DO 180 – Introduction to Containers, Kubernetes, and Red Hat OpenShift

Days: 3

Description:

- Understand container, Docker, and Red Hat OpenShift architecture.
- Create containerized services.
- Manage containers and container images.
- Create custom container images.
- Deploy containerized applications on Red Hat OpenShift.
- Deploy multi-container applications.

Prerequisites:

- Be able to use a Linux terminal session, issue operating system commands, and be familiar with shell scripting
- Have experience with web application architectures and their corresponding technologies
- Being a Red Hat Certified System Administrator (RHCSA®) is recommended, but not required

Audience:

- Developers who wish to containerize software applications
- Administrators who are new to container technology and container orchestration
- Architects who are considering using container technologies in software architectures
- Site reliability engineers who are considering using Kubernetes and Red Hat OpenShift

Course Objectives: As a result of attending this course, you should be able to perform these basic tasks in Red Hat OpenShift Container Platform:

- Create containerized services using Podman.
- Manage containers and container images.
- Create custom container images.
- Deploy containerized applications on Red Hat OpenShift.
- Deploy multi-container applications.

Recommended next exam or course:

- Preliminary Exam in Containers, Kubernetes, & Openshift (PE180)
- Red Hat OpenShift Development I: Containerizing Applications (DO288)
- OpenShift Enterprise Administration (DO280)

OUTLINE:

INTRODUCE CONTAINER TECHNOLOGY

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

CREATE CONTAINERIZED SERVICES

- Provision a server using container technology.

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MANAGE CONTAINERS

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

MANAGE CONTAINER IMAGES

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

CREATE CUSTOM CONTAINER IMAGES

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

DEPLOY CONTAINERIZED APPLICATIONS ON RED HAT OPENSHIFT

- Use single container applications on Red Hat OpenShift Container Platform.

DEPLOY MULTI-CONTAINER APPLICATIONS

- Set up applications that are containerized using multiple container images.

TROUBLESHOOT CONTAINERIZED APPLICATIONS

- Regulate a containerized application deployed on Red Hat OpenShift.

COMPREHENSIVE REVIEW OF CURRICULUM

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