

MS-DP900T00: INTRODUCTION TO MICROSOFT AZURE DATA



DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
1 Day	Beginner	Azure	Instructor-led	NA

INTRODUCTION

In this course, students will gain foundational knowledge of core data concepts and related Microsoft Azure data services. Students will learn about core data concepts such as relational, non-relational, big data, and analytics, and build their foundational knowledge of cloud data services within Microsoft Azure. Students will explore fundamental relational data concepts and relational database services in Azure. They will explore Azure storage for non-relational data and the fundamentals of Azure Cosmos DB. Students will learn about large-scale data warehousing, real-time analytics, and data visualization.

AUDIENCE PROFILE

The audience for this course is individuals who want to learn the fundamentals of database concepts in a cloud environment, get basic skilling in cloud data services, and build their foundational knowledge of cloud data services within Microsoft Azure.

PREREQUISITES

Prerequisite certification is not required before taking this course. Successful Azure Data Fundamentals students start with some basic awareness of computing and Internet concepts, and an interest in extracting insights from data.

COURSE OBJECTIVES

After completing this course, students will be able to:

- Describe core data concepts in Azure
- Explain concepts of relational data in Azure
- Explain concepts of non-relational data in Azure
- Identify components of a modern data warehouse in Azure

COURSE CONTENT

Module 1: Explore Core Data Concepts

Data powers the digital transformation that is sweeping across organizations and society in general. But what is "data", and how is it represented and used?

Lessons

- Introduction
- Identify data formats.
- Explore file storage.
- Explore databases.
- Explore transactional data processing.
- Explore analytical data processing.
- Module assessment.
- Summary.

After completing this module, students will be able to:

- Identify common data formats.
- Describe options for storing data in files.

- Describe options for storing data in databases.
- Describe characteristics of transactional data processing solutions.
- Describe characteristics of analytical data processing solutions.

Module 2: Explore data roles and services

Data professionals perform distinct roles in building and managing software solutions, and work with multiple technologies and services to do so.

Lessons

- Introduction.
- Explore job roles in the world of data.
- Identify data services.
- Module assessment.
- Summary.

After completing this module, students will be able to:

- Identify common data professional roles.
- Identify common cloud services used by data professionals.

Module 3: Explore fundamental relational data concepts

Relational database systems are a common way to store and manage transactional and analytical data in organizations of any size around the world.

Lessons

- Introduction.
- Understand relational data.
- Understand normalization.
- Explore SQL.
- Describe database objects.
- Module assessment.
- Summary.

After completing this module, students will be able to:

- Identify characteristics of relational data.
- Define normalization.
- Identify types of SQL statement.
- Identify common relational database objects.

Module 4: Explore relational database services in Azure

Microsoft Azure provides multiple services for relational databases. You can choose the relational database management system that's best for your needs, and host relational data in the cloud.

Lessons

- Introduction.
- Describe Azure SQL services and capabilities.
- Describe Azure services for open-source databases.
- Exercise: Explore Azure relational database services.
- Module assessment.
- Summary.

After completing this module, students will be able to:

- Identify options for Azure SQL services.
- Identify options for open-source databases in Azure.
- Provision a database service on Azure.

Module 5: Explore Azure Storage for non-relational data

Azure Storage is a core service in Microsoft Azure that is commonly used to store non-relational data.

Lessons

- Introduction.
- Explore Azure blob storage.
- Explore Azure DataLake Storage Gen2.
- Explore Microsoft OneLake in Fabric.
- Explore Azure Files.
- Explore Azure Tables.
- Exercise: Explore Azure Storage.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Describe features and capabilities of Azure blob storage.
- Describe features and capabilities of Azure Data Lake Gen2.
- Describe features and capabilities of Microsoft OneLake in Fabric.
- Describe features and capabilities of Azure file storage.

- Describe features and capabilities of Azure table storage.
- Provision and use an Azure Storage account.

Module 6: Explore fundamentals of Azure Cosmos DB

Azure Cosmos DB provides a highly scalable store for non-relational data.

Lessons

- Introduction.
- Describe Azure Cosmos DB.
- Identify Azure Cosmos DB APIs.
- Exercise: Explore Azure Cosmos DB.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Describe key features and capabilities of Azure Cosmos DB.
- Identify the APIs supported in Azure Cosmos DB.
- Provision and use an Azure Cosmos DB instance.

Module 7: Explore fundamentals of large-scale analytics

Organizations use analytics platforms to build large-scale data analytics solutions that generate insights and drive success. Microsoft provides multiple technologies that you can combine to build a large-scale data analytics solution.

Lessons

- Introduction.
- Describe data warehousing architecture.
- Explore data ingestion pipelines.
- Explore analytical data stores.
- Exercise: Explore data analytics in Microsoft Fabric.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Describe data warehousing architecture.
- Describe key features for data ingestion pipelines.
- Identify common types of analytical data store and related Azure services.
- Use Microsoft Fabric to ingest and analyse data.

Module 8: Explore fundamentals of real-time analytics

Learn about the basics of stream processing, and the services in

Microsoft Azure that you can use to implement real-time analytics solutions.

Lessons

- Introduction
- Understand batch and stream processing.
- Explore common elements of stream processing architecture.
- Explore Microsoft Fabric Real-Time Intelligence.
- Explore Apache Spark structured streaming.
- Exercise: Explore Microsoft Fabric Real-Time Intelligence.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Understand batch and stream processing.
- Describe common elements of streaming data solutions.
- Describe features and capabilities of real-time intelligence in Microsoft Fabric.
- Describe features and capabilities of Apache Spark Structured Streaming on Azure.
- Explore real-time analytics in Microsoft Fabric.

Module 9: Explore fundamentals of data visualization

Learn the fundamental principles of analytical data modeling and data visualization, using Microsoft Power BI as a platform to explore these principles in action.

Lessons

- Introduction.
- Describe Power BI tools and workflow.
- Describe core concepts of data modelling.
- Describe considerations for data visualization.
- Exercise – Explore fundamentals of data visualization with Power BI.
- Knowledge check.
- Summary.

After completing this module, students will be able to:

- Describe a high-level process for creating reporting solutions with Microsoft Power BI.
- Describe core principles of analytical data modelling.
- Identify common types of data visualization and their uses.
- Create an interactive report with Power BI Desktop.

ASSOCIATED CERTIFICATIONS & EXAM

This course will prepare delegates to write the DP-900: Microsoft Azure Data Fundamentals exam.