DevOpsSchool

Course curriculum · November 2026

LEVEL 04 OF 04 · ADVANCED

Mongodb Advanced Training

Scale MongoDB horizontally with sharding, tune performance, harden security and run upgrades and migrations safely.

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	49 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/mongodb/mongodb-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 Mongodb course path, you will be able to:

1

Model and query documents

Design MongoDB schemas, indexes and aggregation pipelines that fit real application access patterns.

2

Administer MongoDB reliably

Run replica sets with security, backups, monitoring and profiling in place.

3

Scale and harden clusters

Shard, tune, secure and upgrade MongoDB deployments for production workloads.

WHAT THE ADVANCED LEVEL ADDS

Sharding, performance, hardening and operations at scale

Hands-on: Sharded production cluster capstone. Deploy a sharded cluster with replica-set shards, shard a large collection, tune queries and rehearse a rolling upgrade.

WHO SHOULD ATTEND

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

BEFORE YOU START

- The Intermediate level, or equivalent hands-on experience.
- You can already: Run highly available replica sets, secure them with authentication and roles, and back up, restore and monitor MongoDB.
- 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

Mongodb Advanced Training agenda

49 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: Document model, installation and CRUD basics

Included from Foundation

1. Introduction to MongoDB: document databases, NoSQL use cases and differences from relational databases
2. MongoDB document: BSON types, _id and ObjectId, embedded documents and arrays
3. Editions and deployment options: Community, Enterprise and MongoDB Atlas
4. Creating an AWS server instance: EC2 sizing, security groups and storage for MongoDB
5. Establish connection: SSH with PuTTY on Windows or OpenSSH to the Linux server
6. Install MongoDB: official apt or yum repositories, mongod.conf, systemd service and data paths
7. Connecting with mongosh: databases, collections and basic shell commands
8. Access MongoDB with GUI tools: MongoDB Compass and Studio 3T (formerly MongoChef)
9. CRUD basics: insertOne, insertMany, find, updateOne, replaceOne and deleteMany
10. Query operators: comparison, logical, element and array operators with projections
11. First application connection: connection strings and a small Node.js or Python client

DAY 2 — Essential: Schema design, indexes, aggregation and drivers

Included from Essential

12. Schema design: embedding versus referencing and one-to-many and many-to-many patterns
13. Design patterns: bucket, computed, subset and extended reference patterns
14. Schema validation: $jsonSchema validators, validation levels and actions
15. Update operators: $set, $inc, $unset, $push, $addToSet, array filters and upserts
16. Indexes: single-field, compound, multikey, text, wildcard and TTL indexes
17. Query performance basics: explain() plans, COLLSCAN versus IXSCAN and covered queries
18. Aggregation techniques: exploring aggregation stages $match, $group, $project, $sort and $limit
19. Joining and reshaping: $lookup, $unwind, $facet and $bucket stages
20. Drivers: PyMongo and the Node.js driver, connection pooling and error handling
21. Data import and export: mongoimport, mongoexport and Compass import tools
22. Multi-document transactions: when to use them and their cost
23. Time series collections: storing metrics and IoT readings efficiently

DAY 3 — Intermediate: Replication, security, backup and monitoring

Included from Intermediate

24. MongoDB replication: replica set architecture, oplog and automatic failover
25. Setting up replica set servers: configure replica set with rs.initiate and rs.add
26. Working with replica set members: connection using Studio 3T and checking rs.status
27. Test replica set election: stepping down the primary and observing failover
28. Member types: configure priority, delayed, hidden and arbiter members and when to use each
29. Read preference and write concern: majority writes, read concern and consistency trade-offs
30. Exploring user roles and authorization: SCRAM authentication, built-in roles and custom roles

31. Network security: bindIp, TLS certificates and keyfile or x.509 internal authentication
32. Practicing MongoDB backup and restore techniques: mongodump, mongorestore and filesystem snapshots
33. Discovering importance of profiler: database profiler levels, slow query log and currentOp
34. Monitoring: mongostat, mongotop, serverStatus and metrics in Prometheus or Atlas
35. Using MongoDB map-reduce: why it is deprecated and rewriting jobs as aggregation pipelines
36. Change streams: reacting to inserts and updates in applications

DAYS 4-5 **Advanced: Sharding, performance, hardening and operations at scale** **New at this level**

37. Sharding your MongoDB cluster: components of a sharded cluster (shards, config servers and mongos)
38. Sharding workflow: setting up config servers and the mongos server, adding shards and sharding a collection
39. Sharding techniques: ranged, hashed and zone sharding and choosing a good shard key
40. Balancer and resharding: chunk migration, jumbo chunks and resharding a collection online
41. Performance tuning: WiredTiger cache, index strategy, query planner and working-set sizing
42. High availability across data centres: member placement, priorities and disaster recovery
43. Security hardening: encryption at rest, client-side field level and Queryable Encryption, and auditing
44. Enterprise authentication: LDAP, Kerberos and OIDC integration
45. Upgrades: rolling upgrades of replica sets and sharded clusters and featureCompatibilityVersion
46. MongoDB on Kubernetes: the Kubernetes operator and stateful deployment considerations
47. Atlas at scale: auto-scaling, Atlas Search and Vector Search for AI applications
48. Migration: moving from relational databases with Relational Migrator and live migration
49. Capstone: a sharded, secured and monitored MongoDB cluster with backups and runbooks

PRACTICE

Hands-on labs

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

FOUNDATION **Install MongoDB and query data**
Launch an AWS instance, install MongoDB, connect with mongosh and Compass and load and query a product catalogue.

ESSENTIAL **Model and index an app database**
Design an order management schema with validation, add indexes verified with explain() and build sales reports with aggregation.

INTERMEDIATE **Secure replica set with backups**
Build a three-member replica set with TLS and role-based access, test elections and restore a dropped collection from backup.

ADVANCED **Sharded production cluster capstone**
Deploy a sharded cluster with replica-set shards, shard a large collection, tune queries and rehearse a rolling upgrade.

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 Mongodb 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 MONGODB 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/mongodb/

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Mongodb Advanced Training

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