DP-700 Implementing Data Engineering Solutions Using Microsoft Fabric

Duration : 4 days

Course Description :

This intensive 4-day training session is designed to provide participants with comprehensive knowledge and practical skills needed to build efficient and optimized data engineering solutions using Microsoft Fabric, from data ingestion and transformation to securing, managing, monitoring, and optimizing analytics solutions.

Target Audience :

- Data Engineers
- Analytics Engineers
- Data Architects
- IT Professionals working with data engineering solutions

Module 01 : Introduction to end-to-end analytics using Microsoft Fabric

- Describe end-to-end analytics in Microsoft Fabric

Module 02 : Get started with lakehouses in Microsoft Fabric

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

Module 03 : Use Apache Spark in Microsoft Fabric

- Configure Spark in a Microsoft Fabric workspace
- Identify suitable scenarios for Spark notebooks and Spark jobs
- Use Spark to connect to data sources and ingest data
- 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 04 : Work with Delta Lake tables in Microsoft Fabric

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

Module 05 : Orchestrate processes and data movement with 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 06 : Ingest Data with Dataflows Gen2 in Microsoft Fabric

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

Module 07 : 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 the Microsoft Fabric environment.
- 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 08 : 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 fact tables and dimensions within a data warehouse.

Module 09 : 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 : Query a data warehouse in Microsoft Fabric

- Use SQL query editor to query a data warehouse.
- Explore how visual query editor works.
- Learn how to connect and query a data warehouse using SQL Server Management Studio.

Module 11 : Secure a Microsoft Fabric data warehouse

- Learn the concepts of securing a data warehouse in Microsoft Fabric.
- Learn how to implement dynamic data masking to obscure sensitive information.
- Learn how to configure row-level security to provide granular control.
- Learn how to implement column-level security to protect sensitive data.
- Learn how to configure granular permissions using T-SQL.

Module 12 : 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 13 : Get started with Real-Time Intelligence in Microsoft Fabric

- Microsoft Fabric includes Real-Time Intelligence capabilities that you can use to capture, analyze, visualize, and act on real-time streams of event data.

Module 14 : Use real-time eventstreams in Microsoft Fabric

- Establish source and destinations in Microsoft Fabric Eventstreams.
- Capture, transform, and route data using Microsoft Fabric Eventstreams.

Module 15 : Work with real-time data in a Microsoft Fabric Eventhouse

- Create an Eventhouse in Microsoft Fabric
- Query real-time data by using Kusto Query Language (KQL).
- Create materialized views and stored functions in a KQL database.

Module 16 : Administer a Microsoft Fabric environment

- Describe Fabric admin tasks
- Navigate the admin center
- Manage user access
- Govern data in Fabric