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Learning Style: On Demand

Technology: Linux Foundation

Difficulty: Beginner

Course Duration: 40 Hours

DevOps and SRE Fundamentals: Implementing Continuous Delivery (LFS261)

About This Course:

This course will help you to be agile and deliver features rapidly, while at the same time being able to achieve non-functional requirements such as availability, reliability, scalability, security, and more.

Course Objectives:

- This course introduces the fundamentals of Continuous Integration/Continuous Delivery (CI/CD) within an open container ecosystem and takes a project-based approach to help you understand and implement key practices. Key learnings include the role played by Docker and Kubernetes, using Git for revision control, how to install and configure Jenkins as a Continuous Integration platform, enforcing development workflows as code reviews, application packaging and distribution with Docker and Docker Registry using Argo CD to set up a deployment pipeline and much more.

Audience:

- This DevOps fundamentals course is for developers who would like to learn how to deliver software safer, faster and reliably; for quality analysts who would like to set up automated testing, leverage disposable environments, and integrate it with CI tools; for operations engineers, system administrators, DevOps/SRE practitioners responsible for deploying software and managing production environments; and build and release engineers who would like to learn how to deploy software safely and continuously.

Prerequisites:

To make the most out of this course, you will need to have:

- Basic Linux and system administration knowledge
- Understanding of software delivery process

Course Outline:

- Chapter 1: Introduction
- Chapter 2: Exploring CI/CD Concepts and Tools
- Chapter 3: Before You Begin: Lab Environment Configuration
- Chapter 4: Container Operations with Docker
- Chapter 5: Version Control with Git
- Chapter 6: Setting Up Continuous Integration with Jenkins
- Chapter 7: GitHub Branch Policies & Pipeline as Code with Jenkinsfile
- Chapter 8: Using Docker with Jenkins Pipelines

- Chapter 9: Docker Images
- Chapter 10: Launching a Multi-Service Application with Docker Compose
- Chapter 11: Automated Code Analysis
- Chapter 12: SRE and Deploying a Scalable Application to Kubernetes
- Chapter 13: SRE, GitOps and CD with Argo CD