Audience profile

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

This exam is intended for you, if you're a candidate beginning to work with data in the cloud.

You should be familiar with:

- The concepts of relational and non-relational data.
- Different types of data workloads such as transactional or analytical.

You can use Azure Data Fundamentals 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.

Skills at a glance

- 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, Microsoft Fabric, Azure HDInsight, and Azure Data Factory
- Describe consideration for real-time data analytics
- Describe the difference between batch and streaming data
- Identify Microsoft cloud services for real-time analytics

- 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