

The MongoDB Essentials

Duration: 2 Days

Description

The MongoDB Essentials course is designed to give delegates experience of installing and using the MongoDB database. This hands-on course introduces delegates to the concept of a document-oriented database then shows how to set up MongoDB for use. Delegates use the built-in shell and various APIs to build a database access application and manipulate data. We also investigate optimising queries using indexes and aggregating data with MongoDB functions.

Delegates will learn how to:

- Install the MongoDB database
- Use the MongoDB shell to access the database
- Create, retrieve, update and delete data
- Use aggregation queries
- Appreciate the APIs used to interface with MongoDB
- Understand the document based structure of the database
- Use an API to develop applications
- Optimise queries with indexes

Outline

NOSQL Databases

- What are NoSQL Databases?
- Common Database Features
- NoSQL Versus Relational Approach
- Types of NoSQL Databases
- Data Storage
- Transaction Handling
- Key Features

Installing MongoDB

- Downloading in the Required Software

- Installing MongoDB
- Configuration Files
- Touring the File Structure
- Securing the Installation

Data Modelling And Design

- Data Storage
- Working with Datatypes
- Collections
- Document Datatypes
- Creating _id Fields

Querying Data

- Databases and Collections
- Querying Collections
- Working with Operators
- Referencing a Database
- Querying Dates

The Aggregation Framework

- Aggregating Results
- Single Purpose Functions
- The Aggregation Pipeline
- Date Aggregation Operators

Manipulating Data

- Inserting Data into Collections
- Updates
- Deletes
- Atomic Operations
- Removing Data
- Capped Collections

Using An Api

- Introducing Drivers
- Java
- PHP
- Ruby
- Python

High Performance Options

- Creating Indexes
- Manipulating Index Behaviour
- Index Properties
- Specialised Index Types
- Replication
- Sharding