Red Hat Training and Certification

CL740
Red Hat OpenStack Services on OpenShift Boot Camp

Red Hat OpenStack Services on OpenShift Boot Camp immerses you in intensive, hands-on management of Red Hat's implementation of Kubernetes, Red Hat OpenShift Container Platform, at enterprise scale, in preparation for the installation and management of Red Hat Openstack Services on OpenShift. This course is for those seeking to understand the fundamentals of Red Hat OpenShift Container Platform, ensuring their journey with Red Hat Openstack Services on OpenShift is coherent, consistent, and logical.

As part of enrollment, you will receive one year of Red Hat Learning Subscription Standard, which gives you unlimited access to all of our courses online, and can take up to 5 unique exams and can retake any of those exams in the event you do not successfully pass.

This collection of courses is based on Red Hat OpenShift Container Platform 4.14 and Red Hat OpenStack Services on OpenShift 18.0.

Course content summary

- Introduction to Kubernetes and OpenShift
- Kubernetes and OpenShift Command-line Interfaces and APIs
- Run Applications as Containers and Pods
- Manage Storage for Application Configuration and Data
- Declarative Resource Management
- Authentication and Authorization
- Network Security
- OpenShift Updates, Logging, and Monitoring
- OpenStack Administration: Control Plane Management

Audience for this course

- System Administrators responsible for administering Red Hat OpenStack Services on OpenShift, OpenStack operators responsible for Day 2 operations, OpenStack/OpenShift Engineers responsible for the day-to-day management of the Red Hat OpenShift Container Platform.

Prerequisites for this course

- Become a Red Hat Certified System Administrator (RHCSA), or equivalent experience and knowledge.

Outline for this course

- **Introduction to Kubernetes and OpenShift**
  - Identify the main Kubernetes cluster services and OpenShift platform services, and monitor them from the web console.

- **Kubernetes and OpenShift Command-line Interfaces and APIs**
  - Access an OpenShift cluster from the command line, and query its Kubernetes API resources to assess the health of a cluster.

- **Run Applications as Containers and Pods**
  - Run and troubleshoot containerized applications as unmanaged Kubernetes pods.

- **Manage Storage for Application Configuration and Data**
  - Externalize application configurations in Kubernetes resources, and provision storage volumes for persistent data files.

- **Declarative Resource Management**
  - Deploy and update applications from resource manifests that are parameterized for different target environments.

- **Authentication and Authorization**
  - Configure authentication with the HTPasswd identity provider and assign roles to users and groups.

- **Network Security**
  - Protect network traffic between applications inside and outside the cluster.

- **OpenShift Updates, Logging, and Monitoring**
  - Update an OpenShift cluster and minimize disruption to deployed applications.
  - Troubleshoot performance and availability issues with applications and clusters.
  - Deploy OpenShift logging and query log entries from workloads and cluster nodes.

- **Managing Clusters by Using Red Hat Advanced Cluster Management for Kubernetes**
  - Import and manage a cluster by using the RHACM web console, configure user access to clusters, and troubleshoot common import issues.

- **Deploying and Managing Policies for Multiple Clusters with RHACM**
  - Deploy and manage policies in a multicluster environment by using Red Hat Advanced Cluster Management for Kubernetes (RHACM) governance.

Course reference: https://www.redhat.com/en/services/training/cl740-red-hat-openstack-services-on-openshift-boot-camp

- **Enabling and Customizing the Red Hat Advanced Cluster Management for Kubernetes Observability**
    - Monitor a fleet of managed clusters and troubleshoot performance and availability issues by using RHACM observability components.
- **OpenStack Administration: Control Plane Management**
    - Identify the Red Hat OpenShift architecture and resources, navigate the graphical and command-line interfaces, and find information about commands.
    - Identify OpenStack services on OpenShift and assess the health of the OpenStack operator and its dependent resources.

Impact on the individual

As a result of attending this course, you should be able to configure and manage a Red Hat OpenShift Container Platform 4 clusters at scale, including:

- Configure security controls for users, applications, and networking.
- Integrate OpenShift with enterprise authentication, storage, and GitOps systems to improve productivity of IT operations and compliance with organization's standards.
- Troubleshoot techniques to identify issues with containerized applications, cluster operators, and compute capacity.

As a result of taking this course, Red Hat OpenStack administrators will be empowered to monitor the health of OpenStack data planes and configure compute nodes by using the transformative capabilities of Kubernetes custom resources and Ansible Playbooks.

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