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Implementing & Maintaining A Microsoft SQL Server 2005

Course Objective:

Microsoft Certified Technology Specialists in Microsoft SQL Server 2005 (MCTS: SQL Server 2005) implement and maintain databases using specific instructions and specifications. They have thorough knowledge of the product, understand how to use the tools and Transact-SQL language, and know how to explore the user interface. Technology Specialists typically pursue careers as database administrators, database developers, or business intelligence developers. They may also be developers and systems administrators who do not work with SQL Server daily but who want to show their breadth of technology experience.

Microsoft Skills Assessments for SQL Server 2005 help database administrators, database developers, and business intelligence developers focus their exam preparation training and find learning resources. This program consists of two module;

Course 2779: Implementing a Microsoft SQL Server 2005 Database

Course 2780: Maintaining a Microsoft SQL Server 2005 Database

Prerequisite:

Working knowledge of Transact-SQL and relational database, some experience in database design and MS Windows operating system and its core functionality

Certificate Of Attendance : Certificate Of Attendance will be awarded to students completing the course achieving minimum 75% attendance.

Training Methodology & Materials:

- Practical hands-on sessions,
- Additional and well-designed lab handouts are given to enhance further enhance the courseware given.

Training Duration:

Full-time: 5 Days (9am – 5pm)

Part-time : 10 sessions (6.30pm – 10.00pm, twice a week)

Course Fee :

Course Fee : S\$999 excluding Microsoft Exam

Regn Fee : S\$50

DETAILED COURSE OUTLINE

Course 2779: Implementing a Microsoft SQL Server 2005 Database

Module 1: Creating Databases and Database Files

This module explains how to create databases, filegroups, schemas, and database snapshots.

- Creating Databases.
- Creating Filegroups.
- Creating Schemas.
- Creating Database Snapshots.

Module 2: Creating Data Types and Tables

This module explains how to create data types and tables. It also describes how to create partitioned tables.

- Creating Data Types.
- Creating Tables.
- Creating Partitioned Tables.

Module 3: Using XML

This module explains how to use the FOR XML clause and the OPENXML function. It also describes how to use the xml data type and its methods.

- Retrieving XML by Using FOR XML
- Shredding XML by Using OPENXML
- Introducing XQuery
- Using the xml Data Type

Module 4: Creating and Tuning Indexes

This module explains how to plan, create, and optimize indexes. It also describes how to create XML indexes.

- Planning Indexes.
- Creating Indexes.
- Optimizing Indexes.
- Creating XML Indexes.

Module 5: Implementing Data Integrity

This module explains how to implement constraints and provides an overview of data integrity

- Data Integrity Overview.
- Implementing Constraints.

Module 6: Implementing Data Integrity by Using Triggers and XML Schemas

This module explains how to implement triggers and XML schemas.

- Implementing Triggers
- Implementing XML Schemas

Module 7: Implementing Views

This module explains how to create views.

- Introduction to Views.
- Creating and Managing Views.
- Optimizing Performance by Using Views.

Module 8: Implementing Stored Procedures

This module explains how to create stored procedures and functions. It also describes execution plans, plan caching, and query compilation.

- Implementing Stored Procedures
- Creating Parameterized Stored Procedures
- Working With Execution Plans
- Handling Errors

Module 9: Implementing Functions

This module explains how to create functions. It also describes how to control the execution context.

- Creating and Using Functions
- Working with Functions
- Controlling Execution Context

Module 10: Implementing Managed Code in the Database

This module explains how to implement managed database objects.

- Introduction to the SQL Server Common Language Runtime
- Importing and Configuring Assemblies
- Creating Managed Database Objects

Module 11: Managing Transactions and Locks

This module explains how to use transactions and the SQL Server locking mechanisms to meet the performance and data integrity requirements of your applications.

- Overview of Transactions and Locks
- Managing Transactions
- Understanding SQL Server Locking Architecture
- Managing Locks

Module 12: Using Service Broker

This module explains how to build a messaging-based solution with Service Broker.

- Service Broker Overview
- Creating Service Broker Objects
- Sending and Receiving Messages

Course 2780: Maintaining a Microsoft SQL Server 2005 Database

Module 1: Installing and Configuring SQL Server 2005

This module explains how to plan for and install SQL Server 2005, how to manage a SQL Server 2005 installation, and how to use the SQL Server 2005 administrative tools.

- Preparing to install SQL Server.
- Installing SQL Server.
- Managing a SQL Server 2005 Installation

Module 2: Managing Databases and Files

This module explains how to manage databases and files.

- Planning databases.
- Creating databases.
- Managing databases

Module 3: Disaster Recovery

This module explains how to plan and implement a backup and restore strategy.

- Planning a Backup Strategy.
- Backing Up User Databases.
- Restoring User Databases.
- Performing Online Restore Operations
- Recovering Data from Database Snapshots.
- System Database and Disaster Recovery.

Module 4: Managing Security

This module explains how to manage principals, securables, and permissions, and how to implement cryptography in a SQL Server database.

- Overview of SQL Server Security.
- Securing the Server Scope.
- Securing the Database Scope.
- Managing Keys and Certificates in SQL Server.

Module 5: Monitoring SQL Server

This module explains how to monitor SQL Server performance and activity.

- Viewing Current Activity.
- Using System Monitor.
- Using SQL Server Profiler.
- Using DDL Triggers.
- Using Event Notifications.

Module 6: Transferring Data

This module explains how to transfer and transform data.

- Overview of Data Transfer.
- Introduction to SQL Server Integration Services.
- Using SQL Server Integration Services.
- Features of SQL Server Integration Services

Module 7: Automating Administrative Tasks

This module explains how to use the SQL Server Agent to automate administrative tasks.

- Automating Administrative Tasks in SQL Server 2005
- Configuring the SQL Server Agent.
- Creating Jobs and Operators.
- Creating Alerts.
- Managing Multiple Servers.
- Managing SQL Server Agent Security.

Module 8: Implementing Replication

This module explains the purpose of replication, introduces the concepts underpinning replication, and describes how to implement replication in several common scenarios.

- Overview of Replication
- Implementing Replication
- Configuring Replication in Some Common Scenarios

Module 9: Maintaining High Availability

This module explains how to implement high availability technologies with SQL Server 2005.

- Introduction to High Availability.
- Implementing Server Clustering.
- Implementing Database Mirroring.
- Implementing Log Shipping.
- Implementing Peer-to-Peer Replication

Microsoft Certification Exam

This course will help the student prepare for the [Exam 70-431](#)