

DP-300: Microsoft Azure Database Administrator Exam Study Guide

April 6, 2022 by [manish](#)

★★★★★ 5/5 - (2 votes)

In this post, we will discuss with you how to prepare and pass the **Microsoft Azure DP-300 Exam** (Microsoft Azure Database Administrator Associate) successfully.

The topics covered in this blog are:

- [DP-300 Exam Overview](#)
- [Who is Azure Database Administrator?](#)
- [Why Learn Azure Database Administrator?](#)
- [Azure Database Administrator Responsibilities](#)
- [Benefits of DP-300 Certification](#)
- [Who Can Do This Certification?](#)

- [DP-300 Exam Details](#)
- [DP-300 Exam Skills Measured](#)
- [How to Register for Azure DP 300 Exam](#)
- [Pre-requisites for DP-300 Certification](#)
- [DP 300 Study Guide](#)
- [DP-300 Exam Retake Policy](#)
- [DP 300 Exam Day Tips](#)
- [Conclusion](#)

DP-300 Exam Overview

The Microsoft DP-300 is developed for Azure database administrator. They are responsible for the maintenance, security, and availability of databases, as well as performance monitoring and optimization of existing relational database systems.

This certification is an objective for Data Architects, Data Professionals, and for people who are handling data and databases available on Microsoft Azure.



Azure Database Administrator Associate

Are you new to the Azure cloud? Do check out our blog post on the [Azure Certification Path 2022](#) and choose the best certification for you.



Who is Azure Database Administrator?

The Azure Database Administrator is responsible for managing the database, availability, and security. They are responsible for monitoring the performance and efficiency of modern relational databases. They should be familiar with T-SQL. They are computer system administrators who can manage a successful database environment.

Their primary responsibility is to keep data safe from loss and corruption, as well as to make it conveniently available when required.

Why Learn Azure Database Administrator?

In today's fast-changing world, data is at the heart of all operations and applications. There is no way to start or run a process without data. Databases are used to store, manage, and organize data. Based on the functionality and architecture of the database, the company will be positioned to compete with other organizations in the field.

Database management is one of the critical responsibilities that has risen to the top of the priority list for enterprises. They preserve the quality of data. They are accountable for handling data online as well as offline. Most firms depend on data for making their judgments and policies hence they hold a high place or status for the individuals who can maintain enormous databases safely.

Azure Database Administrator Responsibilities

- Migrating existing instances to Azure database
- Monitoring the performance of Azure cloud database
- Ensuring highly secured security for data in the cloud and having disaster Recovery

- Backup and restoration Database's present in [Azure Cloud](#)

Benefits of DP-300 Certification

- Demand for Database Administrators is increasing. They occupy a prominent place in every industry.
- Certification leads to a significant increase in both career opportunities and remuneration.
- Updating your profile using this certificate can improve your career profile and increase your odds of being chosen.

Who Can Do This Certification?

You may be questioning Am I qualified for this Certification...?? Here is the solution for you

- People who want to be involved in maintaining databases.
- Data Professionals, Database Architects, and Application developers.
- IT experts that have a deep grasp of data processing languages, such as SQL.
- Data administrator who can manage the quality of data and keep data safe
- Candidates who have understanding on Azure Fundamentals.

Check Out: [Azure Data Factory Interview Questions and Answers](#)

DP-300 Exam Details

Exam Name Exam DP-300: Administering Relational Databases on Microsoft Azure	Exam Duration 150 Minutes
Exam Type	Number of Questions

Multiple Choice Examination	40 - 60 Questions
Exam Fee \$165	Eligibility/Pre-Requisite None
Exam validity 2 years	Exam Languages English, Japanese, Korean, and Simplified Chinese

DP-300 Exam Skills Measured

Implement a secure environment	15– 20%
Plan and implement data platform resources	15– 20%
Monitor and optimize operational resources	15– 20%
Plan and implement a High Availability and Disaster Recovery (HADR) environment	15– 20%
Perform administration by using T-SQL	10- 15%
Perform automation of tasks	10- 15%
Optimize query performance	5-10%

How to Register for Azure DP 300 Exam

You can register for the Microsoft Azure Database Administrator Associate Exam (DP-300) by going to the [official Microsoft page](#).

