RED HAT OPENSHIFT ADMINISTRATION I: OPERATING A PRODUCTION CLUSTER (DO180)

Course Code: 6488

DO180 - Deploy, manage, and troubleshoot containerized applications running as Kubernetes workloads in OpenShift clusters.

Red Hat OpenShift Administration I: Operating a Production Cluster (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 4.14.

Following course completion, hands-on lab access will remain available for up to 45 days for any live course that includes a virtual environment.

Note: This course is offered as a four day in classroom, a five day virtual class, or self-paced.

What You'll Learn

After this course participants should be able to:

- Manage OpenShift clusters from the command-line interface and from the web console
- Deploy applications on OpenShift from container images, templates, and Kubernetes manifests
- Troubleshoot network connectivity between applications inside and outside an OpenShift cluster
- Connect Kubernetes workloads to storage for application data

- Configure Kubernetes workloads for high availability and reliability
- Manage updates to container images, settings, and Kubernetes manifests of an application

Participants 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. They will also be able to identify and escalate application and infrastructure issues to development teams, operation teams, and IT vendors.

Who Needs to Attend

- **Primary:** Platform Engineers, System Administrators, Cloud Administrators, and other infrastructure-related IT roles who are responsible for tier-1 support of infrastructure for applications. who are interested in managing OpenShift clusters and containerized applications.
- **Secondary:** Enterprise Architects, Site Reliability Engineers, DevOps Engineers, and other application-related IT roles who are responsible for designing infrastructure for applications.

NB: 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)

Prerequisites

Recommended:

- RedHat free course Containers, Kubernetes and Red Hat OpenShift Technical Overview (DO080) or equivalent knowledge of Linux containers.
- RedHat free course Getting Started with Linux Fundamentals (RH104) or equivalent proficiency in using a command line interface, ideally operating a Bash shell, is required.

Confirmation of the correct skill set knowledge can be obtained by passing the online skills assessment at Red Hat Skills Assessment

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CLASSROOM LIVE	$4,700 USD	4 Day

Classroom Live Outline

Introducing container technology

- Describe how software can run in containers orchestrated by Red Hat OpenShift Container Platform.

Creating containerized services

- Provision a service using container technology.

Managing containers

- Modify pre-build container images to create and manage containerized services.

Managing container images

- Manage the life cycle of a container image from creation to deletion.

Creating custom container images

- Design and code a Container file to build a custom container image.

Deploying containerized applications on OpenShift

- Deploy single container applications on OpenShift Container Platform.

Deploying multi-container applications

- Deploy applications that are containerized using multiple container images.

Troubleshooting containerized applications

- Troubleshoot a containerized application deployed on OpenShift.

Comprehensive review of introduction to container, Kubernetes, and Red Hat OpenShift

- Demonstrate how to containerize a software application, test it with Podman, and deploy it on an OpenShift cluster.

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VIRTUAL CLASSROOM LIVE	$4,700 USD	5 Day

Virtual Classroom Live Outline

1. **Introduction to Kubernetes and OpenShift**
   - Identify the main Kubernetes cluster services and OpenShift platform services, and monitor them from the web console.
2. **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.
3. **Run Applications as Containers and Pods**
   - Run and troubleshoot containerized applications as unmanaged Kubernetes pods.
4. **Deploy Managed and Networked Applications on Kubernetes**
   - Deploy applications and expose them to network access from inside and outside a Kubernetes cluster.
5. **Manage Storage for Application Configuration and Data**
   - Externalize application configurations in Kubernetes resources, and provision storage volumes for persistent data files.
6. **Configure Applications for Reliability**
   - Configure applications to work with Kubernetes for high availability and resilience.
7. **Manage Application Updates**
   - Manage reproducible application updates and rollbacks of code and configurations.

Dec 15 - 19, 2025 | 11:00 AM - 5:00 PM EST

Jan 5 - 9, 2026 | 11:00 AM - 5:00 PM EST

Jan 19 - 22, 2026 | 10:30 AM - 6:30 PM EST

Feb 9 - 12, 2026 | 10:30 AM - 6:30 PM EST

Feb 23 - 27, 2026 | 11:00 AM - 5:00 PM EST

Mar 9 - 12, 2026 | 10:30 AM - 6:30 PM EDT

Mar 23 - 26, 2026 | 10:30 AM - 6:30 PM EDT

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ON-DEMAND	$3,995 USD

On-Demand Outline

1. **Introduction to Kubernetes and OpenShift**
   - Identify the main Kubernetes cluster services and OpenShift platform services, and monitor them from the web console.
2. **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.
3. **Run Applications as Containers and Pods**
   - Run and troubleshoot containerized applications as unmanaged Kubernetes pods.
4. **Deploy Managed and Networked Applications on Kubernetes**
   - Deploy applications and expose them to network access from inside and outside a Kubernetes cluster.
5. **Manage Storage for Application Configuration and Data**
   - Externalize application configurations in Kubernetes resources, and provision storage volumes for persistent data files.
6. **Configure Applications for Reliability**
   - Configure applications to work with Kubernetes for high availability and resilience.
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PRIVATE GROUP TRAINING	4 Day

Visit us at www.globalknowledge.com or call us at 1-866-716-6688.

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