ADEPT LEARN

# DO180 Red Hat OpenShift Administration I: Operating a Production Cluster

**Course Overview**

The DO180 Red Hat OpenShift Administration I: Operating a Production Cluster course provides a comprehensive introduction to OpenShift, the Containerization software, and its underlying technology, Kubernetes. This course is an excellent starting point for IT professionals looking to achieve Red Hat Kubernetes certification as it covers the fundamental concepts and practical skills needed to operate a production Kubernetes cluster. Students will learn to Monitor cluster services, utilize Command-line interfaces, Run and deploy containerized applications, manage storage and configurations, ensure application reliability, and troubleshoot effectively. With a hands-on approach, this introduction to OpenShift equips learners with the expertise to manage Kubernetes resources and deploy applications in a real-world environment, making them valuable assets in the rapidly evolving landscape of container orchestration.

**Audience Profile**

The DO180 Red Hat OpenShift Administration I course equips IT professionals with the skills to effectively manage Kubernetes and OpenShift clusters.

- System Administrators
- Cloud Administrators
- DevOps Engineers
- IT Architects
- Software Developers focusing on containerization
- Site Reliability Engineers (SREs)
- Technical IT Professionals interested in container technologies
- Application Administrators
- IT Operations Staff
- Infrastructure Automation Professionals
- Technical Project Managers overseeing container-based deployments

**Course Syllabus**

**Introduction to Kubernetes and OpenShift**

- Identify the primary Kubernetes cluster services and OpenShift platform services.
- Monitor cluster health using the OpenShift web console.

**Kubernetes and OpenShift Command-Line Interfaces and APIs**

- Access an OpenShift cluster through the command line.
- Query Kubernetes API resources to evaluate cluster health.

**Run Applications as Containers and Pods**

- Deploy and troubleshoot containerized applications using unmanaged Kubernetes pods.

**Deploy Managed and Networked Applications on Kubernetes**

- Deploy applications on Kubernetes and configure network exposure for access both inside and outside the cluster.

**Manage Storage for Application Configuration and Data**

- Externalize application configurations using Kubernetes resources.
- Provision storage volumes to persist application data files.

**Configure Applications for Reliability**

- Optimize applications for high availability and resilience using Kubernetes features.

**Manage Application Updates**

- Implement reproducible application updates and manage rollbacks of code and configurations.