not endorse any as preparation guides for any exams. Nevertheless, candidates may find additional reading deepens understanding and can prove helpful.

Exam format

The RHCE exam is a performance-based evaluation of Red Hat Enterprise Linux system administration skills and knowledge. Candidates perform a number of routine system administration tasks and are evaluated on whether they have met specific objective criteria. Performance-based testing means that candidates must perform tasks similar to what they must perform on the job.

The RHCE exam is a hands-on, practical exam that lasts 3.5 hours. Internet access is not provided during the exam. Outside materials are not permitted. Documentation that ships with Red Hat Enterprise Linux is available during the exam. Red Hat reserves the right to make changes to the format, including timing and the policies above. Such changes will be made public in advance through revisions to this document.

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.

InspiringWays Training

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