

SQL Server® 2008: A Comprehensive Hands-On Introduction - 4 Days

Course 137 Overview

- You Will Learn How To**
- Build and manage SQL Server 2008 databases
 - Retrieve and manipulate data with SQL queries
 - Integrate SQL Server with .NET, Microsoft Office and XML
 - Secure and monitor databases with Management Studio
 - Replicate data over multiple servers with merge replication
 - Transform data into strategic information using business intelligence processes

Course Benefits SQL Server 2008 offers a progressive and powerful way to manage your organization's information. A robust and scalable enterprise solution, SQL Server 2008 extends the features of SQL Server 2005 and improves application development time and cost management. This hands-on course provides a solid foundation on which to build essential SQL Server development and administrative skills, including creating databases, generating Transact-SQL statements, implementing security and replicating data over multiple servers.

Who Should Attend Those who are new to Microsoft SQL Server. Familiarity with relational databases is helpful.

Hands-On Training Throughout the course, you gain extensive experience with SQL Server 2008. Practical exercises include:

- Installing SQL Server 2008 R2
- Creating tables and constraints
- Manipulating data with SQL
- Integrating SQL Server with Office
- Securing access to SQL Server from intruders
- Backing up databases to prevent disasters with the Maintenance Plan Wizard
- Replicating data between multiple databases
- Rendering a report with Reporting Services

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Course 137 Outline

Getting Started with SQL Server 2008

Overview of SQL Server architecture

- Fundamentals of relational databases
- Client/server model

SQL Server 2008 editions

- Standard
- Enterprise
- Workgroup
- Express
- Compact
- Developer

SQL Server components and tools

- SQL Server Management Studio
- Management reports
- Business Intelligence Development Studio
- SQL Server Agent
- Database engine

Constructing the Database

Creating a database

- Choosing files and directories
- Allocating file size and growth parameters
- Implementing database schemas

Designing tables

- Analyzing various datatypes
- Defining column attributes
- Indexing tables with Management Studio
- Adding, deleting or changing columns

Protecting data with constraints

- Enforcing uniqueness with primary key constraints
- Check constraints to validate conditions
- Building relationships with foreign keys

Server-Side Programming

Data retrieval with Transact-SQL

- Leveraging Query Designer to construct SQL statements
- Writing multiple table join queries
- Aggregating data for business analysis

Modifying data

- Adding new rows with the INSERT command
- Changing targeted data with UPDATE
- Deleting specific rows

Programming constructs

- Writing stored procedures for performance and productivity
- Capturing change events with triggers
- Simplifying data access with user-defined functions

Integrating with Client Applications

Connecting to SQL Server

- Authenticating with SQL Server and Windows logins
- Programming client applications

Interacting with Microsoft Office

- Pulling data from SQL Server into Excel
- Migrating an Access database to SQL Server

Leveraging XML and .NET features

- Retrieving data in XML form
- Utilizing a .NET CLR component

Administering SQL Server 2008

Securing the database infrastructure

- Controlling access to SQL Server
- Granting or revoking permissions
- Defining roles and user memberships

Running the Maintenance Plan Wizard

- Automating backups by scheduling jobs
- Checking database integrity and defragmenting data
- Notifying operators via e-mail

Monitoring SQL Server activity

- Viewing locks and queries
- Requesting management reports with Management Studio

Sharing Data through Replication

Defining the replication architecture

- Snapshot
- Transactional
- Merge replication
- Choosing a replication strategy

Configuring merge replication

- Distributing published data
- Subscribing to a publication

Business Intelligence Components

Transforming data with Integration Services

- Importing and exporting files

- Moving and denormalizing data into a data warehouse

Producing information with Analysis Services

- Building multidimensional cubes
- Predicting trends with data mining

Information delivery with Reporting Services

- Designing reports quickly with the Report Wizard
- Deploying reports to a Report Server for centralized access