

SQL Server® 2005: A Comprehensive Hands-On Introduction - 4 Days

Course 131 Overview

- You Will Learn How To**
- Build databases, queries and reports for SQL Server 2005
 - Create and manage databases with SQL Server Management Studio
 - Generate Transact-SQL statements for data retrieval and modification
 - Implement security and back up databases to protect critical data
 - Configure merge replication and handle data conflicts
 - Explore business intelligence solutions using Integration, Analysis and Reporting Services

Course Benefits SQL Server 2005 offers a robust architecture for enterprise data management, developer productivity and business intelligence. This course provides the knowledge and practical skills needed to maximise the benefits of SQL Server 2005. You gain a solid foundation on which to build essential SQL Server development and administrative skills, including creating databases, generating Transact-SQL statements and implementing security.

Who Should Attend Those who are new to SQL Server, as well as those evaluating SQL Server 2005. Familiarity with relational databases is helpful.

Hands-On Training Exercises throughout the course reinforce the knowledge you gain in class, including:

- Installing SQL Server 2005
- Creating databases with SQL Server Management Studio
- Adding primary and foreign key constraints to tables
- Retrieving and joining data from tables
- Simplifying data access using views
- Defining a database maintenance plan
- Backing up databases to protect against disasters
- Automating administrative jobs with SQL Server Agent
- Importing data from text files using SSIS

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Course 131 Outline

Introducing SQL Server 2005

Overview of database fundamentals

- Client/Server
- RDBMS

SQL Server 2005 editions

- Express
- Standard
- Enterprise
- Workgroup
- Mobile
- Developer

SQL Server components and tools

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

Assembling a Database

Building a database

- Choosing file names and locations
- Determining file size and growth parameters
- Utilising schemas to partition tables

Designing tables

- Defining columns and attributes
- Selecting appropriate datatypes
- Setting the primary keys and indexes
- Modifying or removing columns

Applying declarative constraints

- Enforcing check constraints
- Validating the existing data
- Protecting relationships with foreign keys

Developing Database Applications

Retrieving data with Transact-SQL

- Writing SQL queries with Management Studio
- Sorting the final result sets
- Aggregating data by groups
- Joining columns from different tables
- Refining result sets with subqueries

Altering data with SQL commands

- INSERT
- UPDATE
- DELETE

Storing query definitions

- Generating views with Management Studio
- Simplifying data access with views

Server-side and client-side programming

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- Constructing a stored procedure
- Executing a stored procedure
- Exploring functions and triggers
- Integrating SQL Server with Office

Providing Application Solutions with SQL Server

- Upsizing from Microsoft Access
- Displaying data on the Web with ASP.NET
- Pulling data into Microsoft Excel

Managing SQL Server Security and Administration

Administering security

- Allowing logins access to databases
- Creating SQL Server logins
- Implementing a security plan
- Defining database roles
- Granting permissions on tables to roles

Deploying the Maintenance Plan Wizard

- Checking database consistency
- Backing up the database and log
- Reporting on maintenance plan success

Automating administration

- Defining operators
- Generating and scheduling jobs
- Notifying operators of job outcome

Preparing for disasters

- Performing routine database backups
- Restoring databases to fix corruptions

Replicating Data

- Designing replication strategies
- Configuring the distribution server
- Publishing data with merge replication
- Pulling or pushing subscriptions
- Resolving conflicts using priorities

Leveraging Business Intelligence

SQL Server Integration Services (SSIS)

- Importing data into SQL Server
- Exporting data to text or CSV format

Analysis Services

- Storing multidimensional data
- Pivoting cubes in Microsoft Excel
- Detecting patterns with data mining

SQL Server 2005 Reporting Services

- Authoring and deploying reports
- Viewing reports from a Web site