



# MICROSOFT SQL SERVER DATABASE ADMINISTRATION

Course ID : SQL-ADM



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**Duration: 5 Days**

(30 Hours) 09:00 AM – 04:00 PM



**Price: 17,900 THB**

\* (excluding VAT 7%)

\* Eligible for 200% tax deduction



**Training Schedule**

[www.9experttraining.com](http://www.9experttraining.com)

## Category: Data

This course provides comprehensive training for database administrators using Microsoft SQL Server (versions 2012–2022). Participants will learn how to manage databases effectively and securely, including configuring security, implementing backup and recovery strategies, automating of routine tasks, and monitoring system performance. The curriculum covers all essential responsibilities of a SQL Server administrator and ensures adherence to best practices across various operational scenarios.

## Objectives

1. Gain in-depth understanding of Microsoft SQL Server operations and configuration management.
2. Master the principles of transaction logs, recovery models, and backup strategies.
3. Develop robust backup and restore processes to minimize data loss.
4. Perform both simple and complex data import and export operations.
5. Implement security measures for authentication, authorization, and auditing.

## Objectives

6. Automate administrative tasks using SQL Server Agent Service.
7. Monitor system status and optimize SQL Server performance.
8. Troubleshoot SQL Server failures and resolve operational issues.
9. Understand assessment and data governance practices using Arc-enabled SQL Server.

## Target Audience

1. Individuals responsible for administering Microsoft SQL Server database administration.
2. General IT professionals interested in database management.

## Prerequisites

1. Understanding of database management systems.
2. Experience with Microsoft Windows Server.
3. Familiarity with Microsoft Active Directory Service.
4. Knowledge of computer hardware, particularly memory and disk management.

## System Requirements

1. Windows 11 or Windows 10
2. Remote Desktop Connection.
3. An internet connection

## TRAINING TOPICS

### DAY 1 Morning Session

9:00 AM – 12:00 PM

#### 1. SQL Server Security

- Authentication methods for Microsoft SQL Server.
- Mapping logins to database users.
- Configuring Single Sign-On (delegation).
- Setting up and using partially contained databases.

#### 2. Managing Server Roles and Database Roles

- Understanding and using fixed server roles.
- Creating user-defined server roles.
- Understanding and using fixed database roles.
- Creating user-defined database roles and application roles.

### DAY 1 Afternoon Session

1:00 PM – 4:00 PM

#### 3. Resource Access Management

- Granting users access to objects.
- Applying best practices for permission management.
- Granting execute permissions.
- Managing permission at the schema level.

## DAY 2 Morning Session 9:00 AM – 12:00 PM

### 4. Data Protection : Encryption and Auditing

- Options for auditing data access.
- Creating and managing SQL Server Audit.
- Implementing data encryption techniques.

## DAY 2 Afternoon Session 1:00 PM – 4:00 PM

### 5. Recovery Models and Backup Strategies

- Planning backup strategies.
- Developing a detailed understanding of recovery models and their relationship to backup operations.
- Understanding transaction log concepts.

## DAY 3 Morning Session 9:00 AM – 12:00 PM

### 6. Database Backup

- Performing database and transaction log backups.
- Managing backup operations.
- Using advanced backup options.

### 7. Database Restore

- Understanding restore mechanisms.
- Restoring databases in various scenarios.
- Performing point-in-time recovery.

## DAY 3 Afternoon Session 1:00 PM – 4:00 PM

### 8. Automating SQL Server Administration

- Configuring and using the SQL Server Agent.
- Managing jobs and executing multi-server jobs.

## DAY 4 Morning Session 9:00 AM – 12:00 PM

### 9. Securing SQL Server Agent

- Understanding security concepts for SQL Server Agent.
- Setting up credentials and proxy accounts.

### 10. Alerts and Notifications

- Monitoring SQL Server errors.
- Configuring Database Mail.
- Setting up operators, alerts, and notifications.
- Understanding alerts mechanisms in Azure SQL Database.

## DAY 4 Afternoon Session 1:00 PM – 4:00 PM

### 11. Basic SQL Server Management with PowerShell

- Introduction to Windows PowerShell.
- Configuring SQL Server using PowerShell.
- Performing maintenance and management tasks with PowerShell.
- Managing SQL Azure Database using PowerShell.

## 12. Event Monitoring with Extended Events

- Core concepts of Extended Events.
- Managing and configuring Extended Events.

## 13. Monitoring SQL Server and Data Governance

- Using Activity Monitor and Standard Reports.
- Utilizing Perfmon Data Collector Sets with Profiler.
- Introduction to Arc-enabled SQL Server.
  - Purview Access Policy
  - SQL Server Assessments

## 14. Basic Migration with Data-Tier Application

- Understanding Data-Tier Application.
- Importing and exporting Data-Tier Application.
- Extracting and deploying Data-Tier Application.



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