

# ADMINISTERING MICROSOFT AZURE SQL SOLUTIONS (DP-300T00)

Course Code: 100865

This course provides students with the knowledge and skills to administer a SQL Server database infrastructure.

This course provides students with the knowledge and skills to administer a SQL Server database infrastructure for cloud, on-premises and hybrid relational databases and who work with the Microsoft PaaS relational database offerings. Additionally, it will be of use to individuals who develop applications that deliver content from SQL-based relational databases.

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### **Microsoft Azure Certification Video**

## What You'll Learn

Students will learn to,

- Introduction to Azure database administration
- Plan and implement data platform resources
- Implement a secure environment for a database service
- Monitor and optimize operational resources in Azure SQL
- Optimize query performance in Azure SQL
- Automate database tasks for Azure SQL
- Plan and implement a high availability and disaster recovery environment

## Who Needs to Attend

The audience for this course is data professionals managing data and databases

who want to learn about administering the data platform technologies that are available on Microsoft Azure. This course is also valuable for data architects and application developers who need to understand what technologies are available for the data platform with Azure and how to work with those technologies through applications.

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CLASSROOM LIVE

\$2,595 USD

4 Day

## Classroom Live Outline

### **Module 1 : Introduction to Azure database administration**

- Prepare to maintain SQL databases on Azure

### **Module 2 : Plan and implement data platform resources**

- Deploy IaaS solutions with Azure SQL
- Deploy PaaS solutions with Azure SQL
- Evaluate strategies for migrating to Azure SQL
- Migrate SQL Server workloads to Azure SQL Database
- Migrate SQL Server workloads to Azure SQL Managed Instance

### **Module 3 : Implement a secure environment for a database service**

- Configure database authentication and authorization
- Protect data in-transit and at rest
- Implement compliance controls for sensitive data

### **Module 4 : Monitor and optimize operational resources in Azure SQL**

- Describe performance monitoring
- Configure SQL Server resources for optimal performance
- Configure databases for optimal performance

### **Module 5 : Optimize query performance in Azure SQL**

- Explore query performance optimization
- Explore performance-based design
- Evaluate performance improvements

### **Module 6 : Automate database tasks for Azure SQL**

- Automate deployment of database resources
- Create and manage SQL Agent jobs
- Manage Azure PaaS tasks using automation

## **Module 7 : Plan and implement a high availability and disaster recovery environment**

- Describe high availability and disaster recovery strategies
- Explore IaaS and PaaS solutions for high availability and disaster recovery
- Back up and restore databases

### Classroom Live Labs

#### **Lab : Provision SQL Server on an Azure Virtual Machine**

- Explore the Azure Portal
- Deploy a SQL Server on an Azure Virtual Machine
- Connect to SQL Server on an Azure Virtual Machine

#### **Lab : Provision an Azure SQL Database**

- Create a Virtual Network
- Deploy an Azure SQL Database
- Connect to an Azure SQL Database using Azure Data Studio
- Query an Azure SQL Database using SQL Notebook

#### **Lab : Configure a server-based firewall rule using the Azure portal**

- Configure Azure SQL Database firewall rules
- Validate access

#### **Lab : Authorize Access to Azure SQL Database with Azure Active Directory**

- Create users
- Manage access to database objects
- Validate access

#### **Lab : Enable Microsoft Defender for SQL and Data Classification**

- Enable Microsoft Defender for Azure SQL Database
- Configure Data Classification for Azure SQL Database

#### **Lab : Isolate performance problems through monitoring**

- Review CPU utilization in Azure portal
- Identify high CPU queries

#### **Lab : Detect and correct fragmentation issues**

- Investigate index fragmentation
- Rebuild fragmented indexes
- Validate performance improvements

#### **Lab : Identify database design issues**

- Examine the query and identify the problem
- Identify ways to fix the warning message
- Improve the code

#### **Lab : Identify and resolve blocking issues**

- Run blocked queries report
- Enable Read Commit Snapshot isolation level

- Evaluate performance improvements

**Lab : Isolate problem areas in poorly performing queries in a SQL Database**

- Generate actual execution plan
- Resolve a suboptimal query plan
- Use Query Store to detect and handle regression
- Examine Top Resource Consuming Queries report
- Force a better execution plan
- Use query hints to impact performance

**Lab : Deploy an automation runbook to automatically rebuild indexes**

- Create an Automation Account
- Connect to an existing Azure SQL Database
- Configure Automation Account assets
- Create a PowerShell runbook
- Create a schedule for a runbook

**Lab : Deploy Azure SQL Database using an Azure Resource Manager template**

- Explore Azure Resource Manager template

**Lab : Create a CPU status alert for a SQL Server**

- Create an alert when a CPU exceeds an average of 80 percent

**Lab : Backup to URL and Restore from URL**

- Create a credential
- Backup to URL
- Validate backup through Azure CLI and Storage Explorer
- Restore from URL

**Lab : Configure geo-replication for Azure SQL Database**

- Enable geo-replication
- Failover to a secondary region

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VIRTUAL CLASSROOM LIVE

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4 Day

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Apr 7 - 10, 2025 | 9:00 AM - 5:00 PM EDT

Jun 2 - 5, 2025 | 9:00 AM - 5:00 PM EDT

Aug 11 - 14, 2025 | 9:00 AM - 5:00 PM EDT

Oct 6 - 9, 2025 | 9:00 AM - 5:00 PM EDT





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PRIVATE GROUP TRAINING

4 Day

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Date created: 3/14/2025 5:53:14 AM

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