

## Microsoft Fabric Analytics Engineer (4 Days)

### Course Overview

This course covers methods and practices for implementing and managing enterprise-scale data analytics solutions using Microsoft Fabric. Students will build on existing analytics experience and will learn how to use Microsoft Fabric components, including lakehouses, data warehouses, notebooks, dataflows, data pipelines, and semantic models, to create and deploy analytics assets. This course is best suited for those who have the PL-300 certification or similar expertise in using Power BI for data transformation, modeling, visualization, and sharing. Also, learners should have prior experience in building and deploying data analytics solutions at the enterprise level.

The primary audience for this course is data professionals with experience in data modeling, extraction, and analytics. DP-600 is designed for professionals who want to use Microsoft Fabric to create and deploy enterprise-scale data analytics solutions.

### Course Outline

#### Introduction to end-to-end analytics using Microsoft Fabric

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

#### Administer Microsoft Fabric

- Understand the Fabric Architecture
- Understand the Fabric administrator role
- Manage Fabric security
- Govern data in Fabric

#### Ingest Data with Dataflows Gen2 in Microsoft Fabric

- Understand Dataflows Gen2 in Microsoft Fabric
- Explore Dataflows Gen2 in Microsoft Fabric
- Integrate Dataflows Gen2 and Pipelines in Microsoft Fabric

### **Ingest data with Spark and Microsoft Fabric notebooks**

- Connect to data with Spark
- Write data into a lakehouse
- Consider uses for ingested data

### **Use Data Factory pipelines in Microsoft Fabric**

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

### **Get started with lakehouses in Microsoft Fabric**

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

### **Organize a Fabric lakehouse using medallion architecture design**

- Describe medallion architecture
- Implement a medallion architecture in Fabric
- Query and report on data in your Fabric lakehouse
- Considerations for managing your lakehouse

### **Use Apache Spark in Microsoft Fabric**

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

### **Work with Delta Lake tables in Microsoft Fabric**

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

### **Get started with data warehouses in Microsoft Fabric**

- Understand data warehouse fundamentals

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

#### **Load data into a Microsoft Fabric data warehouse**

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

#### **Query a data warehouse in Microsoft Fabric**

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

#### **Monitor a Microsoft Fabric data warehouse**

- Monitor capacity metrics
- Monitor current activity
- Monitor queries

#### **Understand scalability in Power BI**

- Describe the significance of scalable models
- Implement Power BI data modeling best practices
- Configure large datasets

#### **Create Power BI model relationships**

- Understand model relationships
- Set up relationships
- Use DAX relationship functions
- Understand relationship evaluation

#### **Use tools to optimize Power BI performance**

- Use Performance analyzer
- Troubleshoot DAX performance by using DAX Studio
- Optimize a data model by using Best Practice Analyzer

#### **Enforce Power BI model security**

Restrict access to Power BI model data  
Restrict access to Power BI model objects  
Apply good modeling practices