Global Horizon
TRAINING CENTER

Training Course:
OpenShift Red Hat Administration

23 - 27 December 2024
Manchester (UK)

Training Course:
OpenShift Red Hat Administration

Training Course code: IT235090 From: 23 - 27 December 2024 Venue: Manchester (UK) - Training Course Fees: 5775 ⬚ Euro

Introduction

OpenShift, developed by Global Horizon, It simplifies containerized applications' deployment, management, and scaling, making it easier for organizations to adopt and utilize container technology. This training program aims to equip participants with the essential skills and knowledge required to effectively administer OpenShift clusters, ensuring smooth application deployment, robust networking, efficient storage management, and comprehensive monitoring.

Methodologies

The training will follow a combination of interactive lectures, hands-on lab exercises, real-world scenarios, and demonstrations. Participants will have access to a dedicated OpenShift cluster for practice throughout the training, allowing them to gain practical experience in a controlled environment. The hands-on approach will enable participants to apply their learning in real-time, reinforcing key concepts and best practices.

Target Audience

This training program is designed for IT professionals, DevOps engineers, system administrators, and cloud administrators who have a foundational understanding of containerization, Kubernetes concepts, and basic command-line usage. Participants should be familiar with Linux operating systems and have experience working with containers and container orchestration technologies.

Objectives

By the end of this training program, participants will be able to:

1. Explain the key features and benefits of OpenShift as a containerization platform.
2. Install, configure, and manage OpenShift clusters in various deployment scenarios.
3. Understand the core components of OpenShift and their roles in container orchestration.
4. Deploy and manage applications using Pods, Deployments, and ReplicaSets.
5. Implement effective networking and routing strategies to ensure seamless communication between applications.
6. Set up and manage persistent storage for containerized applications using Persistent Volume Claims and Storage Classes.
7. Use ConfigMaps and Secrets to manage application configurations securely.
8. Leverage Operators to extend the functionality of OpenShift and automate complex tasks.
9. Monitor the health and performance of OpenShift clusters using Prometheus and Grafana.

10. Centralize log management for troubleshooting and analysis using Elasticsearch and Kibana.

Outline

Day 1: Introduction to OpenShift and Installation

- Overview of containerization and Kubernetes
- Introduction to OpenShift and its features
- Understanding OpenShift architecture and components
- Preparing the environment for OpenShift installation
- Installing OpenShift using the web console or CLI
- Configuring authentication and access control

Day 2: Application Deployment and Management

- Creating and managing Pods
- Working with Deployments and ReplicaSets
- Using labels and selectors for managing applications
- Scaling applications and auto-scaling strategies
- Deploying applications using source-to-image S2I

Day 3: Services, Networking, and Storage

- Working with Services in OpenShift
- Understanding different service types: ClusterIP, NodePort, LoadBalancer
- Configuring networking and routing in OpenShift
- Implementing Network Policies for secure communication
- Configuring Persistent Storage in OpenShift
- Working with Persistent Volume Claims PVC and Storage Classes

Day 4: Advanced Topics in OpenShift

- Managing application configurations with ConfigMaps
- Securing sensitive information using Secrets
- Introduction to OpenShift Operators
- Installing and using Operators from the OperatorHub
- Working with Custom Resource Definitions CRDs and Custom Resources CRs
- Integrating OpenShift with external systems using OAuth and Identity Providers

Day 5: Monitoring, Logging, and Troubleshooting

- Monitoring cluster health and performance
- Using Prometheus and Grafana for monitoring
- Centralized logging with Elasticsearch and Kibana
- Troubleshooting common issues in OpenShift
- Best practices for maintaining and securing OpenShift clusters.

Registration form on the Training Course: OpenShift Red Hat Administration

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Payment Method

☐ Please find enclosed a cheque made payable to Global Horizon

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