multisoft
Systems

Helm Training

COURSE CONTENT

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About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with top technologies to bring world-class one-on-one and certification trainings. With the goal to empower professionals and business across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training; project Based Training, comprehensive learning solution with lifetime e-learning access, after training support and globally recognized training certificates.

About Course

Helm Training by Multisoft Systems is designed to help DevOps engineers, system administrators, and Kubernetes practitioners master one of the most powerful tools for managing applications on Kubernetes. As Kubernetes deployments grow in scale and complexity, Helm simplifies the process by enabling consistent, repeatable, and automated application packaging, configuration, and release management.

Module 1: Introduction to Helm

- ✓ What is Helm?
- ✓ Benefits of Helm in Kubernetes
- ✓ Key concepts: Charts, Repositories, Releases
- ✓ Helm vs Kustomize
- ✓ Real-world use cases

Module 2: Helm Architecture & Components

- ✓ Helm Client & Helm Server (Tiller) – Legacy & Modern (Helm 3)
- ✓ Chart structure explained
- ✓ Values, Templates & Chart.yaml
- ✓ Understanding Release Lifecycle

Module 3: Installing & Configuring Helm

- ✓ Helm installation on Linux/Windows/Mac
- ✓ Setting up Kubernetes cluster (Minikube/Kind/Cloud)
- ✓ Helm CLI basics
- ✓ Using Helm with kubectl
- ✓ Authentication & RBAC configurations

Module 4: Working with Helm Charts

- ✓ Creating your first Helm chart
- ✓ Chart directory layout
- ✓ Template files and standard naming
- ✓ Adding dependencies
- ✓ Using helm create effectively

Module 5: Helm Templates & Functions

- ✓ Go templating language basics

- ✓ Template expressions & pipelines
- ✓ Variables, Values, and Overrides
- ✓ Conditional and logical operators
- ✓ Loops, ranges, and inclusion patterns
- ✓ Using lookup, required, default functions
- ✓ Debugging templates (helm lint, helm template)

Module 6: Managing Values & Environments

- ✓ Values.yaml explained
- ✓ Overriding values with CLI & separate files
- ✓ Environment-based values (dev/stage/prod)
- ✓ Deep merging strategies
- ✓ Using Schema files (values.schema.json)

Module 7: Helm Repositories

- ✓ Adding, removing, and searching repositories
- ✓ Hosting private Helm repositories
- ✓ Artifact Hub usage
- ✓ Repository security & access control
- ✓ Chart signing & verification

Module 8: Deploying Applications with Helm

- ✓ Installing and upgrading releases
- ✓ Helm rollout strategies
- ✓ Versioning and release management
- ✓ Handling failed releases & rollbacks
- ✓ Using Helm hooks
- ✓ Managing Stateful applications with Helm

Module 9: Advanced Helm Chart Development

- ✓ Writing custom helpers
- ✓ Creating reusable templates
- ✓ Managing chart dependencies
- ✓ Packaging & distributing charts
- ✓ Helm best practices for enterprise
- ✓ Using subcharts and global values

Module 10: CI/CD Integration with Helm

- ✓ Helm in Jenkins pipelines
- ✓ Helm with GitHub Actions/GitLab CI
- ✓ Using Helm with Argo CD & Flux CD
- ✓ Automated testing and chart versioning
- ✓ GitOps workflows using Helm

Module 11: Security & Governance

- ✓ Securing charts and values
- ✓ Secret management with Helm
- ✓ Helm + Kubernetes RBAC
- ✓ Policy enforcement (OPA, Kyverno, Gatekeeper)
- ✓ Trusted chart repositories

Module 12: Helm with Cloud Providers

- ✓ Helm on AWS EKS
- ✓ Helm on Azure AKS
- ✓ Helm on Google GKE
- ✓ Using cloud-native add-ons from Helm charts