Data AI:
Writing High Performance T-SQL Queries

WorkshopPLUS

Duration: 3 Days | **Focus Area:** Performance and Scalability | **Level**: 300

The High Performance T-SQL Workshop is a 3-day offering that teaches attendees how the SQL Server engine interprets and executes T-SQL, how to write T-SQL that performs well, and how to measure that performance to prove gains. This workshop is targeted at database developers, report writers, and administrators who write T-SQL queries and want to improve their knowledge of how querying works and how to improve it.

◆ OUTCOMES ◆

Skills

Gain a comprehensive understanding of the T-SQL language

Best Practices

Learn how to write T-SQL queries that are efficient as well as how to troubleshoot query performance problems

Way Forward

Take what you've learned in the classroom and apply it to query performance tuning or enterprise report writing.

◆ PREREQUISITES ◆

Participants that have existing experience querying SQL Server databases will receive the most value from this course. However, those that are new to writing database queries will learn a very valuable skillset from this course.

Recommended Qualifications

- Experience with relational database systems and T-SQL knowledge

Hardware Requirements

- An Intel Core-i5-based PC
- 4 GB RAM
- 128 GB HDD
- Windows 7 SP1 or later

- Office 2013 Professional Plus
- Internet access with at least 1 Mbps bandwidth per student

Microsoft

Duration: 3 days

START ● · · · · · · ● DAY 1 · · · · · · · · · · · · · · · ● DAY 2 · · · · · · · · · · · · · · · ● DAY 3 · · · · · · ● **End**

The Elements of T-SQL queries

Designing a Database for High Performance

Efficiently Manipulating Data

Advanced Query Tuning Techniques

◆ SYLLABUS ◆

The Elements of T-SQL Queries

- Lesson 1: Introduction to High Performance T-SQL Queries
- Lesson 2: Using SELECT to Retrieve Columns
- Lesson 3: Joining Data Elements
- Lesson 4: Refining Query Results with WHERE
- Lesson 5: Using GROUP BY and HAVING for Aggregations
- Lesson 6: Ordering a Result Set

Designing a Database for High Performance

- Lesson 1: Choosing the Best Data Type
- Lesson 2: Using Built-In Functions to Improve Performance
- Lesson 3: Creating Indexes to Support Queries
- Lesson 4: How Statistics Affect Performance
- Lesson 5: Taking Advantage of Search Arguments

Efficiently Manipulating Data

- Lesson 1: Using Subqueries for Correlating Data Sets
- Lesson 2: Building Temporary Objects for Data Storage
- Lesson 3: Simplifying Data with Views
- Lesson 4: Reusing Code with Functions

Advanced Query Tuning Techniques

- Lesson 1: Manipulate a Result Set with Window Functions
- Lesson 2: Reusing Code with Stored Procedures
- Lesson 3: How Parameterization Affects Queries
- Lesson 4: Building Complex Queries with Dynamic SQL
- Lesson 5: Implementing Event Response with Triggers

NEXT STEPS: If you are interested in enhancing your T-SQL knowledge, contact your Microsoft Account Representative.

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