Course : Apache Cassandra: Administration and Operation

Practical course - 3d - 21h00 - Ref. SSA
Price : 2360 CHF E.T.

★★★★ 4,6 / 5

🎯 Teaching objectives

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

- ✓ Discover the architecture of the Apache Cassandra NoSQL DBMS
- ✓ Install and configure the Apache Cassandra NoSQL DBMS
- ✓ Create a database and manipulate its objects
- ✓ Discover the principles of optimization and development

Course schedule

1 Overview of the Apache Cassandra DBMS

- Apache Cassandra in the NoSQL world.
- Apache Cassandra use cases.
- Things to consider when using Apache Cassandra.
- Apache Cassandra as a technical choice and an architecture.

2 Installing and getting started with Apache Cassandra

- Installation requirements (sources, platforms, etc.).
- Configuring Apache Cassandra.
- Setting up a topology cluster.
- Validating the installation.

Hands-on work
Installing Cassandra and testing that it works.

3 Databases in Apache Cassandra

- Reminder about different storage models of NoSQL.
- Implementation of the column-oriented data model.
- Objects in Apache Cassandra: Keyspace, column families, supercolumns, composite columns.
- Concrete example of implementation.

Hands-on work
Creating databases and working with the objects created.

PARTICIPANTS

PREREQUISITES

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.

4 Querying data in Apache Cassandra

- Using the declarative language CQL.
- Handling the CQL interactive client to carry out operations.
- Access Apache Cassandra via APIs.
- Different operations that can be performed on objects.

Hands-on work
Performing queries via the various Apache Cassandra access tools.

5 Administration and operation of Apache Cassandra

- Different administration tools (NodeTool).
- Supervision and monitoring of Apache Cassandra.
- Cluster monitoring.
- Importing and exporting data.

Hands-on work
Implementing supervision and monitoring for Apache Cassandra.

6 Development under Apache Cassandra

- Understanding and using the Thrift API.
- Examining an Apache Cassandra application.
- Objects in Apache Cassandra: Composite columns, ordered lists, spaced rows, secondary indices.
- Managing read/write consistency.

Hands-on work
Implementing the Thrift API.

7 Performance management in Apache Cassandra

- Indexing under Apache Cassandra.
- Optimal architecture for Apache Cassandra.

Hands-on work
Implementation of indexing in Apache Cassandra.

Dates and locations

REMOTE CLASS
2026 : 24 June, 24 June, 21 Sep., 21 Sep.