Red Hat - Containerizing Software Applications with exam

Through hands-on labs, students will take a monolithic application and break it down into its distinct services thereby illustrating how containers are an excellent vehicle for microservices architecture deployment. Containerizing Software Applications with exam (DO277) introduces you to deploying applications in containers using Docker and Kubernetes. Learn how to design containers for the deployment of an existing application across multiple containers, build and test those containers using Docker, and deploy the application in a Kubernetes cluster to achieve high availability and load balancing.

- This course also includes the exam, Red Hat Certificate of Expertise in Containerized Application Development (EX276).

Skills Gained
- Creating containers using Docker
- Working with image registries
- Providing persistent storage to a container
- Creating new images using Dockerfiles
- Implementing image design recommended practices
- Linking containers
- Orchestrating containers using Kubernetes
- Provisioning development and testing environments with Vagrant

Who Can Benefit
This course is intended for developers, architects, and system administrators who wish to learn how to deploy containerized applications using Red Hat® Enterprise Linux® Atomic Host software and what changes might make them well-behaved applications in a container environment.

Prerequisites
- Have familiarity with general programming and scripting concepts.
- Have familiarity with one or more of the following languages: JavaScript, Java EE™, PHP, and Python.
- Have an understanding of the runtime environment configuration for the language of choice.
- Have familiarity with relational database concepts and a basic knowledge of SQL; MySQL experience is recommended.
Course Details

Course introduction
Introduce and review the course.

Get started with containers
Provision a database server using container technology.

Work with containers
Work with and manipulate existing container images to produce containerized services.

Manage images
Manage the life cycle of an image from creation to deletion.

Create custom images
Design and code a Dockerfile to build a custom container image.

Design container images for application deployment
Design and build a custom container image for the deployment of an application over multiple containers.

Test containerized application deployment
Deploy a multi-container application using Kubernetes.

Troubleshoot containerized applications
Utilize various techniques to troubleshoot a containerized application.

Provision development environments
Provision a development environment using the Red Hat CDK.

Comprehensive review of containerizing software applications
Demonstrate how to containerize a software application.

- Have basic Red Hat Enterprise Linux administration skills; Red Hat Certified System Administrator (RHCSA) certification recommended.