Provisioning SQL Databases (20765)

Duration: 5 Days

US Price: $895

Delivery Option: Attend via MOC On-Demand

Description

This is a Microsoft Official Course (MOC) and includes Microsoft courseware and hands-on labs. This course is designed to teach students how to provision SQL Server databases both on premise and in SQL Azure. Topics include an overview SQL Server 2016 components and versions; database maintenance plans;SQL Server storage options; planning to deploy SQL Server on Azure; migrating databases to Azure SQL Database; deploying SQL Server on Microsoft Azure virtual machines and managing SQL Server on Azure.

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.

Prerequisites

Before attending this course, students must have:

- 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

About MOC On-Demand

Microsoft Official Courses On-Demand (MOC On-Demand) uses a combination of streaming video, text, lab exercises and assessment checks throughout the course. MOC On-Demand courses are available for 90 days and recommend the following system requirements:

Browser: Current version of Internet Explorer, Microsoft Edge, Google Chrome or Firefox
- Internet: Broadband Internet connection of over 4Mbps
- Screen Resolution: 1280 x 1024 or higher

Course Overview

Module 1: SQL Server Components

This module describes the various SQL Server components and versions.

Lessons

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

After completing this module, you will be able to:

- Describe SQL Server components and versions
- Describe SQL Server architecture and resource usage
- Describe SQL Server services and how you manage the configuration of those services

Module 2: Installing SQL Server

This modules describes the process to install SQL Server 2016.

Lessons

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

Labs

- Preparing to install SQL Server
- Install an instance of SQL Server
- Perform post installation checks
- Automating Installation

After completing this module, you will be able to:

Describe the considerations when installing SQL Server
- Describe TempDB files
- Install SQL Server
- Automate a SQL Server installation

Module 3: Upgrading SQL Server to SQL Server 2017

This module describes the process for upgrading to SQL Server 2017.

Lessons

- Upgrade Requirements
- Upgrade SQL Server Services
- Side by Side Upgrade: Migrating SQL Server Data and Applications

Labs

- Create the Application Logins
- Restore the backups of the TSQL Database
- Orphaned Users and Database Compatibility Level

After completing this module, you will be able to:

- Describe the upgrade requirements for SQL Server
- Upgrade SQL Server
- Migrate SQL Server data and applications

Module 4: 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

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

Labs

- Configuring tempdb Storage
- Creating Databases
- Attaching a Database
- Enable Buffer Pool Extension

After completing this module, you will be able to:

- Describe Data Storage with SQL Server
- Manage Storage for System Databases
- Manage Storage for User Databases
- Move and Copy Database Files
- Describe and use Buffer Pool Extensions

Module 5: Performing Database Maintenance

This module covers database maintenance plans.

Lessons

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

Labs

- Use DBCC CHECKDB to Verify Database Integrity
- Rebuild Indexes
- Create a Database Maintenance Plan

After completing this module, you will be able to:

- Ensure Database Integrity
- Maintain Indexes
- Automate Routine Database Maintenance

Module 6: Database Storage Options

Describe SQL Server storage options.

Lessons

- SQL Server storage Performance
- SMB Fileshare
- SQL Server Storage in Microsoft Azure
- Stretch Databases

Labs

- Run Stretch Database Advisor
- Implement Stretch Database

After completing this module, you will be able to:

- Describe SQL Server Storage Performance
- Describe SMB Fileshare
- Explain SQL Server Storage in Microsoft Azure
- Describe Stretch Database

Module 7: Planning to Deploy SQL Server on Microsoft Azure

This module describes how to plan to deploy SQL Server on Azure.

Lessons

- SQL Server Virtual Machines in Azure
- Azure Storage
- Azure SQL Authentication
- Deploying an Azure SQL Database

Labs

- Plan an Azure SQL Database, Networking, performance tiers, security
- Provision an Azure SQL Database
- Connect to an Azure SQL Database

After completing this module, you will be able to:

- Describe SQL Server Virtual Machines in Azure
- Describe Azure Storage
- Explain Azure SQL Authentication, auditing and compliance
- Deploy an Azure SQL Database

Module 8: Migrating Databases to Azure SQL Database

This module describes how to migrate databases to Azure SQL Database.

Lessons

- Database Migration Testing Tools
- Database Migration Compatibility Issues
- Migrating a SQL Server Database to Azure SQL Database

Labs

- Perform Migration Testing
- Migrate a SQL Server Database to Azure SQL Database

- Test a Migrated Database

After completing this module, students will be able to:

- Describe various database migration testing tools.
- Explain database migration compatibility issues.
- Migrate a SQL Server database to Azure SQL database.

Module 9: Deploying SQL Server on a Microsoft Azure Virtual Machine

This module describes how to deploy SQL Server on Microsoft Azure VMs.

Lessons

- Deploying SQL Server on an Azure VM
- The Deploy Database to a Microsoft Azure VM Wizard

Labs

- Provision an Azure VM
- Use the Deploy Database to Azure VM Wizard

After completing this module, students will be able to:

- Deploy SQL Server on an Azure VM.
- Use The Deploy Database to a Microsoft Azure VM Wizard.
- Configure SQL Server Connections

Module 10: Managing databases in the Cloud

This module describes how to manage SQL Server on Azure.

Lessons

- Managing Azure SQL Database Security
- Configure Azure storage
- Azure Automation

Labs

- Add data masking
- Use Azure automation to stop Virtual Machines

After completing this module, students will be able to:

- Manage Azure SQL Database Security.
- Configure Azure storage.
- Implement Azure Automation.