MICROSOFT AZURE

Languages: English, Chinese (Simplified), Japanese, Korean, French, German, Portuguese (Brazil), Russian, Arabic (Saudi Arabia), Italian, Chinese (Traditional), Spanish, Indonesian (Indonesia)

Retirement date: none

This exam measures your ability to accomplish the following technical tasks: plan and implement data platform resources; implement a secure environment; monitor and optimize operational resources; optimize query performance; perform automation of tasks; plan and implement a High Availability and Disaster Recovery (HADR) environment; and perform administration by using T-SQL.

[Schedule exam >](#)

\$165 USD*

Price based on the country in which the exam is proctored.

Official practice test for Administering Relational Databases on Microsoft Azure

All objectives of the exam are covered in depth so you'll be ready for any question on the exam.

Pre-requisites for DP-300 Certification

1. There aren't any particular prerequisite certifications necessary to gain before taking this exam.
2. A general understanding of IT abilities will be advantageous.
3. Individuals who design applications that distribute content from SQL-based relational databases are the best candidates for the DP-300 Azure Database Administrator Associate Exam.

DP 300 Study Guide

Plan and Implement Data Platform Resources (15-20%)

Deploy resources by using manual methods

- Deploy database offerings on selected platforms
 - [Create an Azure SQL Database single database](#)
- Configure customized deployment templates
 - [Create a single database in Azure SQL Database using an ARM template](#)
- Apply patches and updates for hybrid and IaaS deployment
 - [Patching SQL Azure](#)

Recommend an appropriate database offering based on specific requirements

- Evaluate requirements for the deployment
 - [Azure SQL database deployment](#)
- Evaluate the functional benefits/impact of possible database offerings
 - [What is Azure SQL?](#)
- Evaluate the scalability of the possible database offering
 - [Azure SQL Database – scalability](#)
- Evaluate the HA/DR of the possible database offering
 - [High availability for Azure SQL Database and SQL Managed Instance](#)
 - [Business continuity and HADR for SQL Server on Azure Virtual Machines](#)
 - [DR strategies for applications using Azure SQL Database elastic pools](#)
- Evaluate the security aspects of the possible database offering
 - [Azure SQL Database and SQL Managed Instance](#)

Configure resources for scale and performance

- Configure Azure SQL Database for scale and performance
 - [Scaling out with Azure SQL Database](#)
 - [Scale elastic pool resources in Azure SQL Database](#)
 - [Tune performance for Azure SQL Database/MI](#)
- Configure Azure SQL Managed Instance for scale and performance
 - [What is Azure SQL Managed Instance?](#)
 - [Dynamically scale database resources with minimal downtime](#)
 - [Performance Improvements for Azure SQL Managed Instance](#)
- Configure SQL Server in Azure VMs for scale and performance
 - [Best practices for SQL Server on Azure VMs](#)
- Calculate resource requirements
 - [Storage and SQL Server capacity planning and configuration](#)

- Evaluate database partitioning techniques, such as database sharding
 - [Sharding pattern](#)
- Set up SQL Data Sync
 - [Set up SQL Data Sync between databases in Azure SQL Database and SQL Server](#)

Evaluate a strategy for moving to Azure

- Evaluate requirements for the migration
 - [Azure Database Migration Service – Prerequisites](#)
- Evaluate offline or online migration strategies
 - [Azure Database Migration Guides](#)
- Evaluate requirements for the upgrade
 - [Pre-upgrade Checklist](#)
- Evaluate offline or online upgrade strategies
 - [Using active geo-replication in Azure SQL Database](#)

Implement a migration or upgrade strategy for moving to Azure

- Implement an online migration strategy
 - [Migrate SQL Server to Azure SQL Database using DMS](#)
- Implement an offline migration strategy
 - [Migrate SQL Server to Azure SQL Database offline using DMS](#)
- Implement an online upgrade strategy
 - [Azure SQL Database active geo-replication](#)
- Implement an offline upgrade strategy
 - [Upgrade to a Different Edition of SQL Server \(Setup\)](#)

Implement a Secure Environment (15-20%)

Configure database authentication by using platform and database tools

- Configure Azure AD authentication
 - [Configure and manage Azure AD authentication with Azure SQL](#)
- Create users from Azure AD identities
 - [Create contained users mapped to Azure AD identities](#)
- Configure security principals
 - [Azure AD Service Principal authentication to SQL DB – Code Sample](#)

