



DP-601T00: Implementing a Lakehouse with Microsoft Fabric

Course ID #: 7000-854-ZZ-Z

Hours: 7

Course Content

Course Description:

This course is designed to build your foundational skills in data engineering on Microsoft Fabric, focusing on the Lakehouse concept. This course will explore the powerful capabilities of Apache Spark for distributed data processing and the essential techniques for efficient data management, versioning, and reliability by working with Delta Lake tables. This course will also explore data ingestion and orchestration using Dataflows Gen2 and Data Factory pipelines. This course includes a combination of lectures and hands-on exercises that will prepare you to work with lakehouses in Microsoft Fabric.

Course Objectives:

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

- Describe end-to-end analytics in Microsoft Fabric
- Ingest data into files and tables in a lakehouse
- Query lakehouse tables with SQL
- Use Spark dataframes to analyze and transform data
- Use Spark SQL to query data in tables and views
- Use Spark to query and transform data in delta tables
- Create Dataflow (Gen2) solutions to ingest and transform data
- Create pipelines based on predefined templates
- And so much more!

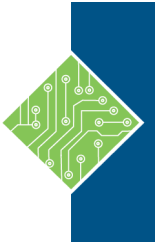
Prerequisites:

You should be familiar with basic data concepts and terminology.

Target Audience:

- Data Analyst
- Data Engineer
- Data Scientist

The primary audience for this course is data professionals who are familiar with data modeling, extraction, and analytics. It is designed for professionals who are interested in gaining knowledge about Lakehouse architecture, the Microsoft Fabric platform, and how to enable end-to-end analytics using these technologies.



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Topics:

Lesson 1: Introduction to end-to-end analytics using Microsoft Fabric

- Introduction
- Explore end-to-end analytics with Microsoft Fabric
- Data teams and Microsoft Fabric
- Enable and use Microsoft Fabric
- Knowledge Check
- Summary

Lesson 2: Get started with lakehouses in Microsoft Fabric

- Introduction
- Explore the Microsoft Fabric Lakehouse
- Work with Microsoft Fabric Lakehouses
- Exercise - Create and ingest data with a Microsoft Fabric Lakehouse
- Knowledge check
- Summary

Lesson 3: Use Apache Spark in Microsoft Fabric

- Introduction
- 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
- Exercise - Analyze data with Apache Spark
- Knowledge check
- Summary

Lesson 4: Work with Delta Lake tables in Microsoft Fabric

- Introduction
- Understand Delta Lake
- Create delta tables
- Work with delta tables in Spark
- Use delta tables with streaming data
- Exercise - Use delta tables in Apache Spark
- Knowledge check
- Summary



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Lesson 5: Ingest Data with Dataflows Gen2 in Microsoft Fabric

- Introduction
- Understand Dataflows (Gen2) in Microsoft Fabric
- Explore Dataflows (Gen2) in Microsoft Fabric
- Integrate Dataflows (Gen2) and Pipelines in Microsoft Fabric
- Exercise - Create and use a Dataflow (Gen2) in Microsoft Fabric
- Knowledge check
- Summary

Lesson 6: Use Data Factory pipelines in Microsoft Fabric

- Introduction
- Understand pipelines
- Use the Copy Data activity
- Use pipeline templates
- Run and monitor pipelines
- Exercise - Ingest data with a pipeline
- Knowledge check
- Summary

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