

Course Outline



Tel: +44 (0) 118 979 4000 Fax: +44 (0) 118 979 4000

Email: training@ptr.co.uk Web: www.ptr.co.uk

Introduction to MariaDB

Course Description:

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 MySQL client program and MySQL Workbench. The basic SQL statements, including the use of SQL functions and the basic table and view handling statements are introduced.

This course will benefit anyone who needs to access and work with a MariaDB Database or is migrating from MySQL to MariaDB.

Pre-requisites:

There are no formal pre-requisites, although an understanding of databases and exposure to information technology in general would be useful.

Course Content:

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

21a Peach Street Wokingham Berkshire RG40 1XJ

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Registered Office: Grenville Court Britwell Road Burnham Bucks SL1 8DF Company Registered No: 2442290 – VAT registration No:532 1929 56

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- **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

- **USING THE MySQL CLIENT with MariaDB**
 - What is the MySQL 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 MySQL Client

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- **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

- **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

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- **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

- **NUMERIC AND CHARACTER FUNCTIONS**
 - Function types
 - Testing functions
 - Numeric functions
 - Character functions
 - Exercise: Using Numeric and Character Functions

- **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

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- **DATABASES AND TABLES**
 - Creating a database
 - Selecting a database
 - Creating tables
 - Auto_increment
 - Show create table
 - Column operations
 - Constraint operations
 - Copying tables
 - Renaming tables
 - Changing engine for tables
 - Dropping tables
 - Temporary tables
 - Exercises: Maintaining databases and tables

- **INDEXES AND VIEWS**
 - What is an index?
 - Creating an index
 - Reviewing indexes
 - Dropping indexes
 - What is a view?
 - Creating views
 - View restrictions
 - Dropping views
 - Exercise: Maintaining indexes and views

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

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

- **IMPORT AND EXPORT**
 - Exporting using SQL
 - Importing using SQL
 - Exporting from the command line
 - Importing from the command line
 - Exercise: Export and import data

Course Duration:

3 Days

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