

Administering Microsoft SQL Server 2014 Databases

Course: 20462

Course Details

Audience(s): IT Professional(s)

Technology: Microsoft SQL Server 2014

Duration: 40 HRs.

ABOUT THIS COURSE

This forty hours instructor-led course provides students with the knowledge and skills to maintain a Microsoft SQL Server 2014 database. The course focuses on teaching individuals how to use SQL Server 2014 features and tools related to maintaining and correctly administer a database.

AUDIENCE PROFILE

The primary audience for this course is individuals who administer and maintain SQL Server databases. These individuals perform database administration and maintenance as their primary area of responsibility, or work in environments where databases play a key role in their primary job. The secondary audience for this course is individuals who develop applications that deliver content from SQL Server databases.

Course Content

Module 1: Introduction to SQL Server 2014 Database Administration

Lessons

- Database Administration Overview
- Introduction to the SQL Server Platform
- Database Management Tools and Techniques

Lab: Using SQL Server Administrative Tools

Module 2: Installing and Configuring SQL Server 2014

Lessons

- Planning SQL Server Installation
- Installing SQL Server 2014
- Post-Installation Configuration

Lab: Installing SQL Server 2014

Module 3: Working with Databases and Storage

Lessons

- Introduction to Data Storage with SQL Server
- Managing Storage for System Databases
- Managing Storage for User Databases
- Moving Database Files
- Configuring the Buffer Pool Extension

Lab: Managing Database Storage

Module 4: Planning and Implementing a Backup Strategy

Lessons

- Understanding SQL Server Recovery Models
- Planning a Backup Strategy
- Backing up Databases and Transaction Logs
- Using Backup Options
- Ensuring Backup Reliability

Lab: Backing Up SQL Server Databases

Module 5: Restoring SQL Server 2014 Databases

Lessons

- Understanding the Restore Process
- Restoring Databases
- Advanced Restore Scenarios
- Working with Point-in-Time Recovery

Lab: Restoring SQL Server Databases

Module 6: Importing and Exporting Data

Lessons

- Introduction to Transferring Data
- Importing and Exporting Table Data
- Copying or Moving a Database

Lab: Importing and Exporting Data

Module 7: Monitoring SQL Server 2014

Lessons

- Introduction to Monitoring SQL Server
- Dynamic Management Views and Functions
- Performance Monitor

Lab: Monitoring SQL Server 2014

Module 8: Tracing SQL Server Activity

Lessons

- Tracing SQL Server Workload Activity
- Using Traces

Lab: Tracing SQL Server Workload Activity

Module 9: Managing SQL Server Security

Lessons

- Introduction to SQL Server Security
- Managing Server-Level Security
- Managing Database-Level Principals
- Managing Database Permissions

Lab: Managing SQL Server Security

Module 10: Auditing Data Access and Encrypting Data

Lessons

- Auditing Data Access in SQL Server
- Implementing SQL Server Audit
- Implementing SQL Server Audit

Lab: Auditing Data Access and Encrypting Data

Module 11: Performing Ongoing Database Maintenance

Lessons

- Ensuring Database Integrity
- Maintaining Indexes
- Automating Routine Database Maintenance

Lab: Performing Ongoing Database Maintenance

Module 12: Automating SQL Server 2014 Management

Lessons

- Automating SQL Server Management
- Implementing SQL Server Agent Jobs
- Managing SQL Server Agent Jobs
- Managing Job Step Security Contexts
- Managing Jobs on Multiple Servers

Lab: Automating SQL Server Management

Module 13: Monitoring SQL Server 2014 by Using Alerts and Notifications

Lessons

- Monitoring SQL Server Errors
- Configuring Database Mail
- Configuring Operators, Alerts, and Notifications

Lab: Monitoring SQL Server by Using Alerts and Notifications

At This Course Completion

At completing this course the student will be able to:

- Describe core database administration tasks and tools.
- Install and configure SQL Server 2014.
- 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.