Configure database authorization by using platform and database tools

- Configure database and object-level permissions using graphical tools
 - [Getting Started with Database Engine Permissions](#)
- Apply principle of least privilege for all securable
 - [Authorization and Permissions in SQL Server](#)

Implement security for data at rest

- Implement Transparent Data Encryption (TDE)
 - [TDE for SQL Database, SQL Managed Instance & Synapse Analytics](#)
- Implement object-level encryption
 - [Configure Always Encrypted by using Azure Key Vault](#)
- Implement Dynamic Data Masking
 - [Implement dynamic data masking with the Azure portal](#)
- Implement Azure Key Vault and disk encryption for Azure VMs
 - [Create and encrypt a Windows virtual machine with the Azure portal](#)

Implement security for data in transit

- Configure server and database-level firewall rules
 - [Create a server-level IP firewall rule](#)
 - [Database-level IP firewall rules](#)

- [Server-level versus database-level IP firewall rules](#)
- Implement Always Encrypted
 - [Configure Always Encrypted by using the Windows certificate store](#)

Implement compliance controls for sensitive data

- Apply a data classification strategy
 - [What is data classification?](#)
 - [Implement Compliance Controls for Sensitive Data](#)
- Configure server and database audits
 - [Auditing for Azure SQL Database and Azure Synapse Analytics](#)
 - [A Boost in Security for Azure SQL Database: Auditing](#)
- Implement data change tracking
 - [Enable and Disable Change Tracking \(SQL Server\)](#)
- Perform a vulnerability assessment
 - [SQL vulnerability assessment helps you identify database vulnerabilities](#)

Monitor and Optimize Operational Resources (15-20%)

Monitor activity and performance

- Prepare an operational performance baseline
 - [Establish a Performance Baseline](#)
- Determine sources for performance metrics
 - [Sources of monitoring data for Azure Monitor](#)
- Interpret performance metrics
 - [Query Performance Insight for Azure SQL Database](#)
 - [Monitoring and performance tuning in Azure SQL Database and Azure SQL Managed Instance](#)
- Configure and monitor activity and performance at the infrastructure, server, service, and database levels
 - [Monitoring & performance tuning in Azure SQL DB/MI](#)

- [Microsoft Azure Database Monitoring Playbook](#)
- [Monitor Azure SQL DB/MI performance using DMVs](#)

Implement performance-related maintenance tasks

- Implement index maintenance tasks
 - [Automating Azure SQL Database maintenance tasks](#)
- Implement statistics maintenance tasks
 - [Update Statistics Task \(Maintenance Plan\)](#)
- Configure database auto-tuning
 - [Implement Performance-related Maintenance Tasks](#)
- Automate database maintenance tasks
 - [Automating Azure SQL DB index and statistics maintenance using Azure Automation](#)
 - [Automating Azure SQL Database maintenance tasks](#)
- Azure SQL agent jobs, Azure automation, SQL Server agent jobs
 - [sql-agent-jobs](#)
 - [Azure Automation: Your SQL Agent in the Cloud](#)
 - [Create a Job](#)
- Manage storage capacity
 - [Manage file space for databases in Azure SQL Database](#)

Identify performance-related issues

- Configure Query Store to collect performance data
 - [Query Performance Insight for Azure SQL Database](#)
- Identify sessions that cause blocking
 - [Finding Blocking Queries in SQL Azure](#)
- Assess growth/fragmentation of databases and logs
 - [Get details of SQL Server Database Growth and Shrink Events](#)
 - [Resolve index fragmentation by reorganizing or rebuilding indexes](#)
- Assess performance-related database configuration parameters
 - [Set the AUTO_CLOSE Database Option to OFF](#)

- [Considerations for the auto grow and auto shrink settings in SQL Server](#)

Configure resources for optimal performance

- Configure storage and infrastructure resources
 - [Configure storage for SQL Server VMs](#)
- Optimize tempdb performance
 - [tempdb database](#)
- Optimize data and log files for performance
 - [Mapping data flow performance and tuning guide](#)
 - [Manage the size of the transaction log file](#)
- Configure server and service account settings for performance
 - [How to determine proper SQL Server configuration settings](#)
- Configure Resource Governor for performance
 - [Resource governance in Azure SQL Database](#)

Configure a user database for optimal performance

- Implement database-scoped configuration
 - [ALTER DATABASE SCOPED CONFIGURATION \(Transact-SQL\)](#)
- Configure compute resources for scaling
 - [Manage to compute in Azure Synapse Analytics data warehouse](#)
- Configure Intelligent Query Processing (IQP)
 - [Intelligent query processing in SQL databases](#)

