DevOpsSchool

Course curriculum · November 2026

LEVEL 04 OF 04 · ADVANCED

Helm Advanced Training

Run Helm at scale with signed charts, policy checks, GitOps delivery and well-governed chart libraries.

LIVE ONLINE **Max 8-10 hours**	CORPORATE (DAY-WISE) **5 days · Days 1-5**	SELF-PACED VIDEO **1-year LMS access**
BATCH SIZE **Max 10 learners**	NEXT BATCHES **1st of every month · weekends: first Saturday**	CERTIFICATE **Verifiable certificate of completion**

Foundation	Essential	Intermediate	Advanced
1 day · Included	2 days · Included	3 days · Included	5 days · This curriculum

INSIDE THIS CURRICULUM

What you will achieve	Outcomes and level focus
Who should attend	Audience and prerequisites
Agenda	48 topics · Foundation to Advanced
Hands-on labs	4 labs
Formats and fees	Live, 1:1, self-paced, corporate
Trainer and reviews	Rajesh Kumar
Enrolment	Batches, payment, contacts

WHY DEVOPSSCHOOL

- Rated 4.6 on Google
- 1,500+ verifiable certificates issued in the public registry
- Trainer Rajesh Kumar: 20 years in industry
- Small batches: max 10 learners, every session recorded

Course page: www.devopsschool.com/courses/kubernetes/helm-advance-training.html
Talk to us: WhatsApp +91 99057 40781 · +1 (469) 756-6329 · contact@DevOpsSchool.com · reply within 1 hour

OUTCOMES

What you will achieve

By the end of the Helm course path, you will be able to:

1

Deploy apps with Helm

Install, configure, upgrade and roll back Kubernetes applications using Helm charts.

2

Author reusable charts

Write, test and publish well-structured charts with templating, dependencies and hooks.

3

Run Helm in production

Secure, govern and deliver charts at scale through CI/CD and GitOps.

WHAT THE ADVANCED LEVEL ADDS

Best practices, supply chain security and GitOps

Hands-on: Ship a signed chart through GitOps. Sign and publish a chart to an OCI registry, enforce policy checks in CI and deliver it to staging and production with Argo CD or Flux.

WHO SHOULD ATTEND

- Experienced Helm practitioners responsible for quality, security and scale.
- Senior engineers, architects and leads who design and troubleshoot Helm solutions.
- Teams making Helm an organisation-wide standard.

BEFORE YOU START

- The Intermediate level, or equivalent hands-on experience.
- You can already: Publish charts to repositories and OCI registries, manage dependencies, use hooks and test charts in CI.
- Basic computer skills and a laptop with a stable internet connection for the live sessions and labs.
- This curriculum includes every earlier level, so it is complete on its own.

AGENDA · FOUNDATION TO ADVANCED

Helm Advanced Training agenda

48 topics. Each level builds on the one before it, so this curriculum lists every earlier level in full. Days are for corporate (day-wise) delivery; live online batches cover the same agenda in max 8-10 hours.

DAY 1 — Foundation: Helm concepts, installation and first release

Included from Foundation

1. Introduction to Helm and Kubernetes: the basics of Helm and how it fits into the Kubernetes ecosystem
2. Helm concepts: charts, releases, revisions, repositories and values
3. Helm architecture: client-only design since Helm 3 (no Tiller) and release records stored as Secrets
4. Installing Helm: setting up Helm on your local machine with the install script, package managers or binaries
5. Connecting to a cluster: kubeconfig contexts, namespaces, helm version and helm env
6. Finding charts: Artifact Hub, helm search hub and helm search repo
7. Repositories: helm repo add, helm repo update and helm repo list
8. First release: helm install with a public chart, helm list and helm status
9. Inspecting charts: helm show chart, helm show values and helm show readme
10. Overriding values: --set and -f values.yaml at install time
11. Removing releases: helm uninstall and --keep-history

DAY 2 — Essential: Chart authoring, templating and release lifecycle

Included from Essential

12. Creating a Helm chart: building a basic chart from scratch with helm create, Chart.yaml metadata and values
13. Chart structure: Chart.yaml, values.yaml, the manifests directory, charts/, _helpers.tpl and NOTES.txt
14. Helm CLI: exploring common commands such as install, upgrade, rollback, history and delete (uninstall)
15. Templating with Helm: Go templating to generate Kubernetes manifests from .Values, .Release and .Chart
16. Functions and pipelines: default, quote, toYaml, nindent, include and required
17. Flow control: if and else, with, range and variables
18. Named partials: define and include in _helpers.tpl for consistent names and labels
19. Customising chart values: value precedence, --set overrides and values.schema.json validation
20. Rendering locally: offline chart rendering, helm install --dry-run --debug and helm get manifest
21. Upgrades and rollbacks: helm upgrade --install, --atomic, --wait and helm rollback
22. Linting: helm lint for chart errors and conventions
23. Packaging: helm package, chart version (SemVer) and appVersion

DAY 3 — Intermediate: Repositories, dependencies, hooks and testing

Included from Intermediate

24. Advanced chart configuration: configuring ConfigMaps, Secrets and more from values, with checksum annotations
25. Chart dependencies: understanding and managing dependencies in Chart.yaml with helm dependency update and build
26. Subcharts and global values: passing values to subcharts, conditions and tags
27. Library charts: sharing common chart code across many charts
28. Chart repositories: setting up a chart repository and publishing charts to it with index.yaml or ChartMuseum
29. OCI registries: helm registry login, helm push and helm pull with oci:// references

