

Microsoft Fabric Data Engineer (DP-700)

Description

Mastering Data Engineering with Microsoft Fabric

This training teaches you how to design and develop data engineering solutions using Microsoft Fabric. You will learn to ingest, transform, and orchestrate data to optimize your analytical processes. The course covers the use of Gen2 dataflows, pipeline management, and real-time intelligence utilization.

You will explore how to store and query data using lakehouses and data warehouses. Leveraging Apache Spark and Delta Lake tables will enable you to process massive data volumes for in-depth analytics. Each module includes practical exercises to apply concepts and strengthen your skills.

Enhance your skills to achieve the DP-700 certification

This program is designed for data professionals aiming to develop high-performance analytical solutions. You will learn to automate processes, query data warehouses, and visualize real-time data flows. The training also prepares you for the DP-700 certification, which is recognized in the field of data engineering.

Course Content

Module 1: Ingest data with Gen2 dataflows in Microsoft Fabric

- Understand Gen2 dataflows in Microsoft Fabric
- Explore a Gen2 dataflow in Microsoft Fabric
- Integrate Gen2 dataflows and pipelines in Microsoft Fabric

Module 2: Orchestrate processes and data movement with Microsoft Fabric

- Understand pipelines
- Use the Copy Data activity
- Use pipeline templates
- Run and monitor pipelines

Module 3: Get started with Real-Time Intelligence in Microsoft Fabric

- What is real-time data analytics?
- Real-time insights in Microsoft Fabric
- Ingest and transform real-time data
- Store and query real-time data
- Visualize real-time data
- Automate actions

Module 4: Use real-time event streams in Microsoft Fabric

- Event stream components
- Eventstream sources and destinations
- Eventstream transformations

Module 5: Use real-time data in a Microsoft Fabric eventhouse

- Get started with an eventhouse
- Use KQL effectively
- Materialized views and stored functions

Module 6: Introduction to end-to-end analytics with Microsoft Fabric

- Explore end-to-end analytics with Microsoft Fabric
- Data teams and Microsoft Fabric
- Enable and use Microsoft Fabric

Module 7: Get started with lakehouses in Microsoft Fabric

- Explore the Microsoft Fabric lakehouse
- Work with Microsoft Fabric data lakes
- Explore and transform data in a lakehouse

Module 8: Use Apache Spark in Microsoft Fabric

- Prepare to use Apache Spark
- Run Spark code
- Use data in a Spark dataframe
- Use data with Spark SQL
- Visualize data in a Spark notebook

Module 9: Use Delta Lake tables in Microsoft Fabric

- Understand Delta Lake
- Create Delta tables
- Optimize Delta tables
- Use Delta tables in Spark
- Use Delta tables with streaming data

Module 10: Ingest data with Gen2 dataflows in Microsoft Fabric

- Understand Gen2 dataflows in Microsoft Fabric
- Explore a Gen2 dataflow in Microsoft Fabric
- Integrate Gen2 dataflows and pipelines in Microsoft Fabric

Module 11: Orchestrate processes and data movement with Microsoft Fabric

- Understand pipelines
- Use the Copy Data activity
- Use pipeline templates
- Run and monitor pipelines

Module 12: Organize a Fabric lakehouse using medallion architecture design

- Describe medallion architecture
- Implement medallion architecture in Fabric
- Query data and generate reports in your Fabric lakehouse
- Considerations for managing your lakehouse

Module 13: Get started with Real-Time Intelligence in Microsoft Fabric

- What is real-time data analytics?
- Real-time insights in Microsoft Fabric
- Ingest and transform real-time data
- Store and query real-time data
- Visualize real-time data
- Automate actions

Module 14: Use Eventstreams in Microsoft Fabric

- Event stream components
- Eventstream sources and destinations
- Eventstream transformations

Module 15: Use real-time data in a Microsoft Fabric eventhouse

- Get started with an eventhouse
- Use KQL effectively
- Materialized views and stored functions

Module 16: Create real-time dashboards in Microsoft Fabric

- Get started with real-time dashboards
- Advanced features
- Best practices for real-time dashboards

Module 17: Get started with data warehouses in Microsoft Fabric

- Understand the basics of a data warehouse
- Understand data warehouses in Fabric
- Query and transform data
- Prepare data for analysis and reporting
- Secure and monitor your data warehouse

Module 18: Load data into a Microsoft Fabric data warehouse

- Explore data loading strategies
- Use data pipelines to load a warehouse
- Load data using T-SQL
- Load and transform data with Dataflow Gen2

Module 19: Query a data warehouse in Microsoft Fabric

- Query data
- Use the SQL query editor
- Explore the visual query editor
- Use client tools to query a warehouse

Module 20: Monitor a Microsoft Fabric data warehouse

- Monitor capacity metrics
- Monitor current activity
- Monitor queries

Module 21: Secure a Microsoft Fabric data warehouse

- Overview of dynamic data masking
- Implement row-level security
- Implement column-level security
- Configure granular SQL permissions using T-SQL

Module 22: Implement continuous integration and continuous delivery (CI/CD) in Microsoft Fabric

- Understand continuous integration and continuous delivery (CI/CD)
- Implement version control and Git integration
- Implement deployment pipelines
- Automate CI/CD using Fabric APIs

Module 23: Monitor activities in Microsoft Fabric

- Monitor data ingestion
- Monitor data transformation
- Monitor and refresh semantic models
- Use Delta tables with streaming data

Module 24: Secure data access in Microsoft Fabric

- Understand the Fabric security model
- Configure workspace and item permissions
- Apply granular permissions

Module 25: Administer a Microsoft Fabric environment

- Understand Fabric architecture
- Understand the Fabric Administrator role
- Manage Fabric security
- Govern data in Fabric

Lab / Exercises

- This course provides you with exclusive access to the official Microsoft lab, enabling you to practice your skills in a professional environment.

Documentation

- Access to Microsoft Learn, Microsoft's online learning platform, offering interactive resources and educational content to deepen your knowledge and develop your technical skills.

Exam

- This course prepares you for the DP-700 certification: Fabric Data Engineer Associate.

Participant profiles

- Data engineers
- Data solution architects
- Data analysts
- Developers specializing in data processing

Prerequisites

- Proficiency in SQL, PySpark, or KQL
- Experience in data extraction and transformation
- Understanding of data storage and orchestration concepts

Objectives

- Master Gen2 dataflows
- Orchestrate processes with pipelines
- Leverage real-time intelligence
- Create and manage lakehouses
- Use Apache Spark for analytics
- Optimize Delta Lake tables
- Secure and monitor a data warehouse
- Automate deployment with CI/CD

Description

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Niveau

Intermédiaire

Classroom Registration Price (CHF)

3600

Virtual Classroom Registration Price (CHF)

3400

Duration (in Days)

4

Reference

DP-700