OpenStack Administration: Control Plane Management

Course code: CL170

As of January 2026, only in-person Red Hat training is available for purchase under the original terms. Virtual training (VT) courses are offered exclusively as part of the annual RHLS Course subscription can be found here.How to schedule a virtual course in the Red Hat Learning Subscription can be found here.Use Red Hat OpenShift to manage OpenStack services and RHEL compute nodes that run VM-based workloads.OpenStack Administration: Control Plane Management (CL170) helps Red Hat OpenStack cluster administrators to manage the health and performance of OpenStack control plane services, to troubleshoot issues by inspecting Kubernetes operators and workloads, and to configure OpenStack control plane services by using Kubernetes custom resources. This course is based on Red Hat OpenShift Services on OpenStack 18.

Who is the course for

Platform Engineers, Cloud Administrators, and System Administrators interested in managing, tuning, and troubleshooting Red Hat OpenStack clusters.

What we teach you

- Check the health of OpenStack operators and workloads and identify disabled or misconfigured services.
- Collect troubleshooting information from OpenStack control and data planes for customer support requests.
- Enable and customize OpenStack control plane services by configuring the control plane custom resource.
- Check the health of OpenStack compute notes and identify missing or misconfigured data plane services.
- Remove and replace or reprovision failed compute nodes.

Required skills

- Take our
- free assessment
- to gauge whether this offering is the best fit for your skills.
- Successful completion of Red Hat System Administration I (RH124) is recommended.
- Recommended, but not required: Red Hat System Administration II (RH134) and Red Hat Enterprise Linux Automation with Ansible (RH294) or demonstrate equivalent skills.
- Basic data center storage concepts: storage protocols, NAS, and SAN.
- Data center networking concepts: ISO model, VLANs, firewalls, and Internet protocols, including but not limited to ICMP, IP, and HTTP.
- Basic object storage concepts, such as experience with AWS S3, are useful but not required.
- Ceph administration skills are useful but not required.

Course outline

Inspecting OpenStack Services on OpenShift

Identify OpenStack services on OpenShift and assess the health of the OpenStack operator and its dependent resources.

Customizing OpenStack Services

Enable and disable OpenStack services and customize them.

Verifying OpenStack API Connectivity

Identify the resources that connect an OpenStack control plane to its data plane.

Verifying Connectivity to OpenStack Cell Services

Verify that an OpenStack cell is connected to its database and messaging services, and validate the additional services that enable connections to it from compute nodes.

Accessing Storage Resources in OpenStack

Verify the status and connectivity of OpenStack storage resources.

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Verifying Reliable OpenStack Services

Configure and assess high availability of an OpenStack control plane and its supporting services such as MariaDB and RabbitMQ.

Verifying Network Encryption for OpenStack Services

Inspect the configuration of OpenStack components and verify that the network communication uses certificate-based encryption.

Inspecting Data Plane Services and Compute Nodes

Identify OpenStack data plane resources and assess their health.

Customizing an OpenStack Data Plane

Apply custom configuration to data plane node sets and verify the applied settings.led compute nodes.

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