

MOC 40008 A Updating your Database Skills to Microsoft SQL Server 2012

Course Summary

Description

This three-day instructor-led course provides existing SQL Server database professionals with the knowledge and skills to use new and enhanced capabilities in SQL Server 2012.

Objectives

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

- Describe key new and enhanced features in SQL Server 2012.
- Install SQL Server 2012.
- Use enhanced tools and PowerShell support to manage SQL Server 2012.
- Use enhanced Transact-SQL and storage capabilities to develop SQL Server 2012 databases.
- Use new and enhanced performance capabilities to optimize a SQL Server 2012 database.
- Use new availability and data recovery technologies to provide high availability.
- Use new and enhanced security capabilities in SQL Server 2012.
- Use SQL Azure. Describe new Business Intelligence (BI) capabilities in SQL Server 2012.

Topics

- Introducing SQL Server 2012
- Installing SQL Server 2012
- Managing SQL Server 2012
- Developing SQL Server 2012 Databases
- Performance and Tuning Enhancements
- High Availability and Data Recovery Enhancements
- Implementing Security in Microsoft SQL Server 2012
- Extending Data Solutions to the Cloud
- Overview of BI Enhancements in SQL Server 2012

Audience

This course is intended for database professionals with experience of using SQL Server 2008 R2.

Prerequisites

Students should have experience of creating and managing database solutions in SQL Server, including basic Transact-SQL programming.

Duration

Three days

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Course Outline

I. Introducing SQL Server 2012

This module provides an overview of SQL Server 2012.

- A. Overview of SQL Server 2012
- B. SQL Server 2012 Editions and Components

II. Installing SQL Server 2012

This module describes how to install SQL Server 2012.

- A. Installation Options and Requirements
- B. Installing SQL Server
- C. Deploying SQL Server in a Private Cloud

Lab : Installing SQL Server

- Installing a SQL Server 2012 Named Instance
- Performing Post-Installation Setup and Checks

Lab : Using a Data-Tier Application in a Private Cloud Scenario

- Creating a Data-Tier Application
- Deploying a Data-Tier Application

III. Managing SQL Server 2012

This module describes new and enhanced features that make it easier to manage SQL Server databases.

- A. Enhancements to SQL Server Management Studio
- B. New and Enhanced Dynamic Management Views
- C. Using PowerShell to Manage SQL Server

Lab : Managing SQL Server

- Using SQL Server Management Studio
- Using SQL Server Management Studio

IV. Developing SQL Server 2012 Databases

This module describes new Transact-SQL and data storage capabilities that you can use to develop databases.

- A. Transact-SQL Enhancements
- B. New and Enhanced Transact-SQL Functions
- C. Enhancements to Spatial Data Support
- D. Storing and Querying Documents

Lab : Developing SQL Server Databases

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

V. Performance and Tuning Enhancements

This module provides an introduction to new and enhanced performance tuning features in SQL Server 2012

- A. Performance Optimization Tools
- B. Enhancements to Indexing

Lab : Optimizing SQL Server Performance

- Creating a Columnstore Index
- Using a Columnstore Index
- Updating a Table with a Columnstore Index

VI. High Availability and Data Recovery Enhancements

This module provides an introduction to new and enhanced features for data recovery and availability.

- A. AlwaysOn High Availability
- B. Enhancements to Data Recovery

Lab : Using AlwaysOn Availability Groups

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

VII. Implementing Security in Microsoft SQL Server 2012

This module describes how to use security enhancements in SQL Server 2012.

- A. Security Management Enhancements
- B. Contained Databases

Lab : Implementing Security

- Implementing user-Defined Server Roles
- Implementing Contained Databases

VIII. Extending Data Solutions to the Cloud

This module provides an introduction to SQL Azure.

- A. Introduction to SQL Azure
- B. Working with SQL Azure

Lab : Using SQL Azure

- Creating a Database in SQL Azure
- Using SQL Server Management Studio with SQL Azure

IX. Overview of BI Enhancements in SQL Server 2012

This module introduces enhancements to BI support in SQL Server 2012.

- A. SQL Server 2012 for Data Warehousing
- B. SQL Server 2012 for Business Intelligence

Lab : Exploring BI Features

- Using PowerPivot
- Using Power View