

10977 - Updating Your SQL Server Skills to Microsoft SQL Server 2014

Duration: 5 days

Overview:

This five-day instructor-led course teaches students how to use the enhancements and new features that have been added to SQL Server and the Microsoft data platform since the release of SQL Server 2008. The course focuses on teaching individuals how to use SQL Server 2014 product features and other Microsoft data platform components.

Target Audience:

The primary audience for this course is database and business intelligence (BI) professionals who are familiar with SQL Server 2008 and want to update their skills to SQL Server 2014, and become familiar with related Microsoft data technologies.

Pre-requisites:

Before attending this course, students must have:

- Experience of building and managing database, data warehouse, and business intelligence (BI) solutions with SQL Server 2008.
- Familiarity with the Windows Server 2012 operating system and networking.
- Familiarity with Microsoft Excel and Microsoft SharePoint Server 2013.

Module 1: Introduction to SQL Server 2014

Lessons

- Overview of SQL Server 2014
- SQL Server 2014 Editions and Components
- Installing SQL Server 2014
- Enhancements to SQL Server Management Studio

Lab : Exploring SQL Server 2014

- Reviewing Installed Components
- Using SQL Server Management Studio

Module 2: What's New in SQL Server Database Development

Lessons

- Transact-SQL Enhancements
- New and Enhanced Transact-SQL Functions
- Enhancements to Spatial Data Support
- Storing and Querying Documents with SQL Server 2014

Lab : Developing SQL Server 2014 Databases

- Using Sequence Objects
- Using the THROW statement
- Implementing Paging
- Querying Documents

Module 3: In-Memory Database Capabilities

Lessons

- The Buffer pool Extension
- Columnstore Indexes
- Memory-Optimised Tables

Lab : Using In-Memory Database Capabilities

- Enabling the Buffer Pool Extension
- Creating Columnstore Indexes
- Working with Memory-Optimised Tables

Module 4: Scripting SQL Server 2014

Lessons

- New and Enhanced Dynamic Management Views
- Using PowerShell to Manage SQL Server

Lab : Managing SQL Server with Scripts

- Using Dynamic Management Views
- Using PowerShell

Module 5: Implementing Security in Microsoft SQL Server 2014

Lessons

- Security Management Enhancements
- Contained Databases

Lab : Implementing Security

- Implementing User-Defines Server Roles
- Implementing Contained Databases

Module 6: High Availability and Data Recovery Enhancements

Lessons

- AlwaysOn High Availability
- Enhancements to Data Recovery

Lab : Using AlwaysOn Availability Groups

- Creating an AlwaysOn Availability Group
- Using an AlwaysOn Availability Group
- Observing Availability Group Failover Behaviour

Module 7: New and Enhanced Features in SQL Server Integration Services

Lessons

- Using the CDC Control Task for Incremental Data Loads
- Deploying and Operating SSIS Packages

Lab : Using SQL Server Integration Services

- Extracting Modified Data
- Deploying and Operating an SSIS Project

Module 8: Data Quality Services

Lessons

- Introduction to Data Quality
- Using Data Quality Services to Cleanse Data
- Using Data Quality Services to Match Data

Lab : Cleansing Data

- Creating a DQS Knowledge Base
- Using a DQS Project to Cleanse Data
- Using DQS in an SSIS Package

Lab : Deduplicating Data

- Creating a Matching Policy
- Using a DQS Project to Match Data

At Course Completion:

After completing this course, students will be able to:

- Describe key features and capabilities of SQL Server 2014.
- Leverage new and enhanced features to develop database in SQL Server 2014.
- Use in-memory database capabilities in SQL Server 2014.
- Manage SQL Server 2014 by using dynamic management views and PowerShell.
- Implement security in SQL Server 2014.
- Implement high-availability and data recovery techniques in SQL Server 2014.
- Use SQL Server 2014 Integration Services.
- Use SQL Server 2014 Data Quality Services.
- Use SQL Server 2014 Master Data Services.
- Manage SQL Server 2012 Agent and Jobs.
- Implement a tabular data model in SQL Server 2014 Analysis Services.
- Implement a Self-Service BI solution with Microsoft Excel 2013.
- Describe key elements of cloud solutions for data.
- Implement a database in Windows Azure SQL Database.
- Implement a SQL Server database in a Windows Azure virtual machine.
- Implement a Big Data solution with Windows Azure HDInsight and the Windows Azure Marketplace.

Module 9: Master Data Services

Lessons

- Introduction to Master Data Services
- Implementing a Master Data Services Model
- Using the Master Data Services Add-in for Excel

Lab : Implementing Master Data Services

- Creating a Basic Model
- Editing a model by Using the Master Data Services Add-in for Excel
- Loading Data into a Model
- Enforcing Business Rules
- Consuming Master Data Services Data

Module 10: SQL Server 2014 Reporting Services

Lessons

- Reporting Services Overview
- Reporting Services and Microsoft SharePoint Server
- Introduction to Data Alerts

Lab : Using SQL Server 2014 Reporting Services

- Viewing SharePoint Mode Configuration
- Authoring, Publishing, and Viewing a Report
- Creating and Managing Data Alerts

Module 11: Implementing an Analysis Services Tabular Data Model

Lessons

- Introduction to Analysis Services Tabular Data Model Projects
- Creating a Tabular Model
- Using an Analysis Services Tabular Data Model in the Enterprise

Lab : Working with an Analysis Services Tabular Data Model

- Creating an Analysis Services Tabular Data Model Project
- Configuring Columns and Relationships
- Using Custom DAX Expressions
- Deploying an Analysis Services Tabular Data Model

Module 12: Self-Service BI with Microsoft Excel

Lessons

- PowerPivot for Excel
- PowerPivot for SharePoint Server
- Power Query
- Power View
- Power Map
- Power BI for Office 365

Lab : Self-Service BI with Excel

- Creating a Data Model with PowerPivot
- Importing Data with Power Query
- Visualising Data with Power View
- Visualising Geographic Data with Power Map

Module 13: Introduction to Cloud Data Solutions

Lessons

- Overview of Cloud Computing
- Windows Azure Services for Data

Lab : Using Windows Azure

- Creating a Windows Azure Storage Account
- Backing Up a Database to Windows Azure

Module 14: Windows Azure SQL Database

Lessons

- Introduction to Windows Azure SQL Database
- Windows Azure SQL Database Security
- Implementing and Managing Databases

Lab : Using Windows Azure SQL Database

- Provisioning Windows Azure SQL Database
- Configuring Windows Azure SQL Database Security
- Migrating a SQL Server Database to Windows Azure SQL Database

Module 15: SQL Server in Windows Azure Virtual Machines

Lessons

- Introduction to Windows Azure Virtual Machines
- Windows Azure Virtual Machine Connectivity and Security
- Creating Databases in a Windows Azure Virtual Machine

Lab : Using Windows Azure Virtual Machines

- Creating a Windows Azure Virtual Machine
- Configuring Virtual Machine Security and Connectivity
- Creating Databases on a Virtual Machine

Module 16: Implementing Big Data Solutions

Lessons

- Introduction to Big Data
- Windows Azure HDInsight
- Consuming HDInsight Results in Excel
- Obtaining Data from the Windows Azure Marketplace

Lab : Creating a Big Data Solution

- Provisioning an HDInsight Cluster
- Processing Data with HDInsight
- Analysing Big Data in Excel
- Obtaining Data from the Windows Azure Marketplace