MongoDB for Developers

Tecnologia - Data & Analytics

- **Nível:**
- **Duração:** 18h

Sobre o curso

This two-day MongoDB for Developers course spans the MongoDB gamut, covering CRUD, schema design, performance tuning, map-reduce, replication, and sharding.

By end of this MongoDB for Developers course, you will be ready to start building real- world applications on MongoDB and to recommend the best deployment strategies for those applications

---

Objetivos

- Understand the MongoDB command shell, query API, and driver tools.
- Design schemas that take advantage of the document data model and of MongoDB’s core features.
- Understand how typical RDBMS schemas can be migrated to MongoDB.
- Build efficient indexes and troubleshoot slow queries.
- Configure both master/slave replication and replica sets.
- Determine when to set up a shard cluster and how to configure it.
- Troubleshoot common issues and failure scenarios.

Programa

- MongoDB Overview
- Working with documents
- Schema Design
- Performance Tuning I – Indexing and Query Optimization
- GridFS for managing large binary objects
- Aggregation
- Replication and Durability
- Auto-Sharding
- Performance Tuning II
- Administration and Troubleshooting
- Introduction to drivers (Java/Python/Ruby/PHP/Perl)

MongoDB Overview

- Origin, design goals
- Key features
- Production use cases and sample applications
- Import sample data sets

Working with documents

- Origin, design goals
- Documents and data types
- CRUD (inserts, queries, updates and atomic modifier, and deletes)

Schema Design

- Schema comparisons: MongoDB vs. RDBMS
- Normalizing / De-normalizing
- Common schema scenarios (one-many, many-many, lists, trees, etc.)
- Import sample data sets

Performance Tuning I — Indexing and Query Optimization

- Index
- Understanding your query execution plan

GridFS for managing large binary objects

Aggregation

- Built-in functions (count, group, distinct)
- Map-reduce

Replication and Durability

- Master-slave replication
- Replica sets
- Using write concern for durability

Auto-Sharding

- When does sharding make sense?
- How does sharding work?
- Setting up a MongoDB shard cluster?
    - Choosing a shard key and indexes
    - Performance and use-case considerations
- Administering a sharded cluster

Performance Tuning II

- Getting the best performance out of MongoDB

- Hosting MongoDB in the cloud
- Using write concern for durability

Administration and Troubleshooting

Introduction to drivers: (Java/Python/Ruby/PHP/Perl)

- How the drivers and shell communicate with MongoDB
- BSON
- MongoDB Wire Protocol