Red Hat - Linux

EX310: Red Hat Certified Engineer in Red Hat OpenStack exam

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- 1 Day

Upcoming Dates

Course Description

The Red Hat Certified Engineer (RHCE) in Red Hat OpenStack exam (EX310) tests your ability to configure advanced networking in a director-based Red Hat® OpenStack environment.

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

This exam is based on Red Hat OpenStack version 10.

Preparation

Red Hat encourages all candidates for the Red Hat Certified Engineer in Red Hat OpenStack exam to consider taking Red Hat OpenStack Administration I (CL110), Red Hat OpenStack Administration II (CL210), and Red Hat OpenStack Administration III: Networking & Foundations of NFV (CL310) 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 one's preparation to take this exam, 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 officially endorse any as preparation guides for its exam. Nevertheless, you may find additional reading deepens understanding and can prove helpful.

Exam format

This exam is a performance-based evaluation of Red Hat $^{®}$ Enterprise Linux$^{®}$OpenStack Platform 10 administration skills and knowledge. You perform a number of routine administration and configuration tasks and are evaluated on whether they have met specific objective criteria.

Performance-based testing means that you must perform tasks similar to what you perform on the job.

This is a single-section exam lasting 3 hours.

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 US 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

Study points for the exam

Red Hat recommends that you earn both RHCSA and RHCSA in Red Hat OpenStack credentials before attempting this exam, but it is not required. Note that to earn the RHCE in Red Hat OpenStack credential, you must be an RHCSA in Red Hat OpenStack and also pass the RHCE in Red Hat OpenStack exam. While it is possible to take these exams out of sequence, Red Hat strongly recommends earning the RHCSA in Red Hat OpenStack credential first.

To help you prepare, the exam objectives highlight the task areas you can expect to see covered in the exam. Red Hat reserves the right to add, modify, and remove exam objectives. Such changes will be made public in advance.

- Create and work with virtual devices

  1. Implement and manage Linux bridges
  2. Implement and manage OpenvSwitch bridges
  3. Implement and manage libVirt bridges

- Manage OpenStack networking agents

  1. Provision tenant networks with DHCP agents
  2. Enable the Load Balancer as a Service (LBAAS) and deploy instances using the LBAAS
  3. Manage metadata agent
  4. Manage metering agent

- Deploy IPv6 networks in OpenStack

  1. Create a tenant network with IPv4 and IPv6
  2. Attach an IPv6 floating IP to an instance

- Provision OpenStack networks

  1. Implement network namespaces
  2. Provision tenant networks using VXLAN, VLAN, and GRE

- Implement distributed virtual routing (DVR)

  1. Create a DVR router
  2. Create instances that use the DVR router

- Tune network functions virtualization (NFV) performance

  1. Deploy EPA
  2. Tune cloud applications

- Implement NFV datapaths

  1. Deploy OpenvSwitch Data Plane Development Kit (OVS-DPDK)
  2. Configure Red Hat OpenStack Platform so that instances can use OVS-DPDK
  3. Configure quality of service (QoS) limits

- Build software-defined networks with OpenDaylight

  1. Implement OpenDaylight
  2. Manage networks with OpenDaylight

Audience

These audiences may be interested in becoming an RHCE in Red Hat OpenStack:

- Experienced OpenStack system administrators responsible for the planning or deployment of Red Hat OpenStack
- Experienced OpenStack system administrators who want to demonstrate their capability in network functions virtualization (NFV)
- An RHCSA in Red Hat OpenStack interested in earning an RHCE in Red Hat OpenStack credential
- An RHCE interested in earning a Red Hat Certified Specialist or RHCSA credential

Prerequisites

- Red Hat Certified Engineer or demonstrate equivalent knowledge
- Red Hat Certified Systems Administrator in Red Hat OpenStack or demonstrate equivalent knowledge

What You Will Learn