

## **DEVELOPMENT WITH MONGODB TRAINING (2 Days)**

MongoDB is an open source document-oriented NoSQL (Not Only SQL) database written in C++. Effective use of MongoDB, understanding its data structures and optimal ways to program to its API aids in creating high-performance and robust solutions in small start-ups and big companies alike.

### ***Objectives***

This intensive hands-on training course aims at making students proficient in developing with MongoDB using Java. The course is supplemented by hands-on labs that help attendees reinforce their theoretical knowledge of the learned material and make them confident in applying the acquired knowledge in practice.

### ***Topics***

- Overview of "NoSQL" landscape
- MongoDB developer value proposition
- MongoDB architecture
- MongoDB installation and configuration
- Essential system administration
- Developing solutions in Java

### ***Audience***

Technical leads and application developers

### ***Prerequisites***

Participants should be familiar with Java programming and using Eclipse development environment

## Course Outline

### **CHAPTER 1. MONGODB OVERVIEW**

- Defining "NoSQL"
- Introducing MongoDB
- MongoDB architecture
- Drivers and Client Libraries

### **CHAPTER 2. MONGODB DATA MODEL**

- Databases
- Collections
- Documents
- BSON data format
- Indexes

### **CHAPTER 3. MONGODB ADMINISTRATION**

- Administration Console
- Security and Authentication
- Basic MongoDB commands
- Data import and export
- Managing MongoDB lifecycles

### **CHAPTER 4. DATA STORAGE**

- Data sharding concepts
- Chunking with GridFS

### **CHAPTER 5. READ AND WRITE OPERATIONS**

- Read Operations
- Cursors
- Write Operations

### **CHAPTER 6. QUERYING, LIMITING, SORTING AND AGGREGATING DATA**

- Querying
- Aggregations operations
- Map-reduce

### **CHAPTER 7. INDEXES**

- Index Types
- Index Properties
- Index Creation

### **CHAPTER 8. ACCESSING MONGODB WITH JAVA**