

MongoDB DBA

Learn to administer MongoDB databases, from CRUD operations and indexing to replication, sharding, security and backups.

5 Days

40 HOURS

8

MODULES

64

TOPICS

COURSE OVERVIEW

The MongoDB DBA course is a comprehensive program designed to equip learners with the skills needed for effective database administration within MongoDB, a popular NoSQL database. It covers a wide range of topics from the basics of MongoDB and CRUD operations to advanced concepts such as Sharding, Replication, and security. Module 1 introduces the course structure, while Module 2 dives into MongoDB fundamentals. Modules 3 through 5 focus on Document manipulation and Indexing, which are crucial for performance optimization. Modules 6 and 7 explore Special index types and the Aggregation Framework for complex queries. Modules 8 through 10 cover Transactions and Replica set configuration, a key aspect of MongoDB's high availability. Modules 11 to 13 delve into the components and administration of a replica set and application connectivity. Modules 14 to 16 provide insights into Sharding, Shard key selection, and Sharding administration for scaling. Modules 17 to 23 round out the course with Performance analysis, security, Durability, Production deployment, Monitoring, Backups, and best practices for deploying MongoDB. This MongoDB administration training is considered one of the best MongoDB online courses for those looking to master database administration in MongoDB.

Who Should Attend

Learn the ins and outs of MongoDB DBA, ideal for IT professionals aiming to excel in database administration and management.

Database Administrators

System Administrators

Data Architects

Backend Developers interested in database management

IT Professionals looking to specialize in NoSQL databases

Database Analysts seeking to upgrade their skills

DevOps Engineers responsible for database setup and maintenance

Technical Leads managing database teams

Software Engineers aspiring to understand MongoDB architecture

Data Scientists requiring knowledge in managing large datasets with MongoDB

IT Managers overseeing database infrastructure

Cloud Database Engineers working with MongoDB on cloud platforms

Technology Consultants advising on database solutions

Full-stack Developers who want to deepen their understanding of the database layer

LEARNING OBJECTIVES

- Explain MongoDB architecture and core data types
- Apply CRUD operations to manage documents
- Build and query indexes to optimise performance
- Configure replica sets and test automatic failover
- Configure sharded clusters and select shard keys
- Implement authentication, authorization and user-defined roles
- Perform backup and restore using mongodump and mongorestore

COURSE SYLLABUS

8 Modules, 64 Topics

01

Introduction to MongoDB

TOPICS

Architecture · MongoDB Tools · Types of Data · Database, Collection, Documents · Create, Insert, Update, Delete, find · Data Types · Mongo Shell

02

Create Update and Delete Documents

TOPICS

- Inserting & Saving Documents
- Batch Insert
- Insert Validation
- Removing Documents
- Remove Speed
- Updating Documents
- Document Replacement
- Using Modifiers
- Upsert
- Updating Multiple Documents
- Setting Write Concern

03

Querying Documents

TOPICS

Introduction to find method · Query Criteria · Type Specific Queries · Cursors · Database Commands · Getting Help

04

Indexing

TOPICS

Introduction to Indexing · Query Execution Plan · When not to index · Types of indexes · Index Administration · GeoSpatial support in MongoDB

05

Replication

TOPICS

- Introduction to replication
- Setting up a Replica Set Part 1
- Configuration Options
- Network Consideration
- Security Consideration
- Setting up a Replica Set Part 2
- Observing Replication
- Testing automatic failover
- Changing Replica Set configuration

06

Sharding

TOPICS

- Introduction to sharding
- Components of a cluster
- Sharding on a single machine cluster
- Configuring sharding
- Shard chunks
- Querying from the shard
- Choosing a shard key
- Sharding across multiple servers
- Databases in the config server
- The mongos Processes

07

MongoDB Security

TOPICS

- Enable authorization and enforce authentication
- Built-in roles
- Creating users
- Creating user-defined roles
- Granting roles to users
- Revoking roles from users
- Dropping Roles
- Dropping users
- Displaying the privileges of a Role

08

Backup & Recovery

TOPICS

Introduction to backup · Data File Backup · Mongodump · Mongorestore · Mongoimport · Mongoexport

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

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