

MOC 10998 A: Updating Your Skills to SQL Server 2017

Course Summary

Description

This two-day instructor led training course is aimed at database professionals looking to update their skills to cover SQL Server 2017.

Objectives

By the end of this course, students will be able to:

- Describe key capabilities and components of SQL Server 2017
- Describe new and enhanced features in SQL Server Performance, Availability, and Scalability
- Describe new and enhanced features in SQL Server data access
- Describe new and enhanced features in SQL Server reporting and BI
- Describe new and enhanced features in SQL Server OLAP
- Describe new and enhanced data analytics features
- Describe new and enhanced features in SQL Server Cloud deployments
- Describe SQL Server on Linux functionality

Topics

- Introduction to SQL Server 2017
- What's new in SQL Server Performance, Scalability, and Availability.
- What's New in SQL Server data Access
- What's new in SQL Server Reporting and BI
- New and Enhanced Features in SQL Server Analysis Services
- New and Enhanced data Analytics Features
- What's new in SQL Server in the Cloud
- SQL Server on Linux

Audience

The primary audience for this course is existing database professionals with experience of SQL Server 2016 who want to update their skills to SQL Server 2017. The secondary audience is existing SQL Server 2016 MCSAs who want to prepare for the Upgrade exam for SQL Server 2017 certification.

Prerequisite

In addition to their professional experience, students who attend this training should already have the following technical knowledge:

- Experience of building and managing database, data warehouse, and business intelligence (BI) solutions with SQL Server 2016.
- Familiarity with the Windows Server 2016 operating system and networking.

Familiarity with Microsoft Office 2016

Duration

Two Days

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Course Outline

I. *Introduction to SQL Server 2017*

Module Goal: Describe key capabilities and components of SQL Server 2017

- A. Overview of SQL Server 2017
- B. Functionality across versions

II. *What's new in SQL Server Performance, Scalability, and Availability.*

This module introduces the performance enhancements provided by Adaptive Query Processing and Automatic Tuning, as well as the scalability and availability enhancements provided by new Availability Group architectures, including Read-Scale Availability Groups and Availability Groups with SQL Server on Linux

- A. Adaptive query processing
- B. Automatic tuning
- C. Availability Scalability

Lab: Performance and availability – adaptive query processing

- Interleaved execution
- Batch mode memory grant feedback
- Batch mode adaptive joins

III. *What's New in SQL Server data Access*

SQL Server 2017 introduces SQL Graph which enables you to define the relationships between your data items in a table rather than calculating them during a query, reducing the query cost and simplifying your data structure.

- A. SQL Graph

Lab: SQL Graph

- Create a Graph database
- Query a Graph database

IV. *What's new in SQL Server Reporting and BI*

This module describes what's new in SQL Server reporting and BI.

- A. Power BI report Server
- B. Reporting Services update

Lab: Reporting and BI

- Deploy Power BI report server
- Add commenting to a report

V. *New and Enhanced Features in SQL Server Analysis Services*

This module introduces new and enhanced features in SQL Server Analysis Services, with particular emphasis on the tabular data model.

- A. Tabular model updates

Lab: Ragged hierarchies

- View existing reports
- Hide blank members

VI. *New and Enhanced data Analytics Features*

This module introduces new and enhanced data analytics features.

- A. New and enhanced data analytics features

Lab: Data analytics with Python

- Enable external script execution
- Run Python scripts

VII. *What's new in SQL Server in the Cloud*

Organizations want the best value from a mixture of cloud services and their existing investment in on-premises hardware and software. This module covers a comparison between the features of Microsoft Azure SQL Database and Microsoft SQL Server 2017, as well as new features that make it easier for you to migrate databases from on-premises SQL Server instances to Azure SQL Database.

- A. Azure SQL database features
- B. Managed Instances

Lab: Managed instances

VIII. *SQL Server on Linux*

This module covers the features of SQL Server on Linux, as well as the process for deploying SQL Server on Linux and using Docker.

- A. SQL Server on Linux
- B. Deploying SQL Server on Linux

Lab: SQL Server in Docker containers

- Deploy a SQL Server Docker image
- Run a SQL Server instance inside a Docker container
- Connect to a SQL Server Instance running in a Docker container