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# Administering Microsoft® SQL Server® 2014 Databases (20462)

- **Formato do curso:** Presencial e Live Training
- **Com certificação:** MCSA: SQL Server
- **Preço:** 1680€
- **Nível:** Intermédio
- **Duração:** 35 horas

This five-day 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 product features and tools related to maintaining a database.

This course is designed for customers who are interested in learning SQL Server 2012 or SQL Server 2014. It covers the new features in SQL Server 2014, but also the important capabilities across the SQL Server data platform.

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## Destinatários

- A audiência principal para este curso são pessoas cujo principal objetivo é o de administrar e manter Bases de Dados em SQL Server
- Também é destinado a desenvolvedores de soluções em Bases de Dados SQL Server, tendo em vista um melhor conhecimento da arquitetura, para poderem desenvolver soluções com base nas melhores práticas recomendadas pela Microsoft

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## Pré-requisitos

- Conhecimentos de sistemas operativos servidores Microsoft
- Conhecimentos de Transact-SQL
- Conhecimentos de Bases de Dados Relacionais
- Alguma experiência no desenho de Bases de Dados Relacionais

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## Objectivos

No final da ação de formação os participantes deverão estar aptos a:

- Conhecer as tarefas e ferramentas necessárias à administração de Bases de Dados SQL Server
- Instalar e configurar o SQL Server 2012 / 2014
- Configurar Bases de Dados e seu armazenamento

- Planear e implementar estratégias de Backup
  - Restaurar Bases de Dados
  - Importar e Exportar dados
  - Monitorizar o SQL Server
  - Monitorizar a atividade no servidor (Tracing)
  - Auditoria e encriptação de dados
  - Implementar tarefas de Manutenção
  - Automatizar a manutenção através de SQL Server Agent Jobs
  - Configurar Mail e Notificações
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## Metodologia

Pode assistir a este curso de forma:

- Presencial
  - [Live Training](#)
  - [MOC On-demand](#)
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## Programa

### **Module 1: Introduction to SQL Server 2014 Database Administration**

This module introduces the Microsoft SQL Server 2014 platform. It describes the components, editions, and versions of SQL Server 2014, and the tasks that a database administrator commonly performs for a SQL Server instance.

Lessons

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

Lab : Using SQL Server Administrative Tools

- Using SQL Server Management Studio
- Using the sqlcmd Utility
- Using Windows PowerShell with SQL Server

### **Module 2: Installing and Configuring SQL Server 2014**

This module explains how to assess resource requirements for SQL Server 2014 and how to install it.

Lessons

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

## Lab : Installing SQL Server 2014

- Preparing to Install SQL Server
- Installing SQL Server
- Performing Post-Installation Configuration

### **Module 3: Working with Databases and Storage**

This module describes how data is stored in databases, how to create databases, how to manage database files, and how to move them. Other tasks related to storage, include managing the tempdb database and using fast storage devices to extend the SQL Server buffer pool cache, are also discussed.

#### 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

- Configuring tempdb Storage
- Creating Databases
- Attaching a Database

### **Module 4: Planning and Implementing a Backup Strategy**

In this module, you will consider how to create a backup strategy that is aligned with organizational needs, and learn how to perform the backup operations required by that 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

- Backing Up Database
- Performing Database, Differential, and Transaction Log Backups
- Performing a Partial Backup

### **Module 5: Restoring SQL Server 2014 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
- Working with Point-in-Time Recovery

Lab : Restoring SQL Server Databases

- Restoring a Database Backup
- Restoring Database, Differential, and Transaction Log Backups
- Performing a Piecemeal Restore

## **Module 6: Importing and Exporting Data**

In this module, you will briefly explore tools and techniques so that you can import and export data to and from SQL Server.

Lessons

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

Lab : Importing and Exporting Data

- Using the SQL Server Import and Export Wizard
- Using the bcp Utility
- Using the BULK INSERT Statement
- Using the OPENROWSET Function

## **Module 7: Monitoring SQL Server 2014**

This module explains how to use three of the most commonly used tools: Activity Monitor, dynamic management views and functions (DMVs and DMFs), and Performance Monitor.

Lessons

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

Lab : Monitoring SQL Server 2014

- Collecting Baseline Metrics
- Monitoring a Workload

## **Module 8: Tracing SQL Server Activity**

This module describes how to use SQL Server Profiler and SQL Trace stored procedures to capture information about SQL Server, and how to use that information to troubleshoot and optimize SQL Server workloads.

Lessons

- Tracing SQL Server Workload Activity
- Using Traces

Lab : Tracing SQL Server Workload Activity

- Capturing a Trace in SQL Server Profiler
- Generating Database Tuning Recommendations
- Using SQL Trace

### **Module 9: Managing SQL Server Security**

In this module, you will learn about the core concepts on which the SQL Server security architecture is based, and how to manage security at the server and database levels.

Lessons

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

Lab : Managing SQL Server Security

- Managing Server-Level Security
- Managing Database-Level Security
- Testing Database Access

### **Module 10: Auditing Data Access and Encrypting Data**

This module describes the available options for auditing in SQL Server, how to use and manage the SQL Server audit feature, and how to implement encryption.

Lessons

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

Lab : Auditing Data Access and Encrypting Data

- Implementing Auditing
- Implementing Transparent Database Encryption

### **Module 11: Performing Ongoing 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

Lab : Performing Ongoing Database Maintenance

- Managing Database Integrity
- Managing Index Fragmentation
- Implementing a Maintenance Plan

## **Module 12: Automating SQL Server 2014 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
- 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

- Creating a Job
- Scheduling a Job
- Configuring Job Step Security Contexts

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

This module covers the configuration of database mail, 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

- Configuring Database Mail
- Implementing Operators and Notifications
- Implementing Alerts

## **Appendix A: Troubleshooting Common Administrative Issues**

## **Appendix B: Installation Considerations**