MongoDB Advanced Developer Training

Overview

This 2-day course is designed for developers who are already familiar with MongoDB, and provides the knowledge to optimize MongoDB deployments, address complex design issues, and develop applications for MongoDB faster and more efficiently.

A MongoDB instructor leads students through a series of case studies covering advanced schema design for a variety of application types and data access patterns. Students then participate in a series of hands-on labs, providing experience building an application using a MongoDB driver.

MongoDB training courses are delivered on site at your company and taught by an experienced MongoDB consulting engineer. Throughout the course, hands-on exercises reinforce the subjects being discussed.

Who Should Attend?

This course is designed for application developers who already have a foundational knowledge of the MongoDB document model, query language, indexes, and features such as replication and sharding. This level can be attained via prior completion of the MongoDB Developer or MongoDB Essentials instructor-led training courses, or equivalent MongoDB University online self-study courses.

Students participate in hands-on exercises in Java or Python, according to the preference of the class. Only basic knowledge of Java or Python syntax is required, as comprehensive code skeletons are provided.

Course Duration

This is a 2-day training course.

Course Prerequisites

- This class can be delivered in person or remotely. For in-person classes, all students must attend the class in person.
- Each class accommodates up to 12 students.
- To fully participate in the class, students should be equipped with a computer that has:
  - unobstructed web access
  - access to the strigo.io training delivery platform via a supported web browser
  - for remote classes, the ability to join a Zoom meeting using the Zoom desktop client (ideally), or using the Zoom web client in a supported web browser
Course Content

**Day 1**

**Indexes**
- Index fundamentals (recap)
- Using explain()
- Indexes and read/write performance
- Sparse indexes
- Unique indexes
- Compound indexes
- Multi-key indexes

**Case Study: Content Management System**
- Building a CMS with MongoDB
- Building a CMS in a relational database
- Design trade-offs
- Optimizations
- Lab: Design a CMS
- Lab: Design additional CMS features
- Lab: Shard CMS

**Case Study: Shopping Cart**
- Shopping cart requirements
- Modelling a shopping cart
- Lab: Design a shopping cart schema

**MongoMart Overview**
- Demo of the functionality of the MongoMart e-commerce platform example that students will build in the subsequent coding labs

**MongoMart Lab 1**
- Setup and connect to the database

**MongoMart Lab 2**
- Populate all necessary database queries

**Day 2**

**Case Study: Time Series Data**
- Time Series Use Cases
- Relational database design
- Document database design
- Design optimizations

**Case Study: Social Network**
- Modelling user relationships
- Building a feed service
- Design trade-offs
- Lab: Design a schema for Twitter

**MongoMart Lab 3**
- Use a replica set with a write concern

**MongoMart Lab 4**
- Improving the data model for scalability

**MongoMart Lab 5**
- Improving query performance

**MongoMart Lab 6**
- Adding geospatial support