Optimize Query Performance (5-10%)

Review query plans

- Determine the appropriate type of execution plan
 - [Live Query Statistics](#)
 - [Display an Actual Execution Plan](#)

- [Display the Estimated Execution Plan](#)
- Identify problem areas in execution plans
 - [Analyze an Actual Execution Plan](#)
 - [Identifying and Fixing Performance Problems using Execution Plans](#)
- Extract query plans from the Query Store
 - [query_store_plan \(Transact-SQL\)](#)

Evaluate performance improvements

- Determine the appropriate Dynamic Management Views (DMVs) to gather query Performance information
 - [Monitoring query performance](#)
- Identify performance issues using DMVs
 - [Monitor Azure SQL DB/MI performance using DMVs](#)
- Identify and implement index changes for queries
 - [SQL Server and Azure SQL index architecture and design guide](#)
- Recommend query construct modifications based on resource usage
 - [Monitoring performance by using the Query Store](#)
- Assess the use of hints for query performance
 - [Hints \(Transact-SQL\) – Query](#)
 - [Query tuning and hinting](#)

Review database table and index design

- Identify data quality issues with duplication of data
 - [Data Quality Services \(DQS\) data matching process](#)
- Identify the normal form of database tables
 - [Description of the database normalization basics](#)
- Assess index design for performance
 - [Improve the performance of your Azure SQL Databases using Index Advisor](#)
 - [SQL Server and Azure SQL index architecture and design guide](#)
- Validate data types defined for columns

- Recommend table and index storage including filegroups
 - [Recommendations when working with files & filegroups](#)
- Evaluate table partitioning strategy
 - [Horizontal, vertical & functional data partitioning](#)
- Evaluate the use of compression for tables and indexes
 - [sp_estimate_data_compression_savings \(Transact-SQL\)](#)

Perform Automation of Tasks (10-15%)

Create scheduled tasks

- Manage schedules for regular maintenance jobs
 - [Automate management tasks using elastic jobs \(preview\)](#)
- Configure multi-server automation
 - [Automated Administration Across an Enterprise](#)
- Configure notifications for task success/failure/non-completion
 - [Notify an Operator of Job Status](#)

Evaluate and implement an alert and notification strategy

- Create event notifications based on metrics
 - [Set up Azure Database for MySQL alerts using the Azure portal](#)
- Create event notifications for Azure resources
 - [CREATE EVENT NOTIFICATION \(Transact-SQL\)](#)
- Create alerts for server configuration changes
 - [Capturing and alerting on SQL Server Configuration Changes](#)
- Create tasks that respond to event notifications
 - [Create, view, and manage log alerts using Azure Monitor](#)

Manage and automate tasks in Azure

- Perform automated deployment methods for resources
 - [Azure SQL database deployment](#)

- Automate Backups
 - [Automated backups – Azure SQL Database & Azure SQL Managed Instance](#)
- Automate performance tuning and patching
 - [Automatic tuning in Azure SQL Database and Azure SQL Managed Instance](#)
 - [Automated Patching for SQL Server on Azure VMs](#)
- Implement policies by using automated evaluation modes
 - [Administer Servers by Using Policy-Based Management](#)

Plan and Implement a High Availability and Disaster Recovery (HADR) Environment (15-20%)

Recommend a HADR strategy for a data platform solution

- Recommend HADR strategy based on RPO/RTO requirements
 - [Understanding and leveraging Azure SQL Database's SLA](#)
- Evaluate HADR for hybrid deployments
 - [Hybrid IT: Disaster recovery solutions](#)
- Evaluate Azure-specific HADR solutions
 - [Azure only: Disaster recovery solutions](#)
- Identify resources for HADR solutions
 - [The Always On availability groups feature](#)
 - [Always On Failover Cluster Instances \(SQL Server\)](#)
 - [About Log Shipping \(SQL Server\)](#)
 - [SQL Server Backup and Restore with Azure Blob Storage](#)

Test a HADR strategy by using platform, OS, and database tools

- Test HA by using failover
 - [Configure an auto-failover group for Azure SQL Database](#)
- Test DR by using failover or restore
 - [Restore your Azure SQL Database or failover to a secondary](#)

