
MICROSOFT SQL SERVER 2017 DATABASE ADMINISTRATION

Course Duration

- 5 Days (30 Hours)

Course Objectives

- Describe core database administration tasks and tools.
- Install and configure SQL Server
- Configure SQL Server databases and storage.
- Plan and implement a backup strategy.
- Restore databases from backups.
- Import and export data. Monitor SQL Server.
- Trace SQL Server activity.
- Manage SQL Server security.
- Audit data access and encrypt data.
- Perform ongoing database maintenance.
- Automate SQL Server maintenance with SQL Server Agent Jobs.
- Configure Database Mail, alerts and notifications.

Required Knowledge

- Microsoft Windows Server
- RDBMS

Course Outline**1. Managing SQL Server Security**

- Authenticating and Authorizing Users
- Setting database logins and user permissions
- Setting Cross-Database Access Permission
- Understanding Partially Contained Databases

2. Assigning Server Role and Database Role

- Implementing Server Roles
- Implementing Fixed Database Roles
- Understanding User-defined Database Roles

3. Authorizing Users to Access Resources

- Setting GRANT Object Permissions
- Setting GRANT Execute Code Permissions

- Setting GRANT Schema Permissions
- 4. Auditing Data Access and Encrypting Data**
 - Describe options for auditing data access.
 - Implement SQL Server audit.
 - Manage SQL Server audit.
 - Implement Transparent Data Encryption.
 - 5. Understanding SQL Server Recovery Models and Planning a Backup Strategy**
 - Understanding backup strategy.
 - Understanding SQL Server Recovery Models.
 - Understanding Transaction Log.
 - Plan a backup strategy for a SQL Server database. 7.5 Backup
 - 6. Backing Up SQL Server Databases**
 - Back up databases and transactions logs.
 - Backing up Databases and Transaction Logs
 - Using Backup Options
 - 7. Restoring SQL Server Databases**
 - Understanding the Restore Process
 - Restoring Databases
 - Advanced Restore Scenarios
 - Working with Point-in-Time Recovery
 - 8. Automating SQL Server Management**
 - Automating SQL Server Management
 - Implementing SQL Server Agent Jobs
 - Managing SQL Server Agent Jobs
 - Managing Jobs on Multiple Servers
 - 9. Setting SQL Server Agent Security**
 - Understanding SQL Server Agent Security
 - Setting Credentials
 - Setting Proxy Accounts ของ SQL Server Agent
 - 10. Monitoring SQL Server by Using Alerts and Notifications**
 - Monitoring SQL Server Errors
 - Configuring Database Mail
 - Configuring Operators, Alerts, and Notifications
 - Understanding Alerts on Azure SQL Database
 - 11. Managing SQL Server with PowerShell.**
 - Getting Started with Windows PowerShell

- SQL Server configuration using PowerShell.
- Managing and Maintenance SQL Server using PowerShell.
- Managing SQL Azure Database with PowerShell

12. Tracking Logins with Extended Events

- Extended Events Concepts
- Managing SQL Server Extended Events

13. Monitoring SQL Server

- Introduction to Monitoring SQL Server
- Trapping and Handling Performance Data
- Using Performance Monitor to monitor SQL Server
- Understanding SQL Server Utility

14. Importing and Exporting Data

- Introduction to Transferring Data
- Importing and Exporting Table Data
- Implementing bcp and BULK Insert for Importing data
- Implementing Data-Tier Applications and upgrading

Relating Course

- Microsoft SQL Server 2017 Database Development and Performance
- Microsoft SQL Server 2017 Database Queries
- Microsoft SQL Server Business Intelligence