MongoDB for Developers

MongoDB is the leading NoSQL database, empowering businesses to be more agile and scalable. Fortune 500 companies and startups alike are using MongoDB to create new types of applications, improve customer experience, accelerate time to market and reduce costs.

MongoDB is an open-source database used by companies of all sizes, across all industries and for a wide variety of applications. It is an agile database that uses a flexible document data model so schemas can change quickly as applications evolve. MongoDBprovides functionality developers expect from traditional databases. This course introduces MongoDB concepts required for developers with hand-on lab and case-study approach.

Course Duration

• 3 days full-time workshop (classroom) mode with Hands-on Lab

Learning Objectives

- MongoDB core concepts and architecture
- CRUD operations
- Aggregation functions
- Availability and Performance through Sharding, Replication & Indexes
- MongoDB Java driver API

Pre Requisites

- Band B2 or higher
- Knowledge of any RDBMS
- Core Java programming

Hands-on Lab Environment

- MongoDB setup
- Java programming in Eclipse IDE

Case Study

After the theory session is completed, participants will be assigned a case study to work on as a group or individual. They should analyze the case study problem and come up with appropriate MongoDB schema design based on the concepts learned in this training and implement the solution using MongoDB Java driver API. All participants will present their solution and feedback will be provided by the fellow participants and the facilitator.

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 - b. New data models
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 - c. JSON
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 - b. Query model
 - c. Data management
- 4. MongoDB installation and configuration
 - a. Driver support
 - b. Initial setup
 - c. Interacting with MongoDB
- 5. CRUD operations
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 - b. Documents and Collections
 - c. Arrays
 - d. Cursor
- 6. Indexes
 - a. Types of indexes
 - b. Creating indexes
 - c. Compound indexes
- 7. Aggregation operations
 - a. Aggregation pipelines
 - b. Map-reduce
 - c. Single purpose aggregation
- 8. Data models
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 - b. Reference data considerations
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 - d. Atomic operations
 - e. Document growth considerations
 - f. Data use and performance
 - g. Capped collections
 - h. GridFS
- 9. Analyzing query performance
- 10. Two phase commit
- 11. Replication

- a. Features
- b. Hands-on lab in deploying a replication set

12. Sharding

- a. Features
- b. Data partitioning in Sharding
- c. Hands-on lab in sharded cluster deployment

13. Case study

a. Building Java application & accessing MongoDB