

# RED HAT® CERTIFIED ENGINEER (RHCE®) IN RED HAT OPENSTACK EXAM (EX310, EX310K)

Course Code: 3938

The Red Hat Certified Engineer (RHCE) in Red Hat OpenStack exam (EX310, EX310K) 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®).

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This exam is based on Red Hat OpenStack version 10.

*(The exam based on Red Hat OpenStack version 6 may be available via on-site and individual exams. To inquire, please reach out to your Account Manager or call 1-800-COURSES)*

## What You'll Learn

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.

Study points for the exam:

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

Implement and manage Linux bridges

Implement and manage OpenvSwitch bridges

Implement and manage libVirt bridges

Manage OpenStack networking agents

Provision tenant networks with DHCP agents

Enable the Load Balancer as a Service (LBAAS) and deploy instances using the LBAAS

Manage metadata agent

Manage metering agent

Deploy IPv6 networks in OpenStack

Create a tenant network with IPv4 and IPv6

Attach an IPv6 floating IP to an instance

Provision OpenStack networks

Implement network namespaces

Provision tenant networks using VXLAN, VLAN, and GRE

Implement distributed virtual routing (DVR)

Create a DVR router

Create instances that use the DVR router

Tune network functions virtualization (NFV) performance

Deploy EPA

Tune cloud applications

Implement NFV datapaths

Deploy OpenvSwitch Data Plane Development Kit (OVS-DPDK)

Configure Red Hat OpenStack Platform so that instances can use OVS-DPDK

Configure quality of service (QoS) limits

Build software-defined networks with OpenDaylight

Implement OpenDaylight

Manage networks with OpenDaylight

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

## Who Needs to Attend

The following audiences may be interested in earning the RHCE in Red Hat OpenStack:

- Experienced OpenStack system administrators responsible for the planning or deployment of Red Hat Ceph Storage as a back end for OpenStack
- An RHCSA in Red Hat OpenStack interested in earning a RHCE in Red Hat OpenStack credential
- An RHCE interested in earning a Red Hat Certificate of Expertise or RHCSA credential

## Prerequisites

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.

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