

Course : MongoDB, getting started and development

Practical course - 3d - 21h00 - Ref. MNO

Price : 2120 CHF E.T.

★★★★☆ 4,3 / 5

This highly practical training course will enable developers to design applications using MongoDB. This NoSQL database is ideal for processing huge quantities of unstructured documents. This course covers all the techniques needed to optimize database performance.

Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Installing the MongoDB DBMS
- ✓ Configuring MongoDB DBMS
- ✓ Handling objects and data in MongoDB
- ✓ Implementing an application under MongoDB
- ✓ Improving performance

Intended audience

This course is aimed at all IT professionals who need to develop with MongoDB.

Prerequisites

Good programming skills.

Course schedule

1 Introduction to MongoDB

- Introduction to SDBG NoSQL MongoDB.
- The characteristics of NoSQL.
- Modeling with MongoDB.
- The different formats used by MongoDB: JSON, BSON.
- Preparing to install MongoDB.
- Connect and test MongoDB.

Hands-on work

Installation of MongoDB on a development workstation and integration of a sample database.

PARTICIPANTS

This course is aimed at all IT professionals who need to develop with MongoDB.

PREREQUISITES

Good programming skills.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.

Participants also complete a placement test before and after the course to measure the skills they've developed.

TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

2 Connecting to and using MongoDB

- Using the Mongo Shell.
- Object and data handling: CRUD operations (Create, Read, Update, Delete).
- Use of objects: collections, documents...
- Use of APIs (PHP, Java, etc.).

Hands-on work

Use the Mongo Shell to manipulate objects and data.

3 Modeling and indexing

- The design schema: thinking about the model to be used.
- Indexing with MongoDB.
- Profiling and query optimization.
- How MongoDB works: transaction, isolation, locking...
- MongoDB performance management.

Hands-on work

Case study modeling and data indexing.

4 Driver management

- Available drivers for MongoDB. API model.
- Use of PHP or Java API.

Hands-on work

Data manipulation through APIs (PHP or Java).

5 Introduction to replication and sharding

- MongoDB replication principles.
- ReplicaSet concepts and operating principles.
- Sharding: concept, operation, limits...
- ReplicaSet and sharding pair.
- Replica coupled with sharding.
- Sharding performance monitoring.

Hands-on work

Automatic or manual data sharding.

6 Performance management and diagnostics

- Analysis of execution plans.
- MongoDB logs.
- Monitoring indicators and performance.
- Performance monitoring tools: explain, mongostat, mongotop.
- Pipeline aggregation: presentation and concept.

Hands-on work

Execution plan analysis and query optimization.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

7 MongoDB extension

- Index geospatial queries.
- GridFS needed to store "large objects".
- Aggregate.

Dates and locations

REMOTE CLASS

2026 : 27 May, 28 Sep., 7 Dec.