Study Guide

Exam DP-900: Microsoft Azure Data Fundamentals

Quick navigation

Purpose of this document

This study guide should help you understand what to expect on *Exam DP-900: Microsoft Azure Data Fundamentals*, 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.

Certification

Certification journey

For an overview of attaining Microsoft Certification, including prerequisites (if any) and additional resources, explore The journey to Microsoft Certified: Azure Data Fundamentals.

Certification renewal

Once you earn your certification, don't let it expire. When you have an active certification that's expiring within six months, you should renew it—at no cost—by passing a renewal assessment on Microsoft Learn. Remember to renew your certification annually, if you want to retain it.

To identify which certifications are available for you to renew, visit your Certifications in your Microsoft Learn profile:

- Ensure your certification profile is connected to your Microsoft Learn profile.
- Expect an email that directs you to the applicable assessment that you must pass on Microsoft Learn. You'll receive this email as soon as you have a certification that you're eligible to renew.
- When you pass an online assessment, your certification will extend by one year from the current expiration date.
- To help prepare for the assessment, explore the collection of free modules on the certification renewal page.

About the exam

Exam DP-900: Microsoft Azure Data Fundamentals is required to earn the Azure Data Fundamentals certification.

This exam measures your ability to accomplish the following tasks: describe core data concepts; identify considerations for relational data on Azure; describe considerations for working with non-relational data on Azure; and describe an analytics workload on Azure.

As an exam candidate, you should be familiar with the concepts of relational and non-relational data, and different types of data workloads such as transactional or analytical.

Passing score

A passing score is 700. Learn more about exam scoring and score reports.

What to expect on the exam

Are you new to Microsoft certification exams? You can explore the exam environment by visiting our exam sandbox. We created the sandbox so you have an opportunity to experience an exam before you take it. In the sandbox, you can interact with different question types, such as *build list*, *case studies*, and others that you might encounter in the user interface when you take an exam. Additionally, it includes the introductory screens, instructions, and help topics related to the different types of questions that your exam might include. It also includes the non-disclosure agreement that you must accept before you can launch the exam.

Prepare to take the exam

There are several points to consider, or pursue, as you prepare for an exam. The following sections detail those points.

Request accommodations

We're committed to ensuring all learners are set up for success. If you use assistive devices, require extra time, or need modification to any part of the exam experience, you can request an accommodation. We encourage you to learn more about available accommodations and how to obtain them by visiting this page.

Take practice tests

Taking a practice test is a great way to know whether you're ready to take the exam or if you need to study a bit more. Subject-matter experts write the Microsoft Official Practice Tests, which are designed to assess all exam objectives. Take the DP-900: Microsoft Azure Data Fundamentals Microsoft Official Practice Test.

Objective domain: skills the exam measures

The English language version of this exam will be updated on **August 4, 2022**. If you're taking this exam's English version before this date, this is the correct study guide. If you want to review changes to the future exam version, scroll to the end of this document.

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 appear below 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

- 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%)

Functional groups

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 a modern data warehouse

- 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

Corresponding learning paths and modules

The design of learning paths and modules should teach you how to perform a role and will help you study for the applicable exam. However, learning paths aren't always in the same order as an exam's "skills measured" list. Therefore, we've created a convenient table that links the skills measured to specific paths and modules.

Exam skills measured	Links to learning paths
Describe core data concepts (25–30%)	DP-900 Learning Path: Microsoft Azure Data Fundamentals: Explore core data concepts • Explore core data concepts • Explore data roles and services
Identify considerations for relational data on Azure (20–25%)	DP-900 Learning Path: Microsoft Azure Data Fundamentals: Explore relational data in Azure • Explore fundamental relational data concepts • Explore relational database services in Azure
Describe considerations for working with non-relational data on Azure (15–20%)	DP-900 Learning Path: Microsoft Azure Data Fundamentals: Explore non-relational data in Azure • Explore Azure Storage for non-relational data • Explore fundamentals of Azure Cosmos DB
Describe an analytics workload on Azure (25–30%)	DP-900 Learning Path: Microsoft Azure Data Fundamentals: Explore data analytics in Azure • Explore fundamentals of large-scale data warehousing • Explore fundamentals of real-time analytics • Explore fundamentals of data visualization

Additional study resources

We offer several resources to help you prepare for the exam and stay current and engaged with the Microsoft Azure community. These resources range from formal training to blogs and even interviews with Microsoft team members.

Study resource link	Resource description
Course DP-900T00: Microsoft Azure Data Fundamentals	Take an instructor-led course to learn the fundamentals of database concepts in a cloud environment, get basic skills in cloud data services, and build foundational knowledge of cloud data services within Microsoft Azure.
Azure documentation	Stay informed on the latest products, tools, and features, and get information on pricing, partners, support, solutions, and more.
Azure Community Support	Ask questions, get answers, and connect with Microsoft engineers and Azure community experts.
Microsoft Learn Community Blog	Get the latest information about certification tests and exam study groups.
Data Exposed	Data Exposed is a show that is all about data; relational and non-relational, on-premises and in the cloud, big and small. Get the inside scoop and join us as we demonstrate features, discuss the latest news, and share our love for data technology including SQL Server, Azure SQL Database, Cosmos DB, open-source databases, Azure Arc Data Services, Azure Data Factory, Azure Synapse and more!

Detailed exam changes

Our exams are updated periodically to reflect skills that're required to perform a role. The following Objective Domain depicts the additions, deletions, and modifications to the exam.

Objective	Changes
Describe common elements of a modern data warehouse	Minor change

Functional groups

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