

Argo CD and Helm Charts (3 days)

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Day 1

What Is Argo CD?

Intro and Topics

- Understanding Containers and Kubernetes
- Understanding Helm and Kustomize
- Understanding GitOps Core Concepts
- History and Overview of Argo CD
- Understanding Argo CD Core Concepts and Architecture
- Understanding Supported Tooling with Argo CD

Intro and Topics

- Requirements for Argo CD
- Deploying Argo CD
- Accessing the Argo CD API Server
- Using the Argo CD Command Line Interface (CLI)
- Demo: Tour of Argo CD Web User Interface
- Upgrading Argo CD
- Setting up RBAC for Argo CD
- Configuring User Management in Argo CD
- Setting up Secrets Management with Argo CD
- High Availability, Backup, and Disaster Recovery with Argo CD
- Configuring Webhooks with Argo CD
- Monitoring and Notifications with Argo CD

Intro and Topics

- Registering a Kubernetes Cluster with Argo CD
- Setting up Projects in Argo CD
- Using Repositories with Argo CD
- Deploying an App Using Argo CD
- Demo: Deploy an Application to a Kubernetes Cluster via Argo CD
- Application Sync & Rollback
- Deleting Applications
- Application Health & Status Reporting

Day 2

- Create Application using UI
- Create Application using CLI

Create ArgoCD Project

- Reconciliation loop
- Git Webhook Configuration
- Lab – ArgoCD Application Reconciliation
- Application health
- Application Custom Health Check
- Types of Sync Strategies
- Application Synchronization Options

- Declarative Setup
- Declarative Setup – Mono Application
- App of Apps
- Declarative Setup – App of Apps
- Deploy apps using HELM Chart
- Deploy apps using HELM Chart
- Multi-cluster application deployment
- Multi-cluster application deployment
- Explore Multi-Cluster, Declarative, and Helm-Chart Deployment

Day 3

- CICD with GitOps (04:14)
- Git Repositories, Dockerfile and Application Walkthrough
- Jenkinsfile Walkthrough
- CICD Pipeline Demo
- ArgoCD Feedback

- ArgoCD Vault Plugin CLI
- ArgoCD Vault Plugin with ArgoCD
- ArgoCD Metrics & Monitoring
- ArgoCD Metrics & Monitoring-2
- Monitoring through Prometheus + Grafana
- Raise Alert using AlertManager
- ArgoCD Notifications
- ArgoCD Notifications with Slack