

**GitOps Using ArgoCD**

**Course Number:** GIT-124WA  
**Duration:** 1 day

**Overview**

GitOps provides a workflow for automating the deployment of applications and infrastructure to Kubernetes clusters and cloud platforms. ArgoCD, an open-source GitOps continuous delivery tool, provides a continuous delivery tool for Kubernetes. This GitOps Using ArgoCD training course teaches attendees how GitOps works, covering all aspects of a basic workflow and the benefits of using GitOps over other Continuous Deployment approaches. Participants come away with a solid understanding of GitOps principles and how to deploy an application to Kubernetes using ArgoCD.

**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
* ArgoCD and related lab files that Accelebrate provides
* Internet access for all attendees and the instructor

**Objectives**

* Understand the benefits of GitOps
* Set up ArgoCD in a Kubernetes cluster
* Deploy an application using ArgoCD
* Administer ArgoCD using the command line tool and in a declarative way

**Outline**

* Introduction to GitOps
  + What is GitOps?
  + Benefits of GitOps
  + Common GitOps Tools
  + A Typical GitOps Workflow
* Introduction to ArgoCD
  + What is ArgoCD?
  + Basic Workflow
  + Advantages of ArgoCD
  + Installing ArgoCD
  + Access The Argo CD API Server
  + Log into the Web UI
* Deploy an Application Using ArgoCD
  + Basic Steps
  + Storing the Deployment YAML Files
  + Define a Git Repo in ArgoCD
  + Create an Application in ArgoCD
  + Synchronization of an Application
  + Application Health Monitoring
* Application Synchronization
  + Synchronization Basics
  + Enable Automatic Synchronization
  + View Synchronization History
  + Disaster Recovery
  + Self-Healing
  + Pruning Resources
  + Undeploy an Application
  + Setup Webhook
* Declarative and CLI-Based Administration
  + Alternative ArgoCD Management Interfaces
  + ArgoCD CLI
  + Logging in Using the CLI
  + Create a Git Repo Using the CLI
  + Manage an Application using CLI
  + Undeploy an Application using CLI
  + Declarative Management
  + Define a Git Repo Declaratively
  + Create an Application Declaratively
* Conclusion