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Learning Style: On Demand

Technology:

Difficulty: Beginner

Course Duration:

Jenkins Essentials (LFS267)



About this Course:

The DevOps movement is in full swing, with development and operations teams working jointly on software development projects. This means it is essential for DevOps engineers, quality assurance staff, site reliability engineers and others to be familiar with the available tools for managing continuous integration and continuous delivery activities. One of the most important CI/CD tools is Jenkins, the open source automation server that provides hundreds of plugins to support

building, deploying and automating any project. The Jenkins Essentials training course from The Linux Foundation and Continuous Delivery Foundation prepares you to scale a Jenkins CI/CD server using containerized and cloud-based solutions, use Jenkins multi-branch pipelines to enable pipeline creation at the repository level, and use Infrastructure as Code and GitOps principles with Jenkins. It provides a solid understanding of containerized installation, distributed builds in Kubernetes clusters, advanced security features, multi-branch pipelines concepts.

Course Objectives:

In this course, students will learn how to set up Jenkins in a Kubernetes cluster, automate Jenkins installation using IaC concepts, set up a highly available Jenkins server, scale Jenkins infrastructure by leveraging static and dynamic build agents, automate various routine Jenkins tasks using CLI and RestAPI, organize Jenkins jobs and implement fine-grained security controls, set up effective CI/CD feedback loops, set up complex multi-branch pipelines simulating real-life scenarios, and automate pull request workflow using GitOps principles. After completing this course, students will be able to scale a Jenkins CI/CD server using containerized and cloud-based solutions, use Jenkins multi-branch pipelines to enable pipeline creation at the repository level, and use Infrastructure as Code (IaC) and GitOps principles with Jenkins. These skills will prepare students for SRE, DevOps, and release engineer roles

Audience:

This course is designed for DevOps engineers, Quality Assurance personnel, SREs as well as software developers and architects who want to gain expertise with Jenkins CI/CD. Before enrolling, students should have a basic knowledge of Jenkins and be familiar with Kubernetes and Docker

Prerequisites:

- Basic knowledge of Jenkins – We recommend the Introduction to Jenkins edX course
- Basic knowledge of Kubernetes (pods, namespaces, volumes, Role Based Access Control (RBAC)) – We recommend Introduction to Kubernetes edX course
- Basic knowledge of concepts of building and using Docker images

Course Outline:

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