

COURSE OVERVIEW:

In this Microsoft online training course, you will learn the skills required to maintain a Microsoft SQL Server 2012 or 2014 database by focusing on data storage, backup and restoration, importing and exporting data, security, database maintenance and the SQL Server Agent.

Students looking to learn SQL server will find this course incorporates material from the Official Microsoft Learning Product 20462: Administering Microsoft SQL Server 2014 Databases. This online IT course from Microsoft covers the skills and knowledge measured by Exam 70-462 and along with on-the-job experience, helps you prepare for the exam. Become a master of SQL administration and learn more about this SQL online course below from NterOne!

WHO SHOULD ATTEND:

The primary audience for this course is as follows:

- Database professionals who administer and maintain SQL Server databases including database maintenance
- Database professionals who work in environments where databases play a key role in their primary job responsibilities or develop applications that deliver content from SQL Server databases

PREREQUISITES:

The knowledge and skills that a learner should have before attending this course are as follows:

- Basic knowledge of Microsoft Windows operations systems and its core functionality
- Working knowledge of Transact-SQL and relational databases
- Experience with database design

COURSE OBJECTIVES

Upon completing this course, the learner will be able to meet these overall objectives:

- Authenticate and authorize users
- Assign server and database roles
- Authorize users to access resource
- Protect data with encryption and auditing
- Recovery models and backup strategies
- Back up SQL Server databases
- Restore SQL Server databases
- Automate database management
- Configure security for the SQL Server agent
- Manage alerts and notifications
- Manage SQL Server using PowerShell
- Trace access to SQL Server
- Monitor a SQL Server infrastructure
- Troubleshoot a SQL Server infrastructure
- Import and export data

COURSE OUTLINE:

Module 1: SQL Server Security

- Authenticating connections to SQL Server
- Authorizing logins to access databases
- Authorization across servers
- Partially contained databases

Module 2: Assigning Server and Database Roles

- Working with server roles
- Working with fixed database roles
- Creating user-defined database roles

Module 3: Authorizing Users to Access Resources

- Authorizing user access to objects
- Authorizing users to execute code
- Configuring permissions at the schema level

Module 4: Protecting Data with Encryption and Auditing

- Options for auditing data access in SQL Server
- Implementing SQL Server audit
- Managing SQL Server audit
- Protecting data with encryption

Module 5: Recovery Models and Backup Strategies

- Understanding Backup strategies
- SQL Server transaction log
- Planning a SQL Server backup strategy

Module 6: Backup of SQL Server Databases

- Backing up databases and transaction logs
- Managing database backups
- Working with backup options

Module 7: Restoring SQL Server 2016 Databases

- The restore process
- Restoring databases
- Working with point-in-time recovery
- Advanced Restore Scenarios

Module 8: Automating SQL Server Management

- Working with SQL Server agent
- Managing SQL Server agent jobs
- Multiserver management

Module 9: Configuring Security for SQL Server Agent

- SQL Server Agent Security
- Configuring credentials

- Configuring proxy accounts

Module 10: Monitoring SQL Server with Alerts and Notifications

- Configuring database mail
- Monitoring SQL Server errors
- Configuring operators, alerts and notifications
- Alerts in Azure SQL database

Module 11: Introduction to Managing SQL Server by Using PowerShell

- Configure SQL Server using PowerShell
- Administer and Maintain SQL Server using PowerShell
- Managing Azure SQL Server databases using PowerShell

Module 12: Tracing Access to SQL Server with Extended Events

- Extended Events Core Concepts
- Working with Extended Events

Module 13: Monitoring SQL Server

- Monitoring activity
- Capturing and managing performance data
- Analyzing collected performance data
- SQL Server utility

Module 14: Troubleshooting SQL Server

- SQL Server troubleshooting methodology
- Resolving service related issues
- Resolving login and connectivity issues

Module 15: Importing and Exporting Data

- Transferring data to/from SQL Server
- Importing and exporting table data
- Using BCP and BULK INSERT to import data
- Deploying and upgrading data-tier applications

LAB OUTLINE

- Lab 1: Authenticating Users
- Lab 2: Assigning Server and Database Roles
- Lab 3: Authorizing Users to Access Resources
- Lab 4: Using Auditing and Encryption
- Lab 5: Understanding SQL Server Recovery Models
- Lab 6: Backing Up SQL Server Databases
- Lab 7: Restoring SQL Server User Databases
- Lab 8: Automating SQL Server Management
- Lab 9: Configuring Security for SQL Server Agent
- Lab 10: Monitoring SQL Server with Alerts and Notifications
- Lab 11: Using PowerShell to Manage SQL Server
- Lab 12: Extended Events
- Lab 13: Monitoring SQL Server
- Lab 14: Troubleshooting Common Issues
- Lab 15: Importing and Exporting Data