



SQL Server Administration

SQL764A: Provisioning and Administering a SQL Server Database On Premise (Combo 20764 & 20765)

Interface created this 5-day course by identifying and selecting the most important infrastructure topics, and removing the cloud implementation topics from two Microsoft courses. If you need to administer a full SQL Server implementation on-premise, and have no intention using the Azure SQL service, you'll gain mastery in SQL Server implementation in one week instead of two! This live class is available virtually with [RemoteLive™](#) or locally at our Phoenix, AZ location.

\$2,995.00

- 5 Days
- Combines Microsoft Courses 20764 & 20765
- Mastery in 1 week instead of 2!
- Attend online with RemoteLive™

Upcoming Dates

Oct 28 - Nov 01

Course Description

This 5-day Interface-exclusive instructor-led course, combines the material from two Microsoft Official courses – 20764 and 20765. Students who administer and maintain SQL Server databases will gain mastery implementing SQL Server in an on-premise configuration.

Students who develop applications that deliver content from SQL Server databases, or are responsible for managing development instances will gain mastery in how to manage a SQL Server instance.

Below is a breakdown of the combined topics:

**Gain Mastery in one week instead of two
with Interface SQL764A...**

TOPIC	INTERFACE COMBO SQL764A	MICROSOFT COURSE 1 20764	MICROSOFT COURSE 2 20765
SQL Server Components	●		●
Installing SQL Server	●		●
Working with Databases	●		●
Recovery Models and Backup Strategies	●	●	
Backing Up SQL Server Databases	●	●	
Restoring SQL Server Databases	●	●	
Performing Database Maintenance	●		●
Authenticating and Authorizing Users	●	●	
Assigning Server and Database Roles	●	●	
Authorizing Users to Access Resources	●	●	
Automating SQL Server Management	●	●	
Configuring Security for SQL Agent	●	●	
Monitoring SQL Server Alerts and Notifications	●	●	
Tracing SQL Server with Event Notifications	●	●	
Monitoring SQL Server and Exporting Data	●	●	

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Interface SQL

Course Outline

Module 1: SQL Server Components

This module introduces the SQL Server 2016 platform. It describes the components, editions, and versions of SQL Server 2016, and the tasks that a database administration commonly performs to configure and SQL Server instance.

Lessons

- Introduction to the SQL Server Platform
- Overview of SQL Server Architecture
- SQL Server Services and Configuration Options

Module 2: Installing SQL Server

One of the key responsibilities of database administrator is to provision databases and server. This includes planning and performing the installation of SQL Server on a physical servers and virtual machines. This module explains how to assess resource requirements for SQL Server 2016 and how to install it.

Lessons

- Considerations for installing SQL Server
- TempDB Files
- Installing SQL Server 2016
- Automating Installation

Module 3: Working with Databases

This module describes the preinstalled system databases, the physical structure of databases and the most common configuration options related to them.

Lessons

- Overview of SQL Server Databases
- Creating Databases
- Database Files and Filegroups
- Moving Database Files
- Buffer Pool Extension

Module 4: Recovery Models and Backup Strategies

In this module, you will consider how to create a strategy that is aligned with organizational needs, based on the available backup models, and the role of the transaction logs in maintaining database consistency.

Lessons

- Understanding Backup Strategies
- SQL Server Transaction Logs
- Planning Backup Strategies

Module 5: Backing Up SQL Server Databases

In this module, you will learn how to implement various backup strategies using the SQL Server backup commands.

Lessons

- Backing Up Databases and Transaction Logs
- Managing Database Backups
- Advanced Database Options

Module 6: Restoring SQL Server Databases

In this module, you will see how to restore user and system databases and how to implement point-in-time recovery.

Lessons

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

Module 7: Performing Database Maintenance

This module describes common database maintenance tasks that a DBA must perform, and demonstrates how to automate these tasks using maintenance plans.

Lessons

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

Module 8: Authenticating and Authorizing Users

Protection of data within your SQL Server databases is essential and requires a working knowledge of the issues and SQL Server security features. This module describes SQL Server security models, logins, users, partially contained databases, and cross-server authorization.

Lessons

- Authenticating Connections to SQL Server
- Authorizing Logins to Connect to databases
- Authorization Across Servers
- Partially Contained Databases

Module 9: Assigning Server and Database Roles

Microsoft SQL Server includes support for security roles defined at server level and at database level. This module covers fixed server roles, user-defined server roles, fixed database roles, and user-defined roles.

Lessons

- Working with server roles
- Working with Fixed Database Roles
- Assigning User-Defined Database Roles

Module 10: Authorizing Users to Access Resources

In this module, you will see how these object permissions are managed. In addition to access permissions on database objects, SQL Server provides the ability to determine which users can execute code, such as stored procedures and functions.

Lessons

- Authorizing User Access to Objects
- Authorizing Users to Execute Code
- Configuring Permissions at the Schema Level

Module 11: Automating SQL Server Management

This module describes how to use SQL Server Agent to automate jobs, how to configure security contexts for jobs, and how to implement multi-server jobs.

Lessons

- Automating SQL Server management
- Working with SQL Server Agent
- Managing SQL Server Agent Jobs
- Multi-server Management

Module 12: Configuring Security for SQL Server Agent

It is important to understand how to create a minimal privilege security environment for jobs that run inside SQL Server Agent. This module describes the considerations for SQL Server Agent security, including proxy accounts and credentials.

Lessons

- Understanding SQL Server Agent Security
- Configuring Credentials
- Configuring Proxy Accounts

Module 13: Monitoring SQL Server with Alerts and Notifications

This module covers the configuration of Database Mail, alerts, and notifications for a SQL Server instance.

Lessons

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

Module 14: Tracing Access to SQL Server with Extended events

SQL Server Extended Events is a flexible, lightweight event-handling system built into the Microsoft SQL Server Database Engine. This module focuses on the architectural concepts, troubleshooting strategies and usage scenarios of Extended Events.

Lessons

- Extended Events Core Concepts
- Working with Extended Events

Module 15: Monitoring SQL Server

This module explains how to use Distributed Management Views to monitor SQL Server. It also describes configuration of data collection and the SQL Server Utility.

Lessons

- Monitoring activity
- Capturing and Managing Performance Data
- Analyzing Collected Performance Data
- SQL Server Utility

Audience

The primary audience for this course are individuals who administer and maintain on premise 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 audiences for this course are individuals who develop applications that deliver content from SQL Server databases.

Prerequisites

- 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

What You Will Learn

- Provision a Database Server
- Configure SQL Server
- Create and Manage Databases and Files
- Perform Ongoing Database Maintenance Activities
- Describe recovery models and backup strategies
- Backup SQL Server databases
- Restore SQL Server databases
- Authenticate and authorize users
- Assign server and database roles
- Authorize users to access resources
- Automate database management
- Configure security for the SQL Server agent
- Manage alerts and notifications
- Trace access to SQL Server with Extended Event
- Monitor a SQL Server infrastructure