Red Hat OpenShift Administration I: Operating a Production Cluster

Duration: 4 Days Course Code: DO180

Overview:

Deploy, manage, and troubleshoot containerized applications running as Kubernetes workloads in OpenShift clusters.
Course Description
Red Hat OpenShift Administration I: Managing Containers and Kubernetes (DO180) prepares OpenShift cluster administrators to manage Kubernetes workloads and to collaborate with developers, DevOps engineers, system administrators, and SREs to ensure the availability of application workloads. This course focuses on managing typical end-user applications that are often accessible from a web or mobile UI and that represent most cloud-native and containerized workloads. Managing applications also includes deploying and updating their dependencies, such as databases, messaging, and authentication systems.
The skills that you learn in this course apply to all versions of OpenShift, including Red Hat OpenShift on AWS (ROSA), Azure Red Hat OpenShift, and OpenShift Container Platform.
This course is based on Red Hat OpenShift 4.12.
Note: This course is five days. Durations may vary based on the delivery. For full course details, scheduling, and pricing, select your location then “get started” on the right hand menu.
Course Content Summary
- Managing OpenShift clusters from the command-line interface and from the web console.
- Troubleshooting network connectivity between applications inside and outside an OpenShift cluster.
- Connecting Kubernetes workloads to storage for application data.
- Configuring Kubernetes workloads for high availability and reliability.
- Managing updates to container images, settings, and Kubernetes manifests of an application.

Target Audience:

- System administrators and platform operators who are interested in managing OpenShift clusters and containerized applications.
- Site Reliability Engineers who are interested in maintaining and troubleshooting containerized applications on Kubernetes.
- System and software architects who are interested in learning and using the features and functions of an OpenShift cluster.
- Developers and Site Reliability Engineers that are new to container technology should enroll in Red Hat OpenShift Development I: Introduction to Containers with Podman (DO188).

Objectives:

- **Impact on the Organization**

- This course is intended to develop the skills needed to manage Red Hat OpenShift clusters and support containerized applications that are highly available, resilient, and scalable. Red Hat OpenShift is an enterprise-hardened application platform based on Kubernetes that provides a common set of APIs and abstractions that enable application portability across cloud providers and traditional data centers. Red Hat OpenShift adds consistency and portability of operational processes across these environments and can also be deployed as a managed service. An external SRE team shares the responsibility of managing Red Hat OpenShift clusters with a customer’s IT operations team when using a managed OpenShift offering such as Red Hat OpenShift on AWS (ROSA) or Azure Red Hat OpenShift.

- **Impact on the Individual**

- As a result of attending this course, students will understand the architecture of Red Hat OpenShift clusters and of Kubernetes applications, and will be able to deploy, manage, and troubleshoot applications on OpenShift. Students will also be able to identify and escalate application and infrastructure issues to development teams, operation teams, and IT vendors.

Prerequisites:

Recommended training

- Take our free assessment to gauge whether this offering is the best fit for your skills.
- Prerequisite: Containers, Kubernetes and Red Hat OpenShift

Testing and Certification

Recommended next course or exam

Red Hat OpenShift Administration II: Operating a Production Kubernetes Cluster (DO280)

Technical Overview or equivalent knowledge of Linux containers.

Red Hat Certified OpenShift Administrator exam (EX280)

Introduction to Red Hat OpenShift Service on AWS (DO120)

Introduction to Microsoft Azure Red Hat OpenShift (DO121)

Follow-on-Courses:

- DO288 - Red Hat OpenShift Development II: Containerizing Applications
- DO280 - Red Hat OpenShift Administration II: Configuring a Production Cluster

Content:

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.

Deploy Managed and Networked Applications on Kubernetes

Deploy applications and expose them to network access from inside and outside a Kubernetes cluster.

Manage Storage for Application Configuration and Data

Externalize application configurations in Kubernetes resources, and provision storage volumes for persistent data files.

Configure Applications for Reliability

Configure applications to work with Kubernetes for high availability and resilience.

Manage Application Updates

Manage reproducible application updates and rollbacks of code and configurations.

Additional Information:

Technology considerations
This course requires internet access to access the cloud-based classroom environment that provides an OpenShift cluster and a remote administrator's workstation.

Further Information:

For More information, or to book your course, please call us on 00 20 (0) 2 2269 1982 or 16142

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