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MariaDB Training: Administration

3 days (21 hours)

Presentation

MariaDB is a relational database management system created by the developers of MySQL. Its aim is to keep MySQL under an open-source license. The software is renowned for its high reliability, performance and functionality. MariaDB is capable of managing tens of thousands of tables and billions of rows of data. It can also process small quantities quickly, making it effective for small businesses or personal projects. Our MariaDB: Administration course will show you how to install and configure MariaDB, how it differs from MySQL and how to understand its system interface. You'll also learn about securing your databases and operations such as backup, restore and maintenance. At the end of this course, you'll know how to install and administer your MariaDB databases. We'll teach you the latest version of the program: MariaDB 10.9.

Objectives

- Understanding MariaDB SGDB
- Installing and configuring MariaDB
- Know how to administer databases
- Managing MariaDB security
- Set up backup, restore and maintenance operations

Target audience

- Database administrator
- Developers

Prerequisites

- Knowledge of SQL

- Operating system knowledge
- Notions in relational databases

MariaDB training program: Administration

Introduction to MariaDB

- What is MariaDB?
- MariaDB and MySQL
- Versions and license types
- Server administration tasks
- Change version and migrate

Installation and configuration

- Installation methods
- PHP and the MariaDB server
- Corresponding module
- Configuration files and parameters
- Start/Stop
- Engine categories

The difference between MariaDB and MySQL

- Server behavior
- mysql, systemctl command
- Authentication
- User management
- Create a user
- Modification of user access
- Requests

Features and benefits

- ACID standard (Atomicity, Coherence, Isolation, Durability)
- Storage motors
  - InnoDB
  - XtraDB
- MyRocks/RocksDB software
- Galera cluster
- Sequential storage engine

Security

- Manage access rights
- User authentication
- Default encryption
- Secure storage engines
- Rights to stored processes and views
- SSL protocol implementation
- Data rollback

Maintaining a server

- Session status
  - Variables
  - Show status command
  - Forced stop
- LOAD DATA
- Myimport
- SELECT INTO OUTFILE
- MySQLdump
- Available tools
- Implementing transactions

Backup, restoration and maintenance operations

- Logging
  - Binary diary
  - Requests
  - Errors
- Different backup methods
  - Server active/stopped
  - Table types
  - Locking
- Create a table definition
- Administration control

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning on entry to training complies with Qualiopi quality criteria. As soon as enrolment is confirmed, the learner receives a self-assessment questionnaire enabling us to

assess their estimated level of proficiency in different types of technology, and their expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or internal security difficulties within the company (intra-company or virtual classroom) that could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.