

Course 2780B: Maintaining a Microsoft SQL Server 2005 Database

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.
- Some experience with database design.

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.

Lessons

- Preparing to Install SQL Server
- Installing SQL Server 2005
- Managing a SQL Server 2005 Installation

Lab: Installing and Configuring SQL Server 2005

- Performing an Installation
- Managing SQL Server

Module 2: Managing Databases and Files

This module explains how to manage databases and files.

Lessons

- Planning Databases
- Creating Databases
- Managing Databases

Lab: Managing Databases and Files

- Creating a Database
- Monitoring and Managing Filegroup Usage
- Viewing Database Metadata

Module 3: Disaster Recovery

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

Lessons

- 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

Lab: Disaster Recovery

- Implementing a Backup Strategy
- Restoring and Recovering a Database
- Performing Piecemeal Backup and Restore Operations
- Restoring the master Database

Module 4: Managing Security

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

Lessons

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

Lab: Managing Security

- Creating Logins and Assigning Server-Scope Permissions
- Creating and Managing Users
- Using a Certificate to Protect Data

Module 5: Monitoring SQL Server

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

Lessons

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

Lab: Monitoring SQL Server

- Monitoring SQL Server Performance
- Tracing SQL Server Activity
- Implementing DDL Triggers

Module 6: Transferring Data

This module explains how to transfer and transform data.

Lessons

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

Lab: Transferring Data

- Creating an SSIS Package
- Deploying an SSIS Package
- Using SSIS to Extract Data, Perform Lookups, Sort, and Split Data

Module 7: Automating Administrative Tasks

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

Lessons

- 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

Lab: Automating Administrative Tasks

- Configuring SQL Server Agent
- Creating Operators and Jobs
- Creating Alerts

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.

Lessons

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

Lab: Implementing Replication

- Creating a Publication
- Creating a Subscription
- Implementing HTTP Merge Replication

Module 9: Maintaining High Availability

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

Lessons

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

Lab: Maintaining High Availability

- Configuring Database Mirroring to Support Failover
- Implementing Distributed High Availability