

Microsoft Certified: Azure Data Fundamentals – Skills Measured

NOTE: The bullets that appear below each of the skills measured are intended to illustrate how we are assessing that skill. This list is not definitive or exhaustive.

NOTE: In most cases, exams do NOT cover preview features, and some features will only be added to an exam when they are GA (General Availability).

Exam DP-900: Microsoft Azure Data Fundamentals

Skills Measured

Describe core data concepts (15-20%)

Describe types of core data workloads

- describe batch data
- describe streaming data
- describe the difference between batch and streaming data
- describe the characteristics of relational data

Describe data analytics core concepts

- describe data visualization (e.g., visualization, reporting, business intelligence)
- describe basic chart types such as bar charts and pie charts
- describe analytics techniques (e.g., descriptive, diagnostic, predictive, prescriptive, cognitive)
- describe ELT and ETL processing
- describe the concepts of data processing

Describe how to work with relational data on Azure (25-30%)

Describe relational data workloads

- identify the right data offering for a relational workload
- describe relational data structures (e.g., tables, index, views)

Describe relational Azure data services

- describe and compare PaaS, IaaS, and SaaS delivery models

- describe Azure SQL Database
- describe Azure Synapse Analytics
- describe SQL Server on Azure Virtual Machine
- describe Azure Database for PostgreSQL, Azure Database for MariaDB, and Azure Database for MySQL
- describe Azure SQL Managed Instance

Identify basic management tasks for relational data

- describe provisioning and deployment of relational data services
- describe method for deployment including ARM templates and Azure Portal
- identify data security components (e.g., firewall, authentication)
- identify basic connectivity issues (e.g., accessing from on-premises, access with Azure VNets, access from Internet, authentication, firewalls)
- identify query tools (e.g., Azure Data Studio, SQL Server Management Studio, sqlcmd utility, etc.)

Describe query techniques for data using SQL language

- compare DDL versus DML
- query relational data in PostgreSQL, MySQL, and Azure SQL Database

Describe how to work with non-relational data on Azure (25-30%)

Describe non-relational data workloads

- describe the characteristics of non-relational data
- describe the types of non-relational and NoSQL data
- recommend the correct data store
- determine when to use non-relational data

Describe non-relational data offerings on Azure

- identify Azure data services for non-relational workloads
- describe Azure Cosmos DB APIs
- describe Azure Table storage
- describe Azure Blob storage
- describe Azure File storage

Identify basic management tasks for non-relational data

- describe provisioning and deployment of non-relational data services
- describe method for deployment including ARM templates and Azure Portal

- identify data security components (e.g., firewall, authentication)
- identify basic connectivity issues (e.g., accessing from on-premises, access with Azure VNets, access from Internet, authentication, firewalls)
- identify management tools for non-relational data

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

Describe analytics workloads

- describe transactional workloads
- describe the difference between a transactional and an analytics workload
- describe the difference between batch and real time
- describe data warehousing workloads
- determine when a data warehouse solution is needed

Describe the components of a modern data warehouse

- describe Azure data services for modern data warehousing such as Azure Data Lake, Azure Synapse Analytics, Azure Databricks, and Azure HDInsight
- describe modern data warehousing architecture and workload

Describe data ingestion and processing on Azure

- describe common practices for data loading
- describe the components of Azure Data Factory (e.g., pipeline, activities, etc.)
- describe data processing options (e.g., HDI, Azure Databricks, Azure Synapse Analytics, Azure Data Factory)

Describe data visualization in Microsoft Power BI

- describe the role of paginated reporting
- describe the role of interactive reports
- describe the role of dashboards
- describe the workflow in Power BI