Perform backup and restore a database by using database tools

- Perform a database backup with options
 - [Back-Up Database \(Backup Options Page\)](#)
- Perform a database restore with options
 - [RESTORE Statements \(Transact-SQL\)](#)
- Perform a database restore to a point in time
 - [Azure SQL Database Point in Time Restore](#)
 - [Restore a SQL Server Database to a Point in Time \(Full Recovery Model\)](#)
- Configure long-term backup retention
 - [Manage Azure SQL Database long-term backup retention](#)

Configure HA/DR by using OS, platform, and database tools

- Configure replication
 - [Replication to Azure SQL Database](#)
- Create an Always-on Availability Group
 - [Configure a SQL Server availability group on Azure VMs](#)
- Integrate a database into an Always-on Availability Group
 - [Add a Database to an Always On availability group](#)
- Configure quorum options for a Windows Server Failover Cluster
 - [Configure and manage quorum](#)
- Configure an Always-on Availability Group listener
 - [Configure a listener for an Always On availability group](#)
- Configure failover cluster instances on Azure VMs
 - [Failover cluster instances with SQL Server on Azure Virtual Machines](#)

Perform Administration by Using T-SQL (10-15%)

Examine system health

- Evaluate database health using DMVs
 - [Monitor Azure SQL Database & SQL Managed Instance using DMs](#)
- Evaluate server health using DMVs
 - [System Dynamic Management Views](#)
- Perform database consistency checks by using DBCC
 - [DBCC CHECKDB \(Transact-SQL\)](#)

Monitor database configuration by using T-SQL

- Assess proper database auto grow configuration
 - [SQL Server Database Growth and Autogrowth Settings](#)
- Report on database free space
 - [Display data and log space information for a database](#)
- Review database configuration options
 - [Change the Configuration Settings for a Database](#)

Perform backup and restore a database by using T-SQL

- Prepare databases for Always-on Availability Groups
 - [Prepare a secondary database for an Always On availability group](#)
- Perform transaction log backup
 - [Back-Up a Transaction Log](#)
- Perform restore of user databases
 - [Restore a Database Backup Using SSMS](#)
- Perform database backups with options
 - [Additional considerations about BACKUP options](#)

Manage authentication by using T-SQL

- Manage certificates
 - [Using Certificates in Azure SQL Database: Import](#)
- Manage security principals
 - [Security in Azure SQL Managed Instance using Azure AD server](#)

Manage authorization by using T-SQL

- Configure permissions for users to access database objects
 - [Permissions \(Database Engine\)](#)
- Configure permissions by using custom roles
 - [CREATE ROLE \(Transact-SQL\)](#)

DP-300 Exam Retake Policy

The DP-300 exam retake policy is as follows:

1. If a candidate fails on the first attempt, they must wait for 24 hours before retaking the exam.
2. If a candidate again fails on the second attempt, then the candidate will have to wait for 14 days.
3. A candidate will be given a maximum of five attempts to retake an exam in a year.

DP 300 Exam Day Tips

1. Don't overthink any of the answers. There are no difficult circumstances in this certification exam. Either an answer is correct or incorrect.
2. If you can't find the correct answer, choose the option that is as near to it as possible. Use the hints and terms in the question to your advantage.
3. Don't go into too much detail while reading a DP-300 exam question, and don't try to relate it to your own experiences. Get a sense of perspective and focus on the question at hand. Follow the instructions in the question and don't come up with any extra or alternative situations in your mind.

Conclusion

In this [Azure tutorial](#), we discussed **What is Azure Database Administrator Certification, Who Can Do This Certification, benefits, Exam Details, Study Guide**, and much more.

I hope you enjoyed this article!!!

Related/References

- [AZ-204: Azure Developer Associate Certification Study Guide](#)
- [SC-900: Azure Security Fundamentals Certification Study Guide](#)
- [AZ-900: Azure Fundamentals Certification Study Guide](#)
- [AI-900: Azure AI Fundamentals Certification Study Guide](#)
- [DP-900: Azure Data Fundamentals Certification Study Guide](#)



1 thought on “DP-300: Microsoft Azure Database Administrator Exam Study Guide”



gralion torile

August 11, 2022 at 6:23 am

This really answered my problem, thank you!

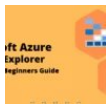
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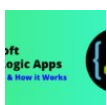
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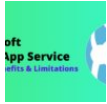
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