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

Course Details

Course Outline

1. **Module 1: Introduction to SQL Server 2014**
   - Overview of SQL Server 2014
   - SQL Server 2014 Editions and Components
   - Installing SQL Server 2014
   - Enhancements to SQL Server Management Studio
   - o **Lab : Exploring SQL Server 2014**
   - Reviewing Installed Components
   - Using SQL Server Management Studio

2. **Module 2: What's New in SQL Server Database Development**
   - Transact-SQL Enhancements
   - New and Enhanced Transact-SQL Functions
   - Enhancements to Spatial Data Support
   - Storing and Querying Documents with SQL Server 2014
   - o **Lab : Developing SQL Server 2014 Databases**
   - Using Sequence Objects
   - Using the THROW statement
   - Implementing Paging
   - Querying Documents

3. **Module 3: In-Memory Database Capabilities**
   - The Buffer pool Extension
   - Columnstore Indexes
   - Memory-Optimized Tables
   - o **Lab : Using In-Memory Database Capabilities**
   - Enabling the Buffer Pool Extension
   - Creating Columnstore Indexes
   - Working with Memory-Optimized Tables

4. **Module 4: Scripting SQL Server 2014**

   - New and Enhanced Dynamic Management Views
   - Using PowerShell to Manage SQL Server
   - o **Lab : Managing SQL Server with Scripts**
   - Using Dynamic Management Views
   - Using PowerShell

5. **Module 5: Implementing Security in Microsoft SQL Server 2014**

   - Security Management Enhancements
   - Contained Databases
   - o **Lab : Implementing Security**
   - Implementing User-Defines Server Roles
   - Implementing Contained Databases

6. **Module 6: High Availability and Data Recovery Enhancements**

   - AlwaysOn High Availability
   - Enhancements to Data Recovery
   - o **Lab : Using AlwaysOn Availability Groups**
   - Creating an AlwaysOn Availability Group
   - Using an AlwaysOn Availability Group
   - Observing Availability Group Failover Behavior

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

   - Using the CDC Control Task for Incremental Data Loads
   - Deploying and Operating SSIS Packages
   - o **Lab : Using SQL Server Integration Services**
   - Extracting Modified Data
   - Deploying and Operating an SSIS Project

8. **Module 8: Data Quality Services**

   - Introduction to Data Quality
   - Using Data Quality Services to Cleanse Data
   - Using Data Quality Services to Match Data
   - o **Lab : Cleansing Data**
   - Creating a DQS Knowledge Base
   - Using a DQS Project to Cleanse Data

- Using DQS in an SSIS Package
  - o **Lab : Deduplicating Data**
- Creating a Matching Policy
- Using a DQS Project to Match Data

9. **Module 9: Master Data Services**

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

10. **Module 10: SQL Server 2014 Reporting Services**

- Reporting Services Overview
- Reporting Services and Microsoft SharePoint Server
- Introduction to Data Alerts
  - o **Lab : Using SQL Server 2014 Reporting Services**
- Viewing SharePoint Mode Configuration
- Authoring, Publishing, and Viewing a Report
- Creating and Managing Data Alerts

11. **Module 11: Implementing an Analysis Services Tabular Data Model**

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

12. Module 12: Self-Service BI with Microsoft Excel

- PowerPivot for Excel
- PowerPivot for SharePoint Server
- Power Query
- Power View
- Power Map
- Power BI for Office 365
  - o **Lab : Self-Service BI with Excel**
- Creating a Data Model with PowerPivot
- Importing Data with Power Query
- Visualizing Data with Power View
- Visualizing Geographic Data with Power Map

13. Module 13: Introduction to Cloud Data Solutions

- Overview of Cloud Computing
- Windows Azure Services for Data
  - o **Lab : Using Windows Azure**
- Creating a Windows Azure Storage Account
- Backing Up a Database to Windows Azure

14. Module 14: Windows Azure SQL Database

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

15. Module 15: SQL Server in Windows Azure Virtual Machines

- Introduction to Windows Azure Virtual Machines
- Windows Azure Virtual Machine Connectivity and Security
- Creating Databases in a Windows Azure Virtual Machine
  - o **Lab : Using Windows Azure Virtual Machines**
- Creating a Windows Azure Virtual Machine

- Configuring Virtual Machine Security and Connectivity

- Creating Databases on a Virtual Machine

16. Module 16: Implementing Big Data Solutions

- Introduction to Big Data

- Windows Azure HDInsight

- Consuming HDInsight Results in Excel

- Obtaining Data from the Windows Azure Marketplace

  o **Lab : Creating a Big Data Solution**

- Provisioning an HDInsight Cluster

- Processing Data with HDInsight

- Analyzing Big Data in Excel

- Obtaining Data from the Windows Azure Marketplace