Red Hat OpenStack Administration III: Distributed Architecture and Scaling For Edge Computing (CL 310)

COURSE OVERVIEW:

You will learn how to manage the OpenStack networking service (Neutron) with network functions virtualization to enhance network performance. You will configure distributed virtual routers, Open vSwitch with Data Plane Development Kit datapath, and IPv6 networking in OpenStack. You will also deploy software-defined networking with OpenDaylight.

- Network functions virtualization (NFV)
- Distributed virtual router (DVR)
- Open vSwitch with Data Plane Development Kit (OVS-DPDK) datapath
- IPv6 networking
- Single-root I/O Virtualization (SR-IOV)
- Software-defined networking (SDN) with OpenDaylight (ODL)
- VLAN, VXLAN, and GRE networks

*SR-IOV is covered in the course as a lecture and a video. The specification is not covered as a hands-on exercise because it requires special hardware.

WHO WILL BENEFIT FROM THIS COURSE?

This course is designed for network engineers, network operators, cloud administrators, and cloud operators.

PREREQUISITES:

- Become a Red Hat Certified System Administrator (RHCSA), or demonstrate equivalent experience
- Complete the Red Hat® Certified System Administrator in Red Hat OpenStack exam (EX210), or demonstrate equivalent experience

COURSE OBJECTIVES:

As a result of attending this course, you should be able to design and tune a Red Hat OpenStack Platform environment meeting the high-network performance requirements of your organization.

You should be able to demonstrate these skills:

- Design and implement high-performing software-defined networks.
- Provide higher-performing networks using enhanced platform awareness (EPA), Open vSwitch Data Plane Development Kit (OVS-DPDK), and network functions virtualization (NFV).

Recommended next exam or course:

- Red Hat Certified Engineer in Red Hat OpenStack exam (EX310)

COURSE OUTLINE:

Manage networks in Linux

- Administer network interfaces, bridges, and virtual networking devices.

Deploy IPv6 networks

- Set up IPv6 networks in OpenStack.

Provision OpenStack networks

- Provision tenant networks and provider networks.

Implement distributed virtual routing

- Enable distributed virtual routing (DVR) to provide scaling and performance.

Tune NFV performance

- Tune OpenStack networking performance.

Implement NFV data paths

- Execute network functions virtualization (NFV) data paths.

Build software-defined networks with OpenDaylight

- Create software-defined networks with OpenDaylight (ODL).

Comprehensive review of Red Hat OpenStack Administration III

- Configure advanced networking on Red Hat® OpenStack Platform.

SUNSET LEARNING INSTITUTE (SLI) DIFFERENTIATORS:

Sunset Learning Institute (SLI) has been an innovative leader in developing and delivering authorized technical training since 1996. Our goal is to help our customers optimize their cloud technology investments by providing convenient, high quality technical training that our customers can rely on. We empower students to master their desired technologies for their unique environments.

What sets SLI apart is not only our immense selection of trainings options, but our convenient and consistent delivery system. No matter how complex your environment is or where you are located, SLI is sure to have a training solution that you can count on!

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- All SLI instructors have a four-year technical degree, instructor level certifications and field consulting work experience.
- Sunset Learning has won numerous Instructor Excellence and Instructor Quality Distinction awards since 2012

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- The goal of our instructors during class is ensure students understand the material, guide them through our labs and encourage questions and interactive discussions.

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