

training code: MongoDB-01 / ENG AA 2d / EN

# Introduction to MongoDB database server





## Purpose of the training

The training provides you with a firm foundation in MongoDB database server deployment and management.

It is addressed to administrators, developers and data analysts.



#### Benefits of completing the training

Training participants will gain knowledge about architecture, configuration, functionalities and operations of MongoDB database server, including but not limited to:

- MongoDB server installation and configuration,
- data structure design and implementation
- data processing using MQL query language and JavaScript scripts,
- basic administrative operations,
- query performance management fundamentals .



#### **Expected Listener Preparation**

- General knowledge of computer science topics and concepts related to databases, as well as an ability to use the computer successfully.
- Basic knowledge of SQL
- Basic knowledge of JavaScript





### Training Language

Training: EnglishMaterials: English



#### Duration

2 days / 14 hours

#### Training agenda

- 1. Introduction to NoSQL database systems (motivations, characteristics and classification of solutions, comparison to relational database systems)
- 2. Introduction to MongoDB (architecture, basic concepts, JSON format, MongoDB server installation, configuration and management)
- 3. Implementing logical database structures (databases, collections, indexes, data modelling)
- 4. Data processing on MongoDB server (inserting, modifying and deleting documents, searching documents, selection predcates, projection, sorting, aggregation, atomic modifications, data validation using JSON Schema)
- 5. Fundamentals of query performance management (execution plans, guidelines)
- 6. Configuring MongoDB database replication
- 7. Basic administrative operations (backups, server monitoring, data migration, security management)
- 8. Implementing data processing scripts (JavaScript language)