DevOpsSchool

Course curriculum · November 2026

LEVEL 04 OF 04 · ADVANCED

Jaeger Advanced Training

Design a production tracing platform with Jaeger that scales, stays available, protects trace data and replaces legacy tracing setups.

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/jaeger/jaeger-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 Jaeger course path, you will be able to:

1

Trace requests end to end

Instrument services with OpenTelemetry and follow requests across microservices in Jaeger.

2

Run Jaeger in production

Choose sampling, storage and deployment patterns that keep tracing useful and affordable.

3

Find latency root causes

Use traces, SPM metrics and correlated logs to locate slow and failing operations quickly.

WHAT THE ADVANCED LEVEL ADDS

Scale, high availability, governance and migration

Hands-on: Capstone: production tracing platform. Build a highly available Jaeger deployment with Kafka buffering, rollover-managed OpenSearch storage, mTLS and tail sampling, then run a failure drill and a latency investigation.

WHO SHOULD ATTEND

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

BEFORE YOU START

- The Intermediate level, or equivalent hands-on experience.
- You can already: Run Jaeger on Kubernetes behind OpenTelemetry Collector pipelines, add tail sampling and SPM, secure endpoints and fix missing traces.
- 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

Jaeger 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: Tracing concepts, Jaeger architecture and first trace

Included from Foundation

1. Distributed tracing concepts: traces, spans, span context, parent-child relationships and context propagation
2. Why tracing: debugging latency and errors across microservices, and how traces relate to logs and metrics
3. Jaeger overview: CNCF graduated project, Jaeger v2 built on the OpenTelemetry Collector, end of life for v1
4. Jaeger architecture: collector, query service, UI, storage backends, ingester and Kafka buffering
5. OpenTelemetry and Jaeger: OTel SDKs, OTLP over gRPC and HTTP, and why the Jaeger client libraries were retired
6. Installing Jaeger: all-in-one container image and binary, UI on port 16686, OTLP on ports 4317 and 4318
7. Jaeger UI tour: search by service, operation, tags and duration, trace timeline, span details and events
8. HotROD demo application: generate traces, find the slow request and read the critical path
9. Span data: attributes, events, status codes, recorded errors and span kinds server, client, producer, consumer
10. Propagation formats: W3C Trace Context traceparent and tracestate headers, B3 for older systems
11. First instrumented service: OpenTelemetry auto-instrumentation for a Python or Java app, viewed in Jaeger

DAY 2 — Essential: Instrumentation, sampling, storage and trace analysis

Included from Essential

12. Jaeger v2 configuration: YAML with receivers, processors, exporters and the jaeger_storage and jaeger_query extensions
13. Manual instrumentation: creating spans, adding attributes, recording exceptions and nested spans in Java, Go and Python
14. Auto-instrumentation: OpenTelemetry Java agent, opentelemetry-instrument for Python, Node.js HTTP, gRPC and DB hooks
15. Context propagation: HTTP, gRPC and Kafka message headers, async tasks and thread boundaries
16. Head-based sampling: probabilistic, rate-limiting and parent-based sampling in the OpenTelemetry SDK
17. Remote sampling: per-service and per-operation strategies served by Jaeger from a strategies file
18. Storage options: in-memory and Badger for development, Elasticsearch, OpenSearch and Cassandra for production
19. Running Jaeger with Elasticsearch or OpenSearch: index layout, retention and the es-index-cleaner job
20. Trace search and analysis: tag queries, duration filters, trace comparison view and JSON export
21. Service dependencies: system architecture view, deep dependency graph and the Spark dependencies job
22. Team environment with Docker Compose: application services, OpenTelemetry Collector, Jaeger and Elasticsearch
23. Team conventions: trace IDs in log lines, service and span naming rules, linking incidents to traces

DAY 3 — Intermediate: Kubernetes, Collector pipelines, SPM and security

Included from Intermediate

24. Jaeger on Kubernetes: Helm chart, OpenTelemetry Operator and Instrumentation resources for auto-injection
25. OpenTelemetry Collector pipelines: agent and gateway patterns, batch and memory_limiter processors, export to Jaeger
26. Tail-based sampling: tail_sampling policies for errors, latency and attributes, load-balancing exporter by trace ID

27. Adaptive sampling in Jaeger: automatic per-operation probabilities driven by target throughput
28. Kafka as a buffer: collector to Kafka, ingester to storage, absorbing traffic spikes
29. Service Performance Monitoring: spanmetrics connector, Prometheus and RED metrics in the Monitor tab
30. Correlation: exemplars in Prometheus and Grafana, trace IDs in Loki or Elasticsearch logs
31. Grafana integration: Jaeger as a data source with trace-to-logs and trace-to-metrics links
32. Security basics: TLS for OTLP and query endpoints, bearer tokens, UI behind an OAuth2 proxy
33. Sensitive data handling: redacting attributes with the Collector attributes and transform processors
34. Troubleshooting missing traces: broken propagation, dropped spans, clock skew, exporter errors and Collector logs
35. Monitoring Jaeger itself: internal metrics, health check extension, queue length and dropped span alerts

DAYS 4-5 **Advanced: Scale, high availability, governance and migration** **New at this level**

36. Production topology: separate collector, ingester and query deployments with horizontal scaling
37. Capacity planning: span volume estimates, storage sizing, retention tiers and sampling budgets
38. Elasticsearch and OpenSearch at scale: es-rollover, lifecycle policies, shard sizing and archive storage
39. Cassandra backend at scale: schema setup, TTLs, compaction and multi-datacentre replication
40. Remote storage: gRPC storage API for additional backends such as ClickHouse
41. High availability: replicated collectors and query services, Kafka partitioning, multi-zone storage, failure drills
42. Performance tuning: collector queue size and workers, batch sizes, memory limits and backpressure
43. Multi-tenancy: tenant headers, per-tenant storage and isolation patterns
44. Security hardening: mTLS between components, Kubernetes network policies and RBAC, access control on trace data
45. Governance: span naming and attribute standards, PII rules, retention policy and tracing cost controls
46. Migration: from Jaeger v1 agents and clients to OpenTelemetry SDKs and Jaeger v2, and from Zipkin
47. Latency investigations at scale: tail latency analysis, critical path, trace comparison and SLO breaches
48. Capstone: production tracing platform for a microservices system with tail sampling, SPM and HA storage

PRACTICE

Hands-on labs

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

FOUNDATION **Trace your first microservice request**
Run Jaeger all-in-one and the HotROD demo, then instrument a small two-service app with OpenTelemetry and follow one request end to end in the Jaeger UI.

ESSENTIAL **Instrument and store traces for a team**
Instrument a three-service app with manual and automatic spans, run Jaeger with Elasticsearch storage and remote sampling, and analyse a slow request.

INTERMEDIATE **Tracing pipeline on Kubernetes**
Deploy Jaeger and an OpenTelemetry Collector gateway on Kubernetes, auto-inject instrumentation, add tail sampling for errors and enable SPM with Prometheus.

ADVANCED

Capstone: production tracing platform

Build a highly available Jaeger deployment with Kafka buffering, rollover-managed OpenSearch storage, mTLS and tail sampling, then run a failure drill and a latency investigation.

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 Jaeger 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 JAEGER 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/jaeger/

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