DevOpsSchool

Course curriculum · November 2026

LEVEL 04 OF 04 · ADVANCED

Knative Advanced Training

Tune, harden and operate Knative as an internal serverless platform with high availability and 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	47 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/knative/knative-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 Knative course path, you will be able to:

1

Deploy serverless on Kubernetes

Run containers as Knative Services that scale with traffic and down to zero.

2

Build event-driven systems

Connect services with Knative Eventing brokers, triggers, sources and Kafka.

3

Operate a Knative platform

Secure, observe, tune and govern Knative for production teams.

WHAT THE ADVANCED LEVEL ADDS

Scale, performance, high availability and platform design

Hands-on: Load test and harden a Knative platform. Load test a multi-tenant Knative installation, tune autoscaling for cold starts, enable HA and Eventing encryption and publish the platform runbook.

WHO SHOULD ATTEND

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

BEFORE YOU START

- The Intermediate level, or equivalent hands-on experience.
- You can already: Run Knative in production with TLS, custom domains, Kafka-backed Eventing, observability and CI/CD.
- 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

Knative Advanced Training agenda

47 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: Serverless concepts, installation and first Service

Included from Foundation

1. Serverless on Kubernetes: what Knative adds, request-driven scaling and scale to zero
2. Knative components: Serving, Eventing and Functions, and the Kubernetes CRDs behind them
3. Serving resources: Service, Configuration, Revision and Route
4. Installation options: Knative Operator vs YAML manifests, and kn quickstart on kind or minikube
5. Networking layers: choosing Kourier, Istio or Contour as the ingress for Knative Serving
6. DNS setup: Magic DNS with sslip.io, real domains and the config-domain ConfigMap
7. The kn CLI: installing kn, kn service create, list, describe, update and delete
8. First Service: deploying a container image as a Knative Service and calling its URL
9. Revisions: immutable revisions created on every change and kn revision list
10. Scale to zero in action: watching pods start on request and terminate when idle
11. Container contract: listening on $PORT, stateless design and readiness expectations

DAY 2 — Essential: Traffic, autoscaling and Eventing basics

Included from Essential

12. Traffic management: splitting traffic between revisions by percentage and latestRevision
13. Revision tags: tag-based URLs for blue-green and canary testing
14. Autoscaling: Knative Pod Autoscaler, concurrency and RPS targets, min-scale and max-scale annotations
15. Concurrency control: containerConcurrency, target utilisation, the activator and queue-proxy
16. Configuring Services: environment variables, ConfigMaps, Secrets, resources and private registries
17. Cluster-local services: private services with the networking.knative.dev/visibility label
18. Eventing concepts: CloudEvents, sources, sinks, brokers and triggers
19. Broker and Trigger: creating a Broker and filtering events by attributes with Triggers
20. Event sources: PingSource, ApiServerSource, ContainerSource and SinkBinding
21. Channels and Subscriptions: InMemoryChannel for development and channel-based delivery
22. Event delivery: retries, backoff and dead letter sinks
23. Knative Functions: func create, build and deploy for Node.js, Python and Go

DAY 3 — Intermediate: Production networking, Eventing backends and operations

Included from Intermediate

24. TLS: automatic certificates through the cert-manager integration and external domain TLS
25. Domain mapping: DomainMapping resources for custom domains per service
26. Kafka integration: Kafka Broker, KafkaSource, KafkaSink and KafkaChannel
27. Other brokers: RabbitMQ Broker and choosing a production broker implementation
28. Flows: Sequence and Parallel for chaining and fanning out event processing
29. Event discovery: EventType resources and the event registry
30. Observability: Prometheus and Grafana metrics, OpenTelemetry tracing and request logs

31. Configuration ConfigMaps: config-autoscaler, config-network, config-features and config-defaults
32. Security basics: service accounts, RBAC for event sources and network policies
33. CI/CD: building images with ko or Buildpacks and delivering Knative Services through GitOps
34. Troubleshooting: revisions not ready, cold start latency, routing errors and queue-proxy logs
35. Upgrading Knative: Kubernetes version compatibility and the Operator upgrade path

DAYS 4-5 **Advanced: Scale, performance, high availability and platform design** **New at this level**

36. Cold start optimisation: min-scale, initial scale, image size and scale-down delay
37. Autoscaler tuning: stable and panic windows, scale bounds and the HPA class for CPU-based scaling
38. High availability: replicated control plane components, leader election and PodDisruptionBudgets
39. Performance testing: load generation with hey or k6 and reading autoscaler metrics
40. Multi-tenancy: namespaces, resource quotas, per-namespace brokers and isolation
41. Security hardening: Eventing transport encryption, OIDC sender identity for event delivery and pod security
42. Event-driven architecture: idempotent consumers, ordering guarantees and delivery semantics
43. AI inference: serving models on Knative Serving, including KServe serverless deployments
44. Platform engineering: offering Knative as an internal serverless platform with golden paths
45. Migration: moving workloads from Deployments or cloud functions such as AWS Lambda and Cloud Run
46. Governance and cost: scale-to-zero savings, resource limits and policies with Kyverno or OPA
47. Capstone: design a production serverless platform with Serving, Kafka-backed Eventing, TLS and observability

PRACTICE

Hands-on labs

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

FOUNDATION **Deploy your first Knative Service**
Install Knative Serving with Kourier on a local cluster, deploy a container with kn and watch it scale from zero under requests.

ESSENTIAL **Build an event-driven function pipeline**
Create a Broker, send scheduled events with PingSource, route them by type to two Knative Functions and canary a new revision with traffic tags.

INTERMEDIATE **Wire Kafka events into Knative services**
Install the Kafka Broker, route events from a KafkaSource through a Sequence of services, secure the endpoints with TLS and trace requests end to end.

ADVANCED **Load test and harden a Knative platform**
Load test a multi-tenant Knative installation, tune autoscaling for cold starts, enable HA and Eventing encryption and publish the platform runbook.

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 Knative 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 KNATIVE 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/knative/

ENROL OR RESERVE A SEAT
Knative Advanced Training

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