

MariaDB, getting started

**SII-322 3 Days (21 Hours)**

Description

An intensive course which will allow you to acquire all the skills necessary for the efficient and reliable use of the Maria DB database: practice of the SQL language, database objects, security... This course also offers an introduction to administration.

Who is this training for ?

For whom

This course is aimed at all IT professionals who have to use MariaDB.

Prerequisites

Aucune

Training objectives

Training program

Présentation du serveur de données MariaDB

- The MariaDB server, history, versions and other projects from MySQL.
- Databases under MariaDB (creation, deletion, options).
- MariaDB tools.
- Tables (type, constraints, indexes, virtual columns, constraints, etc.
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- Introduction to the MariaDB storage engine (MyISAM/Aria,XtraDB/InnoDB, etc.
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- Practical work Creation of databases and different types of tables, modifications.

Le langage SQL

- The relational model.
- Referential integrity (show, information_schema, performance_schema).
- The LMD language: SELECT, GROUP BY, HAVING, ORDER BY, LIMIT, UNION.
- SQL functions and expressions (CASE, IF, LIKE, numeric functions, date functions, handling of NULL values).
- Introduction to transactions (ACID and MariaDB standard) .
- Practical work Implementation of a data model, analysis of constraints and creation of queries.

Requêtes avancées

- Multitable queries (INNER, JOIN, CROSS JOIN, LEFT/RIGHT OUTER JOIN).
- Subqueries (scalars, lists, derived tables).
- Transactions (operation, data consistency).
- Isolation levels (READ COMMITTED, REPEATABLE READ, READ UNCOMMITTED, SERIALIZABLE).
- Table locking (type of locks, visualization, deadly locks).
- Comparison of joins/subqueries: advances in MariaDB.
- Practical work Creation of queries with joins, subqueries, prepared queries, transactions, and table lock analyzes.

Optimisation des requêtes

- Execution plan (EXPLAIN, SHOW EXPLAIN, STATISTICS).
- Query execution and query caching.
- Indexing and best practices.
- Securing stored procedures and views.
- Practical work Analysis of execution plans, indexing of queries.

Introduction à la programmation

- Stored procedures and functions.
- Cursors.
- Error handling.
- Triggers: type, usefulness.