

Introduction to MariaDB

Duration: 3 Days **Course Code: MARI** **Delivery Method: Company Event**

Overview:

Introduction to MariaDB Course Overview

The Introduction to MariaDB course covers the basics of the SQL language as implemented by MariaDB. The course is designed to give delegates practical experience in writing SQL statements using the mariadb client command line program and GUI tools. The basic SQL statements, including the use of SQL functions and the basic table and view handling statements are introduced. Exercises and examples are used throughout the course to give practical hands-on experience with the techniques covered.

Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

Target Audience:

Who will the Course Benefit?

Objectives:

- Course Objectives
 - To provide the skills needed to create and alter a MariaDB database and query and modify data held within such a database.
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Prerequisites:

- There are no formal pre-requisites for the Introduction to MariaDB course, although an understanding of databases and exposure to information technology in general would be useful. This knowledge can be gained by attendance on the Relational Databases & Data Modelling Overview course.
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Follow-on-Courses:

Further Learning

- MariaDB for Developers
 - MariaDB Database Administration
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Content:

Introduction to MariaDB Training Course Course Contents - DAY 1

Course Introduction

- Administration and course materials
- Course structure and agenda
- Delegate and trainer introductions

Session 1: DATABASE CONCEPTS

- What is a database?
- Database management systems
- Tables, rows and columns
- Indexes, primary keys, unique constraints and foreign keys
- Client-Server architecture
- Supported data types
- Storage engines and table types
- The Information_Schema and MySQL Databases for MariaDB
- Exercise: Using a MariaDB Database

Session 2: USING THE mariadb CLIENT with MariaDB

- What is the mariadb client?
- Getting started and Logging in
- Selecting a database
- Client commands
- Entering and executing SQL statements
- Retrieving previous commands
- Creating, editing and executing SQL files
- Redirecting output into a file
- Command line execution of SQL Scripts
- Exercise: Using the mariadb Client

Session 3: BASIC SELECT

- The SQL SELECT statement
- Case sensitivity
- Quotes
- Statement terminator
- Syntax conventions
- The select clause
- The FROM clause
- Conditions and the WHERE clause
- Logical operators
- The ORDER BY clause
- Column aliases
- Arithmetic expressions
- Precedence of operators
- Exercises: Querying the sample database

Session 4: LIMIT, UNION AND AGGREGATE FUNCTIONS

- The LIMIT clause
- UNION
- UNION ALL
- Aggregate functions
- The GROUP BY clause
- Using Rollup with GROUP BY
- The HAVING clause
- Exercises: Using Limit, Union and Aggregate Functions Introduction to MariaDB Training Course Course Contents - DAY 2

Session 5: SUBQUERIES AND JOINS

- Subqueries
- Cartesian products
- Joins with original syntax
- Table aliases
- Natural joins
- Join using
- Join on
- Multi-table joins
- Exercises: Using Subqueries and Joins

Session 6: NUMERIC AND CHARACTER FUNCTIONS

- Function types
- Testing functions
- Numeric functions
- Character functions
- Exercise: Using Numeric and Character Functions

Session 7: DATE, TIME AND OTHER FUNCTIONS

- Date and time column types
- Date and time formats
- The date format function
- Functions to return date time
- Functions to extract components from date time
- Date time arithmetic
- Miscellaneous functions
- Exercise: Using Date, Time and other functions Introduction to MariaDB Training Course Course Contents - DAY 3

Session 8: DATABASES AND TABLES

- Creating a database
- Selecting a database
- Obtaining database metadata
- Table properties
- Creating tables
- Auto_increment
- Show create table
- Column operations

Session 9: INDEXES AND VIEWS

- What is an index?
- Structure of an index
- Creating an index
- Reviewing indexes
- Composite indexes
- Altering a table to add an index
- Dropping indexes
- What is a view?
- Creating views
- View restrictions
- Dropping views
- Exercise: Maintaining indexes and views

Session 10: MANAGING DATA

- Inserting rows
- Replacing rows
- Updating rows
- Deleting rows
- The truncate statement
- The COMMIT and ROLLBACK commands
- Savepoints
- Implicit commits
- Exercise: Managing data

Session 11: ACCESS CONTROL

- Creating users
- Renaming users
- Dropping users
- Granting privileges
- Revoking privileges
- Exercise: Creating users, granting and revoking

Session 12: IMPORT AND EXPORT

- Exporting using SQL
- Importing using SQL
- Exporting from the command line using mariadb_export
- Importing from the command line using mariadb_import
- Exercise: Export and import data

- Constraint operations
 - Copying tables
 - Renaming tables
 - Changing engine for tables
 - Obtaining table metadata
 - Altering tables
 - Dropping tables
 - Temporary tables
 - Memory tables
 - Exercises: Maintaining databases and tables
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Further Information:

For More information, or to book your course, please call us on 0800/84.009

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www.globalknowledge.com/en-be/