

Developing Applications with Red Hat OpenShift Serverless and Knative

Course code: D0244

Develop and deploy event-driven auto-scaling serverless applications and functions. Learn how to develop, deploy, and auto-scale event-driven serverless applications on the Red Hat OpenShift Container Platform. Red Hat OpenShift Serverless enables developers and Site Reliability Engineers (SREs) to focus on the core business logic of their applications and functions by delegating operational concerns and infrastructure services to the Red Hat® OpenShift Serverless platform. This course is based on Red Hat OpenShift Serverless 1.23 and OpenShift Container Platform 4.10.

Who is the course for

- Cloud-native application developers interested in developing serverless applications
- Site Reliability Engineers and OpenShift Administrators interested in using serverless technologies to automate operations and developing utility tools to manage and monitor their applications.

What we teach you

- Understand OpenShift Serverless architecture and primary features of Knative for serverless applications.
- Implement cloud-native serverless applications using Knative serving.
- Implement event-driven serverless applications using Knative eventing.
- Implement serverless applications using OpenShift Serverless functions.

Required skills

- Complete Red Hat OpenShift I: Containers & Kubernetes (D0180) or demonstrate equivalent knowledge.
- Complete Red Hat OpenShift Development II: Containerizing Applications (D0288) or demonstrate equivalent knowledge.
- Experience programming REST APIs in Java or JavaScript (Node.js) is required.

Course outline

Introduction to Red Hat OpenShift Serverless and Knative

Describe the architecture of Red Hat OpenShift Serverless

Develop Serverless Applications by using Knative Serving

Deploy and scale serverless applications with Knative Serving

Develop Event-driven Serverless Applications by using Knative Eventing

Implement event-driven serverless applications using Knative Eventing

Develop Applications by Using OpenShift Serverless Functions

Implement serverless applications using OpenShift Serverless Functions

What you need to know

Impact on the organization

Cloud-native serverless applications minimize the effort spent configuring and scaling infrastructure, allowing developers and Site Reliability Engineers (SREs) to bring products and services to market quickly. Red Hat OpenShift Serverless allows organizations to decrease development time by focusing on the core business functions of their applications, and allows integration with both internal and external applications. Developers can rapidly build event-driven custom workflows using standard protocols and familiar developer tooling. SREs can automate tasks with simple functions that respond to events.

Impact of this training

As a result of attending this course, you will be able to accelerate the time to market for cloud-native applications by minimizing time spent on operational and scaling aspects. You will be able to achieve this through learning and demonstrating the following skills:

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- Develop serverless applications locally, learn how to unit test them, build container images with using Containerfiles, and deploy the container image to a registry
- Deploy serverless applications to an OpenShift cluster from a container registry
- Auto-scale, version control and perform traffic splitting of serverless applications using Knative Serving
- Develop event-driven applications using Knative Eventing
- Develop serverless functions in multiple programming languages using Red Hat OpenShift Serverless Functions

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