15 Days | MCSA SQL Server 2014

Microsoft offers the Microsoft Certified Solutions Associate (MCSA): Microsoft SQL Server 2012/2014, consisting of a series of three exams that a candidate is expected to pass:

- Querying Microsoft SQL Server 2012/2014 (70-461)

- Administering Microsoft SQL Server 2012/2014 Databases (70-462)

- Implementing a Data Warehouse with Microsoft SQL Server 2012/2014 (70-463)

The MCSA 2012/2014 validate the proven ability of an individual to build, implement and control databases in a Microsoft SQL Server 2012 environment. This credential has been designed for database administrators who are willing to equip themselves working across the SQL Server data platform.

MCSA is the first step towards MCSE: Data Platform certification that validates an individual's mastery to operate in a Microsoft SQL environment.

Note: A candidate is expected to attend and clear the corresponding three exams in order to earn the MCSA SQL SERVER 2012/2014 certification.

Course Details

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Course Outline

Module 1: Introduction to Microsoft SQL Server 2014

- This module introduces the SQL Server platform and major tools. It discusses editions, versions, tools used to query, documentation sources, and the logical structure of databases.

Module 2: Introduction to T-SQL Querying

- This module introduces Transact SQL as the primary querying language of SQL Server. It discusses the basic structure of T-SQL queries, the logical flow of a SELECT statement, and introduces concepts such as predicates and set-based operations.

Module 3: Writing SELECT Queries

- This module introduces the fundamentals of the SELECT statement, focusing on queries against a single table.

Module 4: Querying Multiple Tables

- This module explains how to write queries which combine data from multiple sources in SQL Server. The module introduces the use of JOINs in T-SQL queries as a mechanism for retrieving data from multiple tables

Module 5: Sorting and Filtering Data

- This module explains how to enhance queries to limit the rows they return, and to control the order in which the rows are displayed. The module also discusses how to resolve missing and unknown results.

Module 6: Working with SQL Server 2014 Data Types

- This module explains the data types SQL Server uses to store data. It introduces the many types of numeric and special-use data types. It also explains conversions between data types and the importance of type precedence.

Module 7: Using DML to Modify Data

- This module describes the use of Transact-SQL Data Manipulation Language to perform inserts, updates and deletes to your data.

Module 8: Using Built-In Functions

- This module introduces the use of functions that are built into SQL Server Denali and will discuss some common usages including data type conversion, testing for logical results and nullability.

Module 9: Grouping and Aggregating Data

- This module introduces methods for grouping data within a query, aggregating the grouped data and filtering groups with having. The module is designed to help the candidates grasp why a select clause has restrictions placed upon column naming in the group by clause as well as which columns may be listed in the select clause.

Module 10: Using Subqueries

- This module will introduce the use of subqueries in various parts of a SELECT statement. It will include the use of scalar and multi-result subqueries, and the use of the IN and EXISTS operators.

Module 11: Using Table Expressions

- This module introduces T-SQL expressions which return a valid relational table, typically for further use in the query. The module discusses views, derived tables, common table expressions and inline table-valued functions.

Module 12: Using Set Operators

- This module introduces Microsoft SharePoint Server as a platform for BI and then focuses on building BI dashboards and scorecards with PerformancePoint Services.

Module 13: Using Window Ranking, Offset, and Aggregate Functions

- This module introduces window functions including ranking, aggregate and offsets functions. Much of this functionality is new to SQL Server 2012. It will cover the use of T-SQL functions such as ROW_NUMBER, RANK, DENSE_RANK, NTILE, LAG, LEAD, FIRST_VALUE and LAST_VALUE to perform calculations against a set, or window, of rows.

Module 14: Pivoting and Grouping Sets

- This module discusses techniques for pivoting data in T-SQL as well to introduce the fundamentals of the GROUPING SETS clause. It will also cover the use of GROUP BY ROLLUP and GROUP BY CUBE syntax in SQL Server

Module 15: Executing Stored Procedures

- This module introduces the use of existing stored procedures in a T-SQL querying environment. It discusses the use of EXECUTE, how to pass input and output parameters to a procedure, and how to invoke system stored procedures.

Module 16: Programming with T-SQL

- This module provides a basic introduction to T-SQL programming concepts and objects. It discusses batches, variables, control of flow elements such as loops and conditionals, how to create and execute dynamic SQL statements, and how to use synonyms.

Module 17: Implementing Error Handling

- This module introduces the use of error handlers in T-SQL code. It will introduce the difference between compile errors and run-time errors, and will cover how errors affect batches. The module will also cover how to control error handling using TRY/CATCH blocks, the use of the ERROR class of functions, and the use of the new THROW statement.

Module 18: Implementing Transactions

- This module introduces the concepts of transaction management in SQL Server. It will provide a high-level overview of transaction properties, cover the basics of marking transactions with BEGIN, COMMIT and ROLLBACK.

Module 19: Improving Query Performance

- This module presents several key guidelines for writing well-performing queries, as well as ways to monitor the execution of your queries and their impact on Microsoft SQL Server.

Module 20: Querying SQL Server

- MetadataSQL Server provides access to structured metadata by using a variety of mechanisms, such as system catalog views, system

functions, dynamic management objects, and system stored procedures. In this module, you will learn how to write queries to return system metadata using these mechanisms.

Who Should Attend

This course is intended for Database Administrators, Database Developers, and Business Intelligence professionals. The course will very likely be well attended by SQL power users who aren

Exams

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