



ADM-MONDB - Administration MongoDB

ITCore Sviluppo - MongoDB - Sviluppo

Durata:

5 Giorni

Lingue:

Italiano

Certificazione:

Associate Database Administrator Exam

Descrizione del corso

This 5-day **MongoDB Administration** course provides a comprehensive introduction to deploying, managing, and securing MongoDB databases in production environments. Covering core topics such as CRUD operations, performance monitoring, user management, indexing, backups, replication, and sharding, the course combines theory with hands-on labs to build real-world skills. Ideal for DBAs, DevOps, and system administrators, this training is designed to help participants confidently manage MongoDB clusters and optimize data operations.

This course also prepares participants for the official **MongoDB Associate Database Administrator Exam**.

By the end of the course, you'll be equipped to install, configure, and maintain MongoDB systems at scale, ensuring performance, reliability, and security.

Programma

1) Introduction to MongoDB Architecture and Installation

- Differentiate database categories
- List MongoDB tools
- Describe JSON and BSON
- Database categories: What is NoSQL? Why NoSQL? Benefit over RDBMS
- Types of NoSQL Database, and NoSQL vs. SQL Comparison, ACID & Base Property
- Understanding the following: Collection, Documents and Key/ Values,

ITCore Group

Via Balestra, 12
6900 Lugano (CH)
+41.091.9760019
www.itcoregroup.com

Via Lanino, 36
21047 Saronno (VA)
+39.02.84108669
www.itcoregroup.com

etc.,

- Introduction to JSON and BSON documents

2) **CRUD Operations**

- MongoDB CRUD Concepts
- Concerns (Read & Write Operations) -Concern Levels, Journaling, etc.,
- Cursor Query Optimizations, Query Behavior in MongoDB
- Distributed Read & Write Queries
- MongoDB Datatypes
- MongoDB CRUD Syntax & Queries (Live Hands on)
- Batch Insert in MongoDB
- Ordered Bulk Insert and Unordered Bulk Insert
- Inserts: Internals and Implications
- Retrieving the documents
- Specify Equality Condition
- \$in, "AND" Conditions
- \$or Operator
- Specify AND/OR Conditions
- Regular Expression
- Array Exact Match
- Array Projection Operators •\$Where Query
- Cursor
- Pagination
- Advance query option •Update Operation
- \$SET
- \$Unset and \$inc Modifiers •\$Push and \$addToSet •Positional Array Modifications •Upsert
- Removing Documents

3) **MongoDB administration**

- Check server status and DB status
- Monitor various resource utilization of a mongod instance
- Understand various optimization strategies
- Administration concepts in MongoDB
- Monitoring issues related to Database
- Monitoring at Server, Database, Collection level, and various

ITCore Group

Via Balestra, 12
6900 Lugano (CH)
+41.091.9760019
www.itcoregroup.com

Via Lanino, 36
21047 Saronno (VA)
+39.02.84108669
www.itcoregroup.com

Monitoring tools related to MongoDB

- Database Profiling, Locks, Memory Usage, No of connections, page fault etc.,
- Data Managements in MongoDB (Capped Collections/ Expired data from TTL),
- TTL Collection Features
- Memory-Mapped Files
- Journaling Mechanics
- Storage Engines
- Monitoring Strategies for MongoDB . MongoDB Utilities
- MongoDB Commands

4) **User Management**

- Create a User Administrator
- Add a User to a Database
- Create/Assign User a Role
- Verify/Modify a User Access/Privileges
- Change a User's Password

5) **MongoDB security**

- Knowing security concepts in MongoDB
- Understand how Authentication and Authorisation works
- Security Introduction
- Security Concepts

6) **Indexes**

- Index Introduction,
- Index Concepts,
- Index Types
- Index Properties
- Index Creation and Indexing Reference
- Introduction to Aggregation
- Aggregation Approach to Aggregation sort Order
- Pipeline Operators and Indexes
- Text Indexes

ITCore Group

Via Balestra, 12
6900 Lugano (CH)
+41.091.9760019
www.itcoregroup.com

Via Lanino, 36
21047 Saronno (VA)
+39.02.84108669
www.itcoregroup.com

- Aggregate Pipeline Stages
- Text Search
- MapReduce
- Index Creation
- Aggregation Operations
- Index Creation on Replica Set
- Remove, Modify, and Rebuild Indexes
- Listing Indexes
- Measure Index Use
- Control Index Use
- Index Use Reporting

ITCore Group

Via Balestra, 12
6900 Lugano (CH)
+41.091.9760019
www.itcoregroup.com

Via Lanino, 36
21047 Saronno (VA)
+39.02.84108669
www.itcoregroup.com