

Maintaining a Microsoft SQL Server 2008 Database

Duration: 5 days

Course Description: This five-day instructor-led course provides students with the knowledge and skills to maintain a Microsoft SQL Server 2008 database. The course focuses on teaching individuals how to use SQL Server 2008 product features and tools related to maintaining a database.

Audience: Intended for IT Professionals who administer and maintain SQL Server databases

Prerequisites: Before attending this course, students must have basic knowledge of the Microsoft Windows operating system and its core functionality, working knowledge of Transact-SQL, working knowledge of relational databases and some experience with database design.

Topics:

MODULE 1: INSTALLING AND CONFIGURING SQL SERVER

- Preparing to Install SQL Server
- Installing SQL Server
- Configuring a SQL Server Installation

Lab: Installing and Configuring SQL Server

- (Level 200) Installing SQL Server
- (Level 200) Configuring SQL Server

MODULE 2: MANAGING DATABASES AND FILES

- Planning Databases
- Creating Databases
- Using Policy-Based Management

Lab: Managing Databases and Files

- (Level 200) Creating a Database
- (Level 200) Monitoring and Managing Filegroup Usage
- (Level 200) Creating a Policy

MODULE 3: DISASTER RECOVERY

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

Lab: Disaster Recovery

- (Level 200) Designing a Backup Strategy
- (Level 200) Implementing a Backup Strategy
- (Level 200) Restoring and Recovering a Database
- (Level 300) Performing Piecemeal Backup and Restore Operations
- (Level 200) Restoring the master Database

MODULE 4: MANAGING SECURITY

- Overview of SQL Server Security
- Protecting the Server Scope
- Protecting the Database Scope
- Protecting the Server Scope
- Auditing Security

Lab: Managing Security

- (Level 200) Creating Logins and Assigning Server-Scope Permissions
- (Level 200) Creating and Managing Users
- (Level 300) Using a Certificate to Protect Data
- (Level 200) Implementing SQL Server Audit

MODULE 5: TRANSFERRING DATA

- Overview of Data Transfer

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- Introduction to SQL Server Integration Services

Lab: Transferring Data

- (Level 200) Using the Import/Export Wizard
- (Level 200) Performing a Bulk Load
- (Level 200) Creating an SSIS Solution

MODULE 6: AUTOMATING ADMINISTRATIVE TASKS

- Automating Administrative Tasks in SQL Server
- Using SQL Server Agent
- Creating Maintenance Plans
- Implementing Alerts
- Managing Multiple Servers
- Managing SQL Server Agent security

Lab: Automating Administrative Tasks

- (Level 200) Configuring SQL Server Agent
- (Level 200) Creating Operators and Jobs
- (Level 200) Creating Alerts

MODULE 7: IMPLEMENTING REPLICATION

- Overview of Replication
- Managing Publications and Subscriptions
- Configuring Replication in Some Common Scenarios

Lab: Implementing Replication

- (Level 300) Implementing Snapshot Replication
- (Level 300) Implementing Peer-to-Peer Transactional Replication
- (Level 300) Implementing HTTP Merge Replication

MODULE 8: MAINTAINING HIGH AVAILABILITY

- Introduction to High Availability
- Implementing Log Shipping
- Implementing Database Mirroring
- Implementing Server Clustering
- Using Distributed High Availability Solutions

Lab: Maintaining High Availability

- (Level 300) Configuring Log Shipping
- (Level 300) Configuring Database Mirroring
- (Level 300) Implementing SQL Server Clustering

MODULE 9: MONITORING SQL SERVER

- Viewing Current Activity
- Using SQL Server Profiler
- Monitoring with DDL Triggers
- Using Event Notifications

Lab: Monitoring SQL Server

- (Level 200) Monitoring SQL Server Activity
- (Level 300) Tracing SQL Server Activity
- (Level 200) Using DDL Triggers
- (Level 200) Using Event Notifications

MODULE 10: TROUBLESHOOTING AND PERFORMANCE TUNING

- Troubleshooting SQL Server
- Performance Tuning in SQL Server
- Using Resource Governor
- Using Data Collector

Lab: Troubleshooting and Performance Tuning

- (Level 300) Troubleshooting Connectivity Problems
- (Level 300) Troubleshooting Concurrency Problems
- (Level 300) Using the Database Engine Tuning Advisor
- (Level 300) Implementing Resource Governor
- (Level 300) Implementing Data Collector