

[DO285]: Containers, Kubernetes and Red Hat OpenShift Administration I

Length : 5 Days
Delivery Method : Instructor-led (Classroom)

Course Overview

Through an introduction to Docker, Kubernetes, and Red Hat OpenShift Platform, this course helps you understand one of the key tenets of the DevOps movement: continuous integration and continuous deployment. Containers have become a key technology for the configuration and deployment of applications and microservices. Kubernetes is a container orchestration platform that provides foundational services in Red Hat OpenShift Container Platform, which allows enterprises to manage container deployments and scale their applications using Kubernetes.

In addition to gaining an understanding of these tools, you will build core administration skills through the installation, configuration, and management of an OpenShift cluster.

Course summary

- Learn about container, Docker, and OpenShift architecture
- Create containerized services
- Manage containers and container images
- Create custom container images
- Deploy multi-container applications
- Install an OpenShift cluster
- Configure and manage masters and nodes
- Secure OpenShift
- Control access to resources on OpenShift
- Monitor and collect metrics on OpenShift
- Deploy applications on OpenShift using source-to-image (S2I)
- Manage storage on OpenShift

Audience Profile

- Developers who want to containerize software applications
- Administrators who are new to container technology and container orchestration
- Architects who are considering using container technologies in software architectures
- System administrators and System architects who want to learn more about OpenShift
- Architects and developers who want to install and configure OpenShift

AVANTUS TRAINING PTE LTD

80 Jurong East Street 21 #04-04 Devan Nair Institute Singapore 609607
Main Line: +65 6661 0888 | Fax: +65 6661 0886
Email: enquiries@AvantusTraining.com
www.AvantusTraining.com

At Course Completion

Impact on the organization

This course is intended to develop the skills needed to containerize software applications and deploy them to a Red Hat® OpenShift Container Platform cluster. These skills allow you to take advantage of a platform and architecture that fosters DevOps principles in your organization. Red Hat OpenShift Container Platform provides a self-provisioning environment for developers to deploy their applications using DevOps patterns such as continuous integration and deployment. Many language and database runtimes, containerized Red Hat Middleware, and more are provided to reduce the need for custom containerization by the developer, thereby reducing time to market.

Impact on the individual

As a result of attending this course, you should be able to containerize applications for deployment on the Red Hat OpenShift Container Platform.

You should be able to demonstrate these skills:

- Install OpenShift Container Platform to create a simple cluster.
- Configure and manage Openshift master and nodes
- Secure OpenShift with a simple internal authentication mechanism.
- Control access to resources on OpenShift.
- Deploy applications on OpenShift using source-to-image(S2I).
- Configure and manage OpenShift pods, services, routes, secrets, and other resources.

Pre-Requisites

- Have ability to use a Linux terminal session and issue operating system commands
- Become a Red Hat Certified System Administrator (RHCSA) or demonstrate equivalent knowledge
- Have experience with web application architectures and their corresponding technologies

Course Outline

Module 1: Describe container technology

Lessons

- Describe how software can run in containers orchestrated by the OpenShift Container Platform

Module 2: Create containerized services

Lessons

- Provision a server using container technology

AVANTUS TRAINING PTE LTD

80 Jurong East Street 21 #04-04 Devan Nair Institute Singapore 609607

Main Line: +65 6661 0888 | Fax: +65 6661 0886

Email: enquiries@AvantusTraining.com

www.AvantusTraining.com

Module 3: Manage containers

Lessons

- Manipulate pre-built container images to create and manage containerized services

Module 4: Manage container image

Lessons

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

Module 5: Create custom container images

Lessons

- Design and code a Dockerfile to build a custom container image

Module 6: Deploy multi-container applications

Lessons

- Deploy applications that are containerized using multiple container images

Module 7: Install OpenShift container platform

Lessons

- Install OpenShift and configure the cluster

Module 8: Explore Openshift Networking concepts

Lessons

- Describe and explore OpenShift networking concepts

Module 9: Deploy containerized applications on OpenShift

Lessons

- Deploy Single container applications on OpenShift container platform

Module 10: Execute commands

Lessons

- Execute commands using the command-line interface

Module 11: Control resource access

Lessons

- Control access to OpenShift resources

Module 12: Allocate persistent storage

Lessons

- Implement persistent storage

Module 13: Manage application deployments

Lessons

- Manipulate resources to manage deployed applications

Module 14: Install the metrics subsystem

Lessons

- Install and configure the metrics gathering system

AVANTUS TRAINING PTE LTD

80 Jurong East Street 21 #04-04 Devan Nair Institute Singapore 609607

Main Line: +65 6661 0888 | Fax: +65 6661 0886

Email: enquiries@AvantusTraining.com

www.AvantusTraining.com

Module 15: Manage OpenShift container platform

Lessons

- Manage and monitor OpenShift resources and software

Module 16: Deploy Multi-Container applications on OpenShift

Lessons

- Deploy applications that are containerized using multiple container images on an Openshift cluster

AVANTUS TRAINING PTE LTD

80 Jurong East Street 21 #04-04 Devan Nair Institute Singapore 609607

Main Line: +65 6661 0888 | Fax: +65 6661 0886

Email: enquiries@AvantusTraining.com

www.AvantusTraining.com