December 13-16, 2021
Microsoft Certification Week for Partners
Validate your technical expertise

DP-900: Microsoft Azure Data Fundamentals exam resources

Overview

The following resources have been assembled to help you prepare for the DP-900 Microsoft Azure Data Fundamentals learning track during Microsoft Certification Week.

How to use this guide

Each user brings a unique set of knowledge and skills to your Microsoft Certification Week experience. Please identify and utilize the relevant links within this document to help you develop deeper understanding in those specific topic areas where you feel you need additional training. It is not required nor intended that an individual should leverage all the resources in this guide to participate in the event.

Contents

Audience profile for the exam

Candidates for this exam should have foundational knowledge of core data concepts and how they are implemented using Microsoft Azure data services. 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's not a prerequisite for any of them.

Preparing with an Azure subscription

It is highly recommended when preparing for a Microsoft exam, that you have had some level of hands-on experience with the services within the objectives. Microsoft courses have a GitHub repository for labs that are recommended and available to the public.

- Azure Free Trial:

    [Create your Azure free account today | Microsoft Azure](link)

- Suggested Lab Guides:

    https://github.com/MicrosoftLearning/DP-900T00A-Azure-Data-Fundamentals

Self-study resources links aligned by exam objective

The following links have been curated by Microsoft's learning partners as study resources aligned by exam objective.

Objective: Describe core data concepts (15-20%)

- Describe types of core data workloads: [Describe batch data](link)

- Describe streaming data: [Implement data streaming with asa](link)

- Describe the difference between batch and streaming data: [Big data debate batch processing vs streaming processing](link)

- Describe the characteristics of relational data: [Relational data model](link)

Describe data analytics core concepts

- [Describe data visualization](link) (e.g., visualization, reporting, business intelligence)

- [Describe basic chart types such as bar charts and pie charts](link)

- [Describe analytics techniques](link) (e.g., descriptive, diagnostic, predictive, prescriptive, cognitive)

- [Describe ELT and ETL processing](link)

- [Describe the concepts of data processing](link)

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

Describe relational data workloads

- [Identify the right data offering for a relational workload](link)

- [Describe relational data structures](link) (e.g., tables, index, views)

Describe relational Azure data services

- [Describe and compare PaaS, IaaS, and SaaS delivery models](link)

- [Describe Azure SQL Database](link)

- [Describe Azure Synapse Analytics](link)

- [Describe SQL Server on Azure Virtual Machine](link)

- Describe Azure Database for PostgreSQL, Azure Database for MariaDB, and Azure Database for MySQL

    - https://azure.microsoft.com/en-us/services/postgresql/

    - https://azure.microsoft.com/en-us/services/mariadb/

    - https://azure.microsoft.com/en-gb/services/mysql/#product-overview

- [Describe Azure SQL Managed Instance](link)

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](#)

Objective: 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](#)

Objective: 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

  - https://azure.microsoft.com/en-gb/solutions/data-lake/

  - https://azure.microsoft.com/en-gb/services/synapse-analytics/

  - https://azure.microsoft.com/en-gb/services/databricks/

  - https://docs.microsoft.com/en-us/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](#)

Virtual Training Series

This online course will provide foundational level knowledge of cloud services and how those services are provided with Microsoft Azure. The course can be taken as an optional first step in learning about cloud services and Microsoft Azure, before taking further Microsoft Azure or Microsoft cloud services courses.

All Microsoft Virtual Training Series:

Microsoft Virtual Training Series

Microsoft Learning Path

The Microsoft Learning Path for DP-900 - Azure Data Fundamentals provides online courses and resources to help you gain the skills you need to become certified:

DP-900 Microsoft Azure Administrator Learning Path

Additional On-Demand Training from Microsoft Learn

New to the cloud? Azure fundamentals is a six-part series that teaches you basic cloud concepts, provides a streamlined overview of many Azure services, and guides you with hands-on exercises to deploy your very first services for free.

Azure Fundamentals part 1: Describe core Azure Concepts

Azure Fundamentals part 2: Describe core Azure Services

Azure Fundamentals part 3: Describe core solutions and management tools on Azure

Azure Fundamentals part 4: Describe general security and network security features

Azure Fundamentals part 5: Describe identity, governance, privacy, and compliance features

Azure Fundamentals part 6: Describe Azure cost management and service level agreements