



DP-200T01: Implementing an Azure® Data Solution

Duration: 3 Days

Method: Instructor-Led Training (ILT) | Live Online Training

Certification: Microsoft Certified: Azure Data Engineer Associate —

Exam: DP-200: Implementing an Azure Data Solution

Course Description

In this course, the participants will implement various data platform technologies into solutions that are in-line with business and technical requirements, including on-premises, cloud, and hybrid data scenarios incorporating both relational and NoSQL data. Participants will also learn how to process data using a range of technologies and languages for both streaming and batch data. They will explore how to implement data security, including authentication, authorization, data policies, and standards. They will also define and implement data solution monitoring for both the data storage and data processing activities. Finally, they will manage and troubleshoot Azure data solutions which include the optimization and disaster recovery of big data, batch processing, and streaming data solutions.

Target Audience

This course is intended for:

- Data Professionals
- Data Architects
- Business Intelligence Professionals
- Application developers who deliver content from the data platform technologies that exist on Microsoft Azure.

Prerequisites

To attend this course, candidates must have:

- Knowledge of cloud computing concepts and professional experience with data solutions. Specifically:
 - Creating cloud resources in Microsoft Azure
 - Identifying use cases for big data
 - Understanding how cloud compute services can solve common business needs.



Course Objectives

Upon successful completion of this course, attendees will be able to:

- Know the basics of storage management in Azure, how to create a Storage Account, and how to choose the right model.
- Perform data preparation task that can contribute to the data science project.
- Work with NoSQL data using Azure Cosmos DB.
- Provision an Azure SQL database to store data.
- Provision and load data into Azure SQL Data Warehouse.
- Set up a stream analytics job to stream data and know-how to query the incoming data to perform analysis of the data.
- Use Azure Data Factory to orchestrate the data movement and transformation from a wide range of data platform technologies.

Course Topics

Module 1: Azure for the Data Engineer

- Explain the Evolving World of Data
- Survey the Services in the Azure Data Platform
- Identify the Tasks that are Performed by a Data Engineer
- Describe the Use Cases for the Cloud in a Case Study

Module 2: Working with Data Storage

- Choose a Data Storage Approach in Azure
- Create an Azure Storage Account
- Explain Azure Data Lake Storage
- Upload Data into Azure Data Lake

Module 3: Enabling Team-Based Data Science with Azure Databricks

- Explain Azure Databricks
- Work with Azure Databricks
- Read Data with Azure Databricks
- Perform Transformations with Azure Databricks

Module 4: Building Globally Distributed Databases with Cosmos DB

- Create an Azure Cosmos DB Database Built to Scale
- Insert and Query Data in Your Azure Cosmos DB Database
- Build a .NET Core App for Cosmos DB in Visual Studio Code
- Distribute Data Globally with Azure Cosmos DB

Module 5: Working with Relational Data Stores in the Cloud

- Use Azure SQL Database
- Describe Azure SQL Data Warehouse
- Creating and Querying an Azure SQL Data Warehouse
- Use PolyBase to Load Data into Azure SQL Data Warehouse



Course Topics *Continued*

Module 6: Performing Real-Time Analytics with Stream Analytics

- Explain Data Streams and Event Processing
- Data Ingestion with Event Hubs
- Processing Data with Stream Analytics Jobs

Module 7: Orchestrating Data Movement with Azure Data Factory

- Explain How Azure Data Factory Works
- Azure Data Factory Components
- Azure Data Factory and Databricks

Module 8: Securing Azure Data Platforms

- An Introduction to Security
- Key Security Components
- Securing Storage Accounts and Data Lake Storage
- Securing Data Stores
- Securing Streaming Data

Module 9: Monitoring and Troubleshooting Data Storage and Processing

- Explain the Available Monitoring Capabilities
- Troubleshoot Common Data Storage Issues
- Troubleshoot Common Data Processing Issues
- Manage Disaster Recovery

LABS INCLUDED

