
PostgreSQL for Developers

8 hours

Course Overview:

This training course covers SQL, DML, DDL, PL/pgSQL language and basic performance diagnostics. Attendees will learn how to work with a PostgreSQL development environment, manipulate and query data.

Who Should Attend:

This training is ideal for those are looking to migrate to PostgreSQL. It is designed for developers with minimal SQL knowledge seeking to leverage their server-side development skills.

Required Skills:

Basic knowledge in SQL language.

Course Contents:

Introduction

- Preparing the PG Instance
 - PostgreSQL for Windows
 - PostgreSQL Docker for Linux
- Development tools
 - pgAdmin
 - DBeaver
 - IDEA
- Connecting to PostgreSQL
 - Creating a database/schema
 - Loading the demo schema
 - What is a database object?
 - browsing the schema objects
- Hand-on Lab
- Learning SQL
 - Creating a Tables (DDLs): data types, PK, Identity column
 - DMLs: INSERT/DELETE/UPDATE
 - Selecting Data
 - JOINS (INNER, LEFT, RIGHT, OUTER)
 - Built-In Functions
 - Aggregate functions and GROUP BY
 - ORDER BY
- Hand-on Lab
- Procedural Language - PL/pgSQL
 - Basics of PL/pgSQL
 - Functions
 - Procedures
 - Cursors (loop, case, if-then-else)

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- Triggers
 - Exception Handling
 - The PERFORM and EXECUTE statements
 - Autonomous Transactions
 - Hand-on Lab
 - Performance tuning
 - Explain the explain
 - Indexes, B-tree, FKs (constraints)
 - Indexes on expressions
 - Analyzing & optimizing queries