Curso: MongoDB for Developers

Duração: 18h
Área formativa: Cursos

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.

Objectivos

The objectives for the **MongoDB for Developers** course are: 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.

Destinatários

The **MongoDB for Developers** course targets professional developers who are looking for in-depth knowledge for developing, administering, securing and scaling MongoDB-based applications.

Programa

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