
MongoDB for Administrators

MongoDB for Administrators eğitimi, MongoDB veritabanı yönetimi hakkında bilgi ve beceriler kazandırma amaçlı bir eğitimidir. Bu eğitim MongoDB veritabanının yapısını, kurulumunu, yapılandırmasını, performansını ve güvenliğini optimize etmeyi, veritabanı yedekleme ve geri yükleme işlemlerini yapmayı ve MongoDB cluster yapılarının yönetimini öğrenmeyi amaçlar. Ayrıca, MongoDB ile veritabanı tasarımı, indexing ve diğer avans seviyedeki konuları da kapsar. Bu eğitim MongoDB yöneticileri, sistem yöneticileri ve veritabanı yöneticileri gibi profesyonellere yöneliktir.

Topics:

Introduction to NoSQL

- What Is NoSQL?
- Why NoSQL databases are required?
- Types of NoSQL Database
- NoSQL vs SQL Comparison
- ACID & BASE Property
- CAP Theorem
- Benefits of NoSQL databases
- Installation
- Start and Stop the mongod process

Architecture

- Document, Collection, Databases
- JSON and BSON

- Storage Engines
- WiredTiger Storage Engine
- Snapshots and Checkpoints
- Journal
- Compression
- In-Memory Storage Engine
- Read and Write Concerns
- GridFS

CRUD Operations

- MongoDB Data Types (BSON Types)
- CRUD Operations
- Create Operations
- Read Operations
- Update Operations
- Delete Operations
- Bulk Write Operations

Schema Design and Data modeling

- Dynamic Schema
- Document Structures
- Schema Validation

- What is Data modeling?
- Embedding Document
- Reference Document
- Factors effect Data Model Selection

Indexes

- Indexing concepts in MongoDB
- Types of Indexes
- Index Properties
- Managing Indexes
- Index Strategies

Database Administration

- Changing Run-time Configuration
- Database Server Status
- Current Operations
- Managing mongod Processes
- Terminating Running Operations
- Rotating Log Files
- Enabling Access Control
- Users and Roles
- Copy and Clone database

- DB and Collection Stats
- Explain Plan
- Database Profiler
- Diagnostic Commands

Backup and Security

- Concept of Backups
- mongoexport/mongoimport
- mongodump/mongorestore
- Oplog backups
- LVM Backups
- Backups using Ops Manager

Replication

- Concept of Replication
- Replica Set Member Roles
- Replication Process
- Read Reference
- Replica Set Primary & Secondary Members
- Role of Oplog in Replication
- Deployment Architectures
- Voting and Electing Primary

- Rollbacks During Replica Set Failover
- Write Concern and Read Preference

Scalability

- Concept of Scalability
- Sharding Concept
- Shard Keys and Chunks
- Advantages of Sharding
- Sharded and Non-sharded Collection
- Sharding Strategies
- Sharded Cluster Components
- Production and Development Deployments
- Zones

Monitoring and Other Tools

- Monitoring
- MongoDB Tools
- MongoDB Developer Tools
- MongoDB Ops Manager
- MongoDB Atlas