Course : MongoDB, implementation and administration

Practical course - 3d - 21h00 - Ref. MGO
Price : 2160 CHF E.T.

★★★★⯪ 4,3 / 5

BEST

This course will help you understand the reasons behind the emergence of the NoSQL movement, the various technical solutions and the positioning of the MongoDB NoSQL database in this new ecosystem. It will also provide you with the knowledge you need to install and get to grips with MongoDB.

Teaching objectives

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

- Distribute data across multiple instances of a MongoDB database
- Installing and administering the MongoDB NoSQL database
- Handling documents in a MongoDB database
- Supervising a MongoDB NoSQL database
- Backing up MongoDB database data

Intended audience

This course is aimed at all IT professionals who need to install and run MongoDB, or who want to learn about administration for the first time.

Prerequisites

Good knowledge of a programming language. Basic command-line administration skills. Knowledge of Python or Java desirable.

Practical details

Hands-on work
Each chapter is accompanied by demonstrations and practical exercises.

Course schedule

PARTICIPANTS
This course is aimed at all IT professionals who need to install and run MongoDB, or who want to learn about administration for the first time.

PREREQUISITES
Good knowledge of a programming language. Basic command-line administration skills. Knowledge of Python or Java desirable.

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.

1. Introducing the NoSQL movement and MongoDB

- A brief history of the evolution of databases and their various models.
- The importance of the relational model and the emergence of the NoSQL movement.
- The different NoSQL solutions and MongoDB's positioning.
- MongoDB's technical choices and some practical examples of use.

2. Getting started with MongoDB

- Installation on Windows and Linux.
- Interactive (Shell) prompting and administration.
- Overview of the different development APIs: PHP, Ruby, Python, Java.
- Database creation.
- Data schema. Different schema scenarios.

Hands-on work
Install MongoDB and get to grips with the command prompt.

3. Working with documents

- Understand and use namespaces, collections and documents.
- JSON and BSON formats.
- Elementary data types and special types.
- CRUD instructions through APIs: Create, Read, Update, Delete.
- Data import and export methods.

Hands-on work
Create and manipulate a document at the command prompt and using a client language.

4. Replication and Sharding

- Master-slave replication.
- Operation of automatic master node switchover.
- Setting up sharding.
- Sharding configuration server management.

Hands-on work
Implementation of sharding coupled with replicates.

5. Performance and indexing

- Index structure in MongoDB.
- Indexing strategies and query optimization.
- Obtain indicators and ensure supervision.
- Integrate MongoDB into Nagios, Cacti or Zabbix.

Hands-on work
Index creation and performance monitoring on a heavily-used database.

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.

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.

6   MongoDB administration

- Data backup. Access security.
- Graphical administration interfaces.
- Manage logging.

Hands-on work
Data backup and use of a graphical administration interface.

Dates and locations

REMOTE CLASS
2026 : 20 May, 5 Oct., 14 Dec.