

**GitOps Using Flux**

**Course Number:** GIT-122WA  
**Duration:** 1 day

**Overview**

Flux is a popular continuous delivery solution for Kubernetes. In this GitOps Using Flux training course, attendees learn the fundamentals of GitOps and how to use Flux to manage continuous integration and continuous (CI/CD) delivery of their applications and infrastructure. Participants come away with a strong understanding of GitOps principles and the skills needed to use Flux to implement GitOps in their organization.

**Prerequisites**

All attendees must have experience deploying applications to Kubernetes.

**Materials**

All GitOps training attendees receive comprehensive course materials.

**Software Needed on Each Student PC**

* Git 2.x or later
* Flux
* Related lab files that Accelebrate provides
* Internet access for all attendees and the instructor

**Objectives**

* Understand the benefits of GitOps
* Set up Flux in a Kubernetes cluster
* Deploy an application using Flux
* Protect secure data using Apache SOPS

**Outline**

* Introduction to GitOps
  + What is GitOps?
  + Benefits of GitOps
  + Common GitOps tools
  + A Typical GitOps workflow
* Introduction to Flux
  + What is Flux?
  + Key components of Flux
  + Installing Flux
  + Bootstrapping Flux
  + Bootstrap switches
  + A review of the components
  + Manifest files created by bootstrap
* Deploy Application Using Flux
  + Create deployment manifest files
  + Create the kustomization File
  + Create a Source for the Application
  + Specify the location of the kustomization file
  + Deploying the application
  + Troubleshooting deployment
* Encrypt Secrets Using SOPS
  + K8s (Kubernetes) Secrets
  + Defining a Secret
  + Using the Secrets from an Application
  + Secrets and GitOps
  + The Basic Workflow
* Conclusion