DevOpsSchool

Course curriculum · November 2026

LEVEL 04 OF 04 · ADVANCED

Gitops Advanced Training

Promote releases across clusters, run blue/green and canary rollouts, recover through Git, manage secrets safely and scale GitOps governance.

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	53 topics · Foundation to Advanced
Hands-on labs	4 labs
Formats and fees	Live, 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/gitops/gitops-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 Gitops course path, you will be able to:

1

Explain and design GitOps

Choose GitOps architecture, repository layout and tooling with Argo CD or Flux.

2

Deliver applications through Git

Deploy, update and scale Kubernetes workloads with pull requests and automated sync.

3

Run GitOps in production

Promote releases, run progressive delivery, protect secrets and govern many clusters.

WHAT THE ADVANCED LEVEL ADDS

Promotion, progressive delivery, secrets and scale

Hands-on: Capstone: promote and recover through Git. Promote a release from staging to a production cluster, roll it out as a canary with Argo Rollouts, inject a sealed secret and revert a failing version using only Git.

WHO SHOULD ATTEND

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

BEFORE YOU START

- The Intermediate level, or equivalent hands-on experience.
- You can already: Deliver and update a microservice purely through Git with Argo CD automated sync, pull request checks, services and load balancers.
- 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

Gitops Advanced Training agenda

53 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: GitOps principles, architecture, workflow and adoption

Included from Foundation

1. Understanding GitOps: intro and overview, what GitOps is and the need for GitOps
2. Benefits of GitOps: Git history as audit trail, faster recovery, automatic drift correction and developer self-service
3. GitOps compared: the difference between GitOps and DevOps and between GitOps and infrastructure as code
4. GitOps principles and practices: OpenGitOps declarative, versioned and immutable, pulled automatically, continuously reconciled
5. GitOps tooling: Argo CD, Flux, Helm, Kustomize, Sealed Secrets and progressive delivery controllers
6. A GitOps architecture: Git repositories, in-cluster reconciliation controllers, image registry and CI system
7. Architectural decision points: monorepo or polyrepo, app and config repos, per-cluster or hub controllers
8. Argo CD demo: deploy a new application using the Argo CD GitOps tool
9. Enabling a GitOps IaC workflow: declarative infrastructure definitions applied by controllers
10. Enabling a GitOps workflow using Flux: flux bootstrap, GitRepository and Kustomization resources
11. Azure Arc demo: GitOps in action with Azure Arc-enabled Kubernetes and the Flux extension
12. Adopting GitOps: how GitOps applies to your career and selling GitOps to your leadership
13. Next steps: onboarding GitOps on your next project, resources for GitOps and module summaries

DAY 2 Essential: Tool setup, Flux demos, AWS and Argo CD

Included from Essential

14. Course introduction: GitOps workflow and GitOps architecture recap
15. Required knowledge: Git commits and pull requests, deploying a service with kubectl, pushing an image to a registry
16. CI/CD in GitOps: how GitOps reverses traditional CI/CD, CI builds and pushes while the cluster pulls
17. Core concepts, a quick introduction: immutable infrastructure, infrastructure as code, orchestration, convergence, CI/CD
18. What GitOps is not: GitOps is not infrastructure as code and does not replace continuous integration
19. The use case: deploying a highly available microservice to Kubernetes with all surrounding infrastructure
20. Demonstration setup: prepare a local Kubernetes cluster, install Helm (Helm 3 replaces Tiller) and the Flux operator
21. Flux demonstrations: demo GitHub repo review, test deployment, manifest update and sync, image update, drift and sync
22. Implementing GitOps for Kubernetes in AWS: Weave Flux and Helm with Git as the single source of truth
23. AWS lab: console login, web-based containers IDE on port 8080, DevOps pipeline review, AWS CodePipeline deploy and validation
24. Setting up the tools: pre-allocated cluster per person such as EKS, kubectl credentials, k9s, checking pods and deployments
25. Repositories: an infrastructure repository and an application repository with a hello world Node.js web server
26. Why Argo CD: tight Kubernetes integration and a GitOps mindset
27. Argo CD install exercise: add Argo CD to the cluster, create the namespace, deploy Argo CD and access it using the CLI

