DP-3012 Implementing a Data Analytics Solution with Azure Synapse Analytics

Overview

Course Duration: 1 Day

About This Course

Course designed to give the learners instruction on the SQL dedicated and serverless Spark pools and providing instruction of data wrangling and the ELT process using Synapse Pipelines which is very similar to those familiar with Azure Data Factory (ADF) to move data into the Synapse dedicated pool database.

Audience Profile

The Audience should have familiarity with notebooks that use different languages and a Spark engine, such as Databricks, Jupyter Notebooks, Zeppelin notebooks and more. They should also have some experience with SQL, Python, and Azure tools, such as Data Factory.

Course Outline

Module 1: Introduction to Azure Synapse Analytics.
- What is Azure Synapse Analytics.
- How Azure Synapse Analytics works.
- When to use Azure Synapse Analytics.
- Exercise - Explore Azure Synapse Analytics.

Module 2: Use Azure Synapse serverless SQL pool to query files in a data lake.
- Understand Azure Synapse serverless SQL pool capabilities and use cases.
- Query files using a serverless SQL pool.
- Create external database objects.
- Exercise - Query files using a serverless SQL pool.

Module 3: Analyze data with Apache Spark in Azure Synapse Analytics.
- Get to know Apache Spark.
- Use Spark in Azure Synapse Analytics.
- Analyze data with Spark.
- Visualize data with Spark.
- Exercise - Analyze data with Spark.

Module 4: Use Delta Lake in Azure Synapse Analytics.
- Understand Delta Lake.
- Create Delta Lake tables.
- Create catalog tables.
- Use Delta Lake with streaming data.
- Use Delta Lake in a SQL pool.
- Exercise - Use Delta Lake in Azure Synapse Analytics.

Module 5: Analyze data in a relational data warehouse.
- Design a data warehouse schema.
- Create data warehouse tables.
- Load data warehouse tables.
- Query a data warehouse.
- Exercise - Explore a data warehouse.

Module 6: Build a data pipeline in Azure Synapse Analytics.
- Understand pipelines in Azure Synapse Analytics.
- Create a pipeline in Azure Synapse Studio.
- Define data flows.
- Run a pipeline.
- Exercise - Build a data pipeline in Azure Synapse Analytics.