

Study guide for Exam DP-900: Microsoft Azure Data Fundamentals

Purpose of this document

This study guide should help you understand what to expect on the exam and includes a summary of the topics the exam might cover and links to additional resources. The information and materials in this document should help you focus your studies as you prepare for the exam.

Useful links	Description
Review the skills measured as of August 4, 2022	This list represents the skills measured AFTER the date provided. Study this list if you plan to take the exam AFTER that date.
Review the skills measured prior to August 4, 2022	Study this list of skills if you take your exam PRIOR to the date provided.
Change log	You can go directly to the change log if you want to see the changes that will be made on the date provided.
How to earn the certification	Some certifications only require passing one exam, while others require passing multiple exams.
Your Microsoft Learn profile	Connecting your certification profile to Learn allows you to schedule and renew exams and share and print certificates.
Passing score	A score of 700 or greater is required to pass.
Exam sandbox	You can explore the exam environment using our exam sandbox.
Request accommodations	If you use assistive devices, require extra time, or need modification to any part of the exam experience, you can request an accommodation.

Useful links	Description
Take a free Practice Assessment	Test your skills with practice questions to help you prepare for the exam.

Updates to the exam

Our exams are updated periodically to reflect skills that are required to perform a role. We have included two versions of the Skills Measured objectives depending on when you are taking the exam.

We always update the English language version of the exam first. Some exams are localized into other languages, and those are updated approximately eight weeks after the English version is updated. Other available languages are listed in the **Schedule Exam** section of the **Exam Details** webpage. If the exam isn't available in your preferred language, you can request an additional 30 minutes to complete the exam.

Note

The bullets that follow each of the skills measured are intended to illustrate how we are assessing that skill. Related topics may be covered in the exam.

Note

Most questions cover features that are general availability (GA). The exam may contain questions on Preview features if those features are commonly used.

Skills measured as of August 4, 2022

Audience profile

This exam is an opportunity to demonstrate knowledge of core data concepts and related Microsoft Azure data services. Candidates for this exam should have familiarity with DP-900's self-paced or instructor-led learning material.

This exam is intended for candidates beginning to work with data in the cloud.

Candidates should be familiar with the concepts of relational and non-relational data, and different types of data workloads such as transactional or analytical.

Azure Data Fundamentals can be used to prepare for other Azure role-based certifications like Azure Database Administrator Associate or Azure Data Engineer Associate, but it is not a prerequisite for any of them.

- Describe core data concepts (25–30%)
- Identify considerations for relational data on Azure (20–25%)
- Describe considerations for working with non-relational data on Azure (15–20%)

- Describe an analytics workload on Azure (25–30%)

Describe core data concepts (25—30%)

Describe ways to represent data

- Describe features of structured data
- Describe features of semi-structured
- Describe features of unstructured data

Identify options for data storage

- Describe common formats for data files
- Describe types of databases

Describe common data workloads

- Describe features of transactional workloads
- Describe features of analytical workloads

Identify roles and responsibilities for data workloads

- Describe responsibilities for database administrators
- Describe responsibilities for data engineers
- Describe responsibilities for data analysts

Identify considerations for relational data on Azure (20—25%)

Describe relational concepts

- Identify features of relational data
- Describe normalization and why it is used
- Identify common structured query language (SQL) statements
- Identify common database objects

Describe relational Azure data services

- Describe the Azure SQL family of products including Azure SQL Database, Azure SQL Managed Instance, and SQL Server on Azure Virtual Machines
- Identify Azure database services for open-source database systems

Describe considerations for working with non-relational data on Azure (15—20%)

Describe capabilities of Azure storage

- Describe Azure Blob storage
- Describe Azure File storage
- Describe Azure Table storage

Describe capabilities and features of Azure Cosmos DB

- Identify use cases for Azure Cosmos DB
- Describe Azure Cosmos DB APIs

Describe an analytics workload on Azure (25—30%)

Describe common elements of large-scale analytics

- Describe considerations for data ingestion and processing
- Describe options for analytical data stores
- Describe Azure services for data warehousing, including Azure Synapse Analytics, Azure Databricks, Azure HDInsight, and Azure Data Factory

Describe consideration for real-time data analytics

- Describe the difference between batch and streaming data
- Describe technologies for real-time analytics including Azure Stream Analytics, Azure Synapse Data Explorer, and Spark structured streaming

Describe data visualization in Microsoft Power BI

- Identify capabilities of Power BI
- Describe features of data models in Power BI
- Identify appropriate visualizations for data

Study resources

We recommend that you train and get hands-on experience before you take the exam. We offer self-study options and classroom training as well as links to documentation, community sites, and videos.

Study resources	Links to learning and documentation
Get trained	Choose from self-paced learning paths and modules or take an instructor-led course
Find documentation	Azure SQL documentation - Azure SQL SQL Server technical documentation - SQL Server Azure Blob Storage documentation Azure Table storage documentation Azure Storage documentation Azure Cosmos DB Azure Synapse Analytics

Study resources	Links to learning and documentation
	Azure Databricks Data Factory Power BI documentation - Power BI
Ask a question	Microsoft Q&A Microsoft Docs
Get community support	Analytics on Azure TechCommunity Azure Synapse Analytics TechCommunity Welcome to the SQL Server Community (microsoft.com) Azure PaaS - Microsoft Tech Community
Follow Microsoft Learn	Microsoft Learn - Microsoft Tech Community
Find a video	Exam Readiness Zone Data Exposed Browse other Microsoft Learn shows

Change log

Key to understanding the table: The topic groups (also known as functional groups) are in bold typeface followed by the objectives within each group. The table is a comparison between the two versions of the exam skills measured and the third column describes the extent of the changes.

Skill area prior to August 4, 2022	Skill area as of August 4, 2022	Changes
Audience profile		No change
Describe core data concepts	Describe core data concepts	No change
Describe ways to represent data	Describe ways to represent data	No change
Identify options for data storage	Identify options for data storage	No change
Describe common data workloads	Describe common data workloads	No change
Identify roles and responsibilities for data workloads	Identify roles and responsibilities for data workloads	No change

Skill area prior to August 4, 2022	Skill area as of August 4, 2022	Changes
Identify considerations for relational data on Azure	Identify considerations for relational data on Azure	No change
Describe relational concepts	Describe relational concepts	No change
Describe relational Azure data services	Describe relational Azure data services	No change
Describe considerations for working with non-relational data on Azure	Describe considerations for working with non-relational data on Azure	No change
Describe capabilities of Azure storage	Describe capabilities of Azure storage	No change
Describe capabilities and features of Azure Cosmos DB	Describe capabilities and features of Azure Cosmos DB	No change
Describe an analytics workload on Azure	Describe an analytics workload on Azure	No change
Describe common elements of a modern data warehouse	Describe common elements of large-scale analytics	Minor
Describe consideration for real-time data analytics	Describe consideration for real-time data analytics	No change
Describe data visualization in Microsoft Power BI	Describe data visualization in Microsoft Power BI	No change

Skills measured prior to August 4, 2022

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