MongoDB Administrator Training

Overview

Get ramped quickly on MongoDB with a comprehensive entry-level training program for operations teams. This 3-day course covers everything an operations team needs to know to successfully deploy and maintain MongoDB, diagnose performance issues, import and export data from MongoDB and establish the proper backup and restore routines.

In this course, students participate in hands-on exercises using a MongoDB Atlas database environment. Alternatively, and according to the preference of the class, students may use a MongoDB deployment managed by Ops Manager, or a manually-managed deployment of MongoDB.

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 database administrators with no prior experience of MongoDB.

Course Duration

This is a 3-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

Storage Basics
- What is a Storage Engine?
- WiredTiger Storage Engine
- In-Memory Storage Engine
- Encrypted Storage Engine

MongoDB Document Model
- JSON and BSON
- MongoDB Data Types

MongoDB Setup
- Lab: Atlas Setup / Ops Manager Setup / Local MongoDB Setup

CRUD Basics
- Insert Command
- Find Command
- Query Operators
- Lab: Finding Documents
- Remove Command
- Updating Documents
- Lab: Updating Documents

Performance Basics
- Indexes
- Lab: Creating Indexes
- Lab: Using explain()

Replication Basics
- MongoDB Replica Sets
- Replica Set Use Cases
- Replication Mechanics

Day 2

Replication Advanced
- Using Write Concern to Tune Durability Semantics
- Using Read Concern to Tune Read Isolation
- Using Read Preference
- Replica Set Tag Sets

Sharding Basics
- Sharding Concepts
- When to Shard
- What is a Shard Key?
- Zoned Sharding / MongoDB Atlas Global Clusters

Sharding Advanced
- Components of a Sharded Cluster
- Sharding Mechanics
- Choosing a Good Shard Key

Security Basics
- Authentication & Authorization
- Lab: Creating an Admin User
- Lab: Creating a readWrite User
- Network Encryption
- Encryption at Rest
- Auditing

Day 3

Performance Advanced
- Designing Compound Indexes
- Indexing Arrays
- Covered Queries
- Using hint() and Index Filters

Performance Troubleshooting
- Understanding Common Symptoms and Causes
- Logs and Tools
- Profiler
- Performance Tips and Considerations

Monitoring
- Key Metrics to Monitor
- Monitoring using Atlas / Ops Manager
- Lab: Configuring Alerts

Automation
- Atlas / Ops Manager Automation Use Cases
- How Automation Works
- Using the Atlas / Ops Manager Automation API
- Using the Terraform MongoDB Atlas Provider

Backup and Recovery
- Why We Need Backups
- MongoDB Atlas / Ops Manager Backup Methods
- mongodump and mongorestore tools
- Lab: Backup and Restore using Atlas / Ops Manager