DevOpsSchool

Course curriculum · November 2026

LEVEL 04 OF 04 · ADVANCED

OpenSearch Advanced Training

Size and tune OpenSearch for scale, build resilient multi-cluster setups, add vector and hybrid search and migrate from Elasticsearch.

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/opensearch/opensearch-and-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 OpenSearch course path, you will be able to:

1

Search and analyse data

Index, query and visualise data with OpenSearch and OpenSearch Dashboards.

2

Operate secure clusters

Secure, automate, monitor and troubleshoot OpenSearch clusters in production.

3

Scale search platforms

Design resilient, high-performance clusters with vector and hybrid search.

WHAT THE ADVANCED LEVEL ADDS

Scaling, vector search, high availability and migration

Hands-on: Build hybrid search with DR. Add a k-NN index with an embedding model for hybrid search, replicate the cluster to a second region and benchmark query latency.

WHO SHOULD ATTEND

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

BEFORE YOU START

- The Intermediate level, or equivalent hands-on experience.
- You can already: Secure OpenSearch, automate index lifecycles and snapshots, set up alerting and anomaly detection, and troubleshoot cluster issues.
- 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

OpenSearch 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: Search concepts, cluster architecture and first queries

Included from Foundation

1. OpenSearch overview: fork of Elasticsearch 7.10, Apache 2.0 licence and OpenSearch Software Foundation governance
2. Use cases: full-text search, log analytics, observability, security analytics and vector search
3. Architecture: clusters, nodes and node roles (cluster manager, data, ingest, coordinating), shards and replicas
4. Documents and indices: JSON documents, the inverted index, mappings and field types
5. Installation: Docker Compose with OpenSearch and Dashboards, tarball and package installs, initial admin password
6. Cluster health: _cluster/health and the _cat APIs for nodes, indices and shards
7. Document operations: index, get, update and delete APIs and the _bulk API
8. Basic search: match, term and bool queries, pagination and sorting
9. OpenSearch Dashboards: Discover, index patterns and the Dev Tools console
10. Analyzers basics: standard analyzer, tokenizers, lowercase and stop filters
11. Managed options: Amazon OpenSearch Service domains and serverless collections

DAY 2 — Essential: Querying, mappings, ingestion and dashboards

Included from Essential

12. Query DSL in depth: multi_match, range, prefix, wildcard, fuzzy, phrase and boosting
13. Aggregations: terms, date_histogram, avg, sum and percentiles, and nested aggregations
14. Mappings: explicit mappings, dynamic mapping rules, text versus keyword and multi-fields
15. Index management basics: aliases, reindex and the rollover concept
16. Ingest pipelines: grok, date, rename and geoip processors to transform documents
17. Data ingestion: Data Prepper pipelines and Fluent Bit or Logstash output to OpenSearch
18. Visualisations: bar, line, area, data tables, TSVB and maps
19. Dashboards: building, filtering and exporting or importing saved objects
20. SQL and PPL: Query Workbench and piped processing language for log analysis
21. Relevance tuning: BM25 scoring, function_score, highlighting and suggesters
22. Client libraries: opensearch-py, the OpenSearch Java client and the JavaScript client
23. Team workflow: index naming conventions, saved objects in Git and tenants in Dashboards

DAY 3 — Intermediate: Security, ISM, alerting, observability and operations

Included from Intermediate

24. Security plugin: TLS, internal users, roles, role mappings, field-level and document-level security
25. Authentication backends: LDAP or Active Directory, SAML and OpenID Connect for Dashboards
26. Index State Management: hot-warm transitions, rollover and delete policies applied by index pattern
27. Snapshots: S3 or file system repositories, snapshot management policies and restores
28. Alerting: per-query, per-bucket and per-document monitors, triggers and notification channels
29. Anomaly detection: detectors, features, real-time and historical analysis

30. Observability: trace analytics with Data Prepper and OpenTelemetry, log analytics and event explorer
31. Security Analytics: Sigma detection rules, findings and correlations for SIEM use cases
32. Cluster operations: shard allocation, rebalancing, rolling restarts and cluster settings
33. Cluster monitoring: _nodes/stats, Performance Analyzer, Prometheus exporter and slow logs
34. Troubleshooting: yellow or red status, unassigned shards with allocation explain and mapping explosions
35. Automation: index setup and policies as code with the Terraform OpenSearch provider

DAYS 4-5 **Advanced: Scaling, vector search, high availability and migration** — New at this level

36. Capacity planning: shard sizing, node sizing, JVM heap and disk watermarks
37. Performance tuning: refresh interval, bulk sizing, query caching, force merge and slow query analysis
38. High availability: zone awareness, dedicated cluster manager nodes and replica strategy
39. Multi-cluster setups: cross-cluster replication and cross-cluster search for DR and multi-region use
40. Storage tiers: UltraWarm and cold storage, searchable snapshots and remote-backed storage
41. Segment replication versus document replication: throughput trade-offs and configuration
42. Vector search: k-NN indices, HNSW and IVF methods, Faiss and Lucene engines and quantization
43. Neural and hybrid search: ML Commons, embedding models and search pipelines with score normalization
44. Generative AI patterns: RAG with conversational search and ML connectors to external LLMs
45. Migration: from Elasticsearch with snapshots, Migration Assistant and reindex from remote
46. Upgrades: rolling upgrades across major versions, plugin compatibility and testing
47. Capstone: production log analytics and semantic search platform with security, ISM and DR

PRACTICE

Hands-on labs

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

FOUNDATION

Run a cluster and search documents

Start a two-node OpenSearch cluster with Dashboards in Docker, bulk-load a product catalogue and query it from Dev Tools.

ESSENTIAL

Ingest logs and build a dashboard

Ship web server logs through Data Prepper with a grok pipeline, map the fields correctly and build a traffic and error dashboard.

INTERMEDIATE

Secure and automate a log cluster

Enable role-based access with OIDC sign-in, add ISM rollover and retention, schedule snapshots and alert on an error spike.

ADVANCED

Build hybrid search with DR

Add a k-NN index with an embedding model for hybrid search, replicate the cluster to a second region and benchmark query latency.

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 OpenSearch 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 OPENSEARCH 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/opensearch/

ENROL OR RESERVE A SEAT
OpenSearch Advanced Training

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