

Microsoft Fabric Analytics Engineer

content

Module 1: Ingest Data with Dataflows Gen2 in Microsoft Fabric

- Describe Dataflow (Gen2) capabilities in Microsoft Fabric.
- Create Dataflow (Gen2) solutions to ingest and transform data.
- Include a Dataflow (Gen2) in a pipeline.

Module 2: Ingest data with Spark and Microsoft Fabric notebooks

- Ingest external data to Fabric lakehouses using Spark.
- Configure external source authentication and optimization.
- Load data into lakehouse as files or as Delta tables.

Module 3: Use Data Factory pipelines in Microsoft Fabric

- Describe pipeline capabilities in Microsoft Fabric.
- Use the Copy Data activity in a pipeline.
- Create pipelines based on predefined templates.
- Run and monitor pipelines.

Module 4: Get started with lakehouses in Microsoft Fabric

- Describe core features and capabilities of lakehouses in Microsoft Fabric.
- Create a lakehouse.
- Ingest data into files and tables in a lakehouse.
- Query lakehouse tables with SQL.

Module 5: Organize a Fabric lakehouse using medallion architecture design

- Describe the principles of using the medallion architecture in data management.
- Apply the medallion architecture framework within Microsoft Fabric.
- Analyze data stored in the lakehouse using DirectLake in Power BI.
- Describe best practices for ensuring the security and governance of data stored in the medallion architecture.

Module 6: Use Apache Spark in Microsoft Fabric

- Configure Spark in a Microsoft Fabric workspace.
- Identify suitable scenarios for Spark notebooks and Spark jobs.
- Use Spark dataframes to analyze and transform data.
- Use Spark SQL to query data in tables and views.
- Visualize data in a Spark notebook.

Module 7: Work with Delta Lake tables in Microsoft Fabric

- Understand Delta Lake and delta tables in Microsoft Fabric.
- Create and manage delta tables using Spark.
- Use Spark to query and transform data in delta tables.
- Use delta tables with Spark structured streaming.

Module 8: Get started with data warehouses in Microsoft Fabric

- Describe data warehouses in Fabric.
- Understand a data warehouse vs a data Lakehouse.
- Work with data warehouses in Fabric.
- Create and manage datasets within a data warehouse.

Module 9: Load data into a Microsoft Fabric data warehouse

- Learn different strategies to load data into a data warehouse in Microsoft Fabric.
- Learn how to build a data pipeline to load a warehouse in Microsoft Fabric.
- Learn how to load data in a warehouse using T-SQL.
- Learn how to load and transform data with dataflow (Gen 2).

Module 10: Monitor a Microsoft Fabric data warehouse

- Monitor capacity unit usage with the Microsoft Fabric Capacity Metrics app.
- Monitor current activity in the data warehouse with dynamic management views.
- Monitor querying trends with query insights views.

Module 11: Understand scalability in Power BI

- Describe the importance of building scalable data models.
- Implement Power BI data modeling best practices.
- Use the Power BI large dataset storage format.

Module 12: Create Power BI model relationships

- Understand how model relationships work.
- Set up relationships.
- Use DAX relationship functions.
- Understand relationship evaluation.

Module 13: Use tools to optimize Power BI performance

- Optimize queries using performance analyzer.
- Troubleshoot DAX performance using DAX Studio.
- Optimize a data model using Tabular Editor.

Module 14: Enforce Power BI model security

- Restrict access to Power BI model data with RLS.
- Restrict access to Power BI model objects with OLS.

