

# **GitOps: Continuous Delivery on Kubernetes with Flux (LFS269)**

Master the art of automating Kubernetes deployments by implementing GitOps – the set of practices that enable developers to carry out tasks that traditionally fell to operations personnel – with Flux CD.

**Duration:** 5 Days

## **Prerequisites for this course**

- Familiarity with Kubernetes (pods, ReplicaSets, deployments, services, namespaces, kubectl and YAML specs, CRDs, controllers/operators), Helm and Kustomize
- Familiarity with git (branching, merging, remotes, pull requests, branching models, protected branches, code reviews)
- Basic familiarity with Continuous Integration/Continuous Delivery (building pipelines, setting up automated builds, tests, building artifacts and images, etc.)

## **Outline for this course**

Chapter 1 – Course Introduction

Chapter 2 – Introduction to Flux CD

Chapter 3 – Setting up a Learning Environment

Chapter 4 – Kubernetes Essentials for a GitOps Practitioner

Chapter 5 – Essentials of Git Workflows

Chapter 6 – Deploying Your Application on Kubernetes with Flux

Chapter 7 – Kustomizing Kubernetes Deployments

Chapter 8 – Integrating with Helm

Chapter 9 – Monitoring and Alerting

Chapter 10 – Integrating CI with CD using Tekton

Chapter 11 – Achieving Multi-Tenancy with Flux

Chapter 12 – Building Release Strategies with Service Mesh and Flagger

Chapter 13 – Securing GitOps Workflows