Red Hat OpenShift Administration III: Scaling Deployments in the Enterprise (DO380) Training

Duration: **5 Day**

BILGINC IT Academy
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Plan, implement, and manage Red Hat OpenShift clusters at enterprise scale.

The {*training} provides advanced OpenShift skills for administrators responsible for operating production-grade clusters.
You will learn how to design, configure, and maintain **OpenShift clusters that scale to meet complex application demands**, while ensuring performance, reliability, and security.

This course builds on the foundational knowledge of OpenShift cluster administration and introduces advanced cluster management techniques — including **GitOps automation, observability, authentication, and data protection**.

> *This course is based on Red Hat OpenShift Container Platform 4.14.*

Prerequisites

- Completion of **Red Hat OpenShift Administration II: Operating a Production Kubernetes Cluster (DO280)**
- Achievement of **Red Hat Certified Specialist in OpenShift Administration**
- Completion of **Red Hat System Administration II (RH134)** and **Red Hat Certified System Administrator (RHCSA)** certification
- Recommended: Knowledge of **Ansible Automation** or equivalent automation experience

Who Should Attend

Primary Audience:

- Platform Engineers
- System Administrators
- Cloud Administrators
- Infrastructure Engineers responsible for OpenShift environments

Secondary Audience:

- Enterprise Architects
- Site Reliability Engineers (SREs)
- DevOps Engineers
- Application Infrastructure Specialists

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What You Will Learn

By the end of this {*training}, you will have gained knowledge and skills in the following areas:

- Manage OpenShift cluster operators and **add new Operators** for extending functionality.
- Implement **GitOps workflows** with the OpenShift GitOps operator.
- Integrate OpenShift clusters with **enterprise identity providers** using LDAP or OIDC.
- Configure and monitor **logs, metrics, and alerts** across the entire cluster.
- Perform **application backups and restores** using OpenShift APIs for Data Protection (OADP).
- Manage **machine pools, node groups, and machine configurations** for workload isolation and optimization.

Impact on the Organization

Enterprises expanding their **container adoption journey** require scalable and automated cluster management solutions.
This course empowers IT operations teams to:

- Manage **multiple OpenShift clusters** efficiently across hybrid and multicloud environments.
- Improve **resilience and observability** of applications through centralized logging and monitoring.
- Integrate **enterprise authentication** and security for compliance.
- Simplify operations with **GitOps-based automation** and consistent configuration management.

By mastering the skills in this course, teams can accelerate innovation, reduce operational overhead, and ensure reliable performance across large-scale Kubernetes environments.

Impact on the Individual

By completing this course, participants will be able to:

- Configure dedicated machine pools and isolate workloads for optimal performance.
- Integrate LDAP and OIDC authentication with OpenShift identity management.
- Implement **centralized logging and log forwarding** to third-party aggregators or SIEM platforms.
- Deploy and manage **GitOps workflows** for automated application delivery.
- Monitor and troubleshoot **performance and availability** with OpenShift Monitoring.
- Use OADP to automate **data backup and recovery** operations.

This course gives administrators the expertise to **operate OpenShift clusters at scale**, ensuring high reliability, consistent governance, and streamlined automation for enterprise environments.

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Training Outline

1. Authentication and Identity Management
Configure OpenShift clusters to authenticate using enterprise identity systems such as LDAP or OIDC, and manage user groups defined in those systems.

2. Backup, Restore, and Migration with OADP
Use OpenShift APIs for Data Protection (OADP) to back up and restore application data, configurations, and persistent storage.

3. Cluster Partitioning
Design node pools and dedicate subsets of cluster nodes for specific workload types to improve performance and security.

4. Pod Scheduling and Workload Placement
Use scheduling rules and affinity settings to ensure workloads are deployed only on designated cluster nodes.

5. Implementing OpenShift GitOps
Deploy and configure the **OpenShift GitOps Operator** to automate cluster configuration and application deployment using Git repositories as a source of truth.

6. OpenShift Monitoring
Set up and utilize **metrics, alerts, and dashboards** to troubleshoot and optimize application and cluster performance.

7. OpenShift Logging
Deploy and configure **OpenShift Logging**, aggregate logs from workloads and nodes, and forward them to external SIEM or analytics systems.