



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

Course ID #: 7000-891-ZZ-Z

Hours: 7

Course Content

Course Description:

This is a single day Instructor Lead 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.

Course Objectives:

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

- Identify the business problems that Azure Synapse Analytics addresses
- Query CSV, JSON, and Parquet files using a serverless SQL pool
- Run code to load, analyze, and visualize data in a Spark notebook
- Design a schema for a relational data warehouse
- Implement a data flow activity in a pipeline

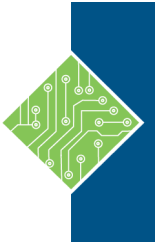
Prerequisites:

The following is recommended:

- Familiarity with cloud computing concepts and Microsoft Azure.
- Familiarity with fundamental data concepts.
- Analytical data workloads in Microsoft Azure
- Querying data with Transact-SQL
- Existing knowledge of working with Spark pools in Azure Synapse Analytics
- An understanding of data fundamentals
- Experience of querying data with Transact-SQL

Target Audience:

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.



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

Course ID #: 7000-891-ZZ-Z

Hours: 7

Topics:

Lesson 1: Introduction to Azure Synapse Analytics

- Introduction
- What is Azure Synapse Analytics
- How Azure Synapse Analytics works
- When to use Azure Synapse Analytics
- Exercise - Explore Azure Synapse Analytics
- Knowledge check
- Summary

Lesson 2: Use Azure Synapse serverless SQL pool to query files in a data lake

- Introduction
- 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
- Knowledge check
- Summary

Lesson 3: Analyze data with Apache Spark in Azure Synapse Analytics

- Introduction
- Get to know Apache Spark
- Use Spark in Azure Synapse Analytics
- Analyze data with Spark
- Visualize data with Spark
- Exercise - Analyze data with Spark
- Knowledge check
- Summary

Lesson 4: Use Delta Lake in Azure Synapse Analytics

- Introduction
- 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
- Knowledge check
- Summary



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

Course ID #: 7000-891-ZZ-Z

Hours: 7

Lesson 5: Analyze data in a relational data warehouse

- Introduction
- Design a data warehouse schema
- Create data warehouse tables
- Load data warehouse tables
- Query a data warehouse
- Exercise - Explore a data warehouse
- Knowledge check
- Summary

Lesson 6: Build a data pipeline in Azure Synapse Analytics

- Introduction
- 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
- Knowledge check
- Summary

Register for this class by visiting us at:
www.tcworkshop.com or calling us at 800-639-3535