DAY 3 **Intermediate: Microservice delivery, automated sync and pull requests** Included from Intermediate

28. Microservice exercise: prepare a simple microservice, build it as a container and push it to docker.io, quay.io or a cloud registry
29. Deployment exercise: create a Kubernetes deployment definition in code and push it to the infrastructure repository
30. Argo CD applications: create and sync an application with the CLI, then move to a Git-driven flow
31. Verification: kubectl checks that the deployment, pods and service work after every sync
32. Automated synchronization: pull versus push, enabling auto-sync on every push, self-heal and prune
33. Service exercise: create a Kubernetes service definition so the deployment is reachable inside the cluster
34. Pull requests: reviewing every change and extending checks with GitHub Actions as an optional CI exercise
35. Load balancer exercise: create a cloud load balancer definition and curl its address to prove the service is online
36. Application update exercise: change the app, rebuild with a new tag, update the deployment through a pull request and test
37. Infrastructure update exercise: scale to multiple replicas and discuss blurry app and infrastructure boundaries
38. Wrap-up: the core GitOps workflow of deploying, updating and changing an application
39. Packaging configuration: Helm charts and Kustomize overlays rendered and diffed by Argo CD
40. Argo CD in depth: app-of-apps, sync waves and hooks, history, rollback and health checks

DAYS 4-5 **Advanced: Promotion, progressive delivery, secrets and scale** **New at this level**

41. Promoting changes through environments: prepare a second cluster and register it in Argo CD
42. From development to production: separate repositories, folders in one repository or branches, and their trade-offs
43. Promotion exercise: promote a version so the production cluster reads its own folder, merged through a pull request
44. Blue/green exercise: enable Argo Rollouts, kubectl plugin, a rollout for the existing microservice and observing it
45. Canary release: weighted steps, analysis and the merits and trade-offs of deployment strategies
46. Error handling exercise: introduce a failing release, confirm it with kubectl and revert the change through code
47. Accessing resources: why kubectl must not replace logging and monitoring, like SSH into production
48. Secrets: no plaintext secrets in Git, HashiCorp Vault and External Secrets Operator theory
49. Sealed secrets exercise: install the controller, encrypted secrets in the infrastructure repo injected into the microservice
50. Recap and next steps: Git as source of truth, pull model, convergence, automated promotion and observability
51. Multi-cluster GitOps: ApplicationSets, Argo CD projects, RBAC, SSO and Flux multi-tenancy
52. Policy and supply chain: Kyverno or Gatekeeper admission policies, signed commits and cosign image verification
53. Capstone: a two-cluster GitOps platform with promotion, canary releases, sealed secrets and monitoring

PRACTICE

Hands-on labs

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

FOUNDATION **Watch Git drive a cluster**

Install Argo CD on a local cluster, point it at a Git repository and change a manifest in Git to see the application reconcile without any kubectl apply.

ESSENTIAL

Flux sync and Argo CD install

Bootstrap Flux on a local cluster, push manifest and image changes to see them sync and drift corrected, then install Argo CD and log in with the CLI.

INTERMEDIATE

Ship a microservice through pull requests

Deploy a Node.js microservice with deployment, service and load balancer manifests via Argo CD auto-sync, then release a new version and scale it only by merging pull requests.

ADVANCED

Capstone: promote and recover through Git

Promote a release from staging to a production cluster, roll it out as a canary with Argo Rollouts, inject a sealed secret and revert a failing version using only Git.

HOW YOU CAN LEARN

Formats and fees

The same agenda in three 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**
Self-paced video	1-year LMS access	All four Gitops 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). 1:1 training is also available on demand.	**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 GITOPS 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. Corporate and 1:1 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/gitops/

ENROL OR RESERVE A SEAT **Gitops Advanced Training**	WHATSAPP · INDIA **+91 99057 40781**
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