30. Helm hooks: pre- and post-install hooks, pre-upgrade and pre-delete hooks, custom hooks, weights and deletion policies
31. Helm testing: helm test with test hooks and linting (Tiller-based testing was removed in Helm 3)
32. Chart testing in CI: ct lint and ct install from chart-testing on kind clusters
33. Helm in CI/CD: helm upgrade --install from GitHub Actions, GitLab CI or Jenkins
34. Troubleshooting releases: failed and pending-upgrade states, helm get values and debugging rendering errors
35. Secrets handling: keeping secrets out of values files with helm-secrets or External Secrets

DAYS 4-5 **Advanced: Best practices, supply chain security and GitOps** — **New at this level**

36. Helm best practices: creating and managing charts with versioning, testing, labels, naming and security
37. Case studies and examples: structuring charts for microservice platforms and umbrella charts
38. Chart provenance: helm package --sign and --verify, and Cosign signatures for OCI charts
39. Supply chain security: scanning charts with Checkov or Trivy and pinning images by digest
40. Policy enforcement: checking rendered manifests with Conftest (OPA), the Kyverno CLI and kubeconform
41. GitOps with Helm: Argo CD Applications and Flux HelmRelease resources
42. Managing many releases: Helmfile for multi-environment, multi-chart deployments
43. Post-rendering: --post-renderer with Kustomize for last-mile patches
44. Helm plugins: helm-diff, helm-secrets and writing your own plugin
45. Helm 4: changes from Helm 3 such as server-side apply and the new plugin system, and upgrade planning
46. Migrating to Helm: converting raw manifests or Kustomize setups into charts
47. Large-scale operations: --history-max, release storage drivers and performance
48. Capstone: build a production chart library with dependencies, signed OCI publishing and GitOps delivery

PRACTICE

Hands-on labs

You build these yourself during the course, guided by the trainer.

FOUNDATION

Install and manage a release

Install Helm, add a public repository, deploy a database chart with custom values and upgrade, inspect and uninstall the release.

ESSENTIAL

Author a chart for a web application

Write a chart for a web app with a Deployment, Service and Ingress driven by values, then upgrade it and roll back a broken release.

INTERMEDIATE

Publish and test charts in CI

Add a database dependency and a migration hook to your chart, test it with chart-testing on kind and push it to an OCI registry from CI.

ADVANCED

Ship a signed chart through GitOps

Sign and publish a chart to an OCI registry, enforce policy checks in CI and deliver it to staging and production with Argo CD or Flux.

HOW YOU CAN LEARN

Formats and fees

The same agenda in four formats. Fees are in Indian rupees as of November 2026; the course page shows them in your currency.

FORMAT	DURATION	WHAT YOU GET	FEE
Live & interactive (online)	Max 8-10 hours	Instructor-led public batch of max 10 learners with demos, labs, Q&A and assignment review. Weekday batches start on the 1st of every month, weekend batches on the first Saturday of every month.	**INR 34,999**
1:1 live training (online)	Max 8-10 hours, one-to-one	The same agenda, taught one-to-one by the trainer. Starts immediately, without waiting for the next batch; sessions planned around your working hours, at your pace.	**INR 99,999**
Self-paced video	1-year LMS access	All four Helm levels, plus 20+ more courses and 50+ tools, at your own pace.	**INR 833/month** billed yearly at INR 9,996
Corporate (day-wise)	5 days for this level	A private batch for your team, on demand. Foundation 1 day, Essential 2, Intermediate 3, Advanced 5 (cumulative).	**Quote on request**

ASSESSMENT AND CERTIFICATE

Your progress is checked through hands-on labs and assignments at every level. On completion you receive a DevOpsSchool certificate of completion with a unique credential ID that anyone can verify at devopsschool.com/certificates.

INCLUDED WITH EVERY LIVE BATCH

- Every live session is recorded and stays in your LMS for a year.
- Can't attend your batch? Move to next month's batch.
- Free demo class before you pay.
- Free 10-15 minute call with an advisor or the trainer to check the course fits you.

YOUR TRAINER

Learn from Rajesh Kumar

Principal Architect, trainer and mentor in DevOps, SRE, DevSecOps and platform engineering, with 20 years across 8+ software MNCs, including Staff DevOps/SRE Engineer for a leading Japanese mobile-payment platform and Principal DevOps Architect and Manager in Europe.

Profile: www.rajeshkumar.xyz · Videos: youtube.com/@TheDevOpsSchool

20 years in industry	**200+** corporate trainings
10,000+ engineers mentored	**70+** organisations coached

REVIEWS

What learners say

Rated 4.6 on Google · more reviews at devopsschool.com/testimonials and in our video testimonials.

> “Rajesh is very good trainer. Rajesh was able to resolve our queries and question effectively. We really liked the hands-on examples covered during this training program.”
>
> Indrayani, India

> “The training was very useful and interactive. Rajesh helped develop the confidence of all.”
>
> Abhinav Gupta, Pune

START YOUR HELM TRAINING

Join the next batch

Weekday batches start on the 1st of every month and weekend batches on the first Saturday of every month, with max 10 learners each. 1:1 training can start immediately; corporate batches run on demand. We reply within 1 hour.

Pay by UPI, credit and debit cards, net banking or PayPal. Before you pay, read our refund policy. All levels of this course: www.devopsschool.com/courses/kubernetes/

ENROL OR RESERVE A SEAT
Helm Advanced Training

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