Lab 12 – Synapse Link (Cosmos DB)

1. Provision Azure Resources

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1. Configure Synapse Link in Azure Cosmos DB

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1. Create an analytical store container

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1. Configure Synapse Link in Azure Synapse Analytics

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1. Query Azure Cosmos DB from a Spark pool

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1. Manipulate data using SQL in Spark notebook

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1. Query Azure Cosmos DB from a serverless SQL pool

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1. Verify data modifications in Cosmos DB are reflected in Synapse

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1. Delete Azure Resources

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Summary:

Azure Cosmos DB is a cloud-native HTAP technology that facilitates near-real-time analytics over operational data. By leveraging Synapse Link, a tight integration is established between Azure Cosmos DB and Azure Synapse Analytics. After provisioning the necessary Azure resources, Synapse Link is enabled in the Cosmos DB data explorer tab, and an analytical container is created to facilitate communication. Additionally, three new objects are created using JSON code. To establish the link, Cosmos DB is configured in Synapse Studio. Queries are then executed on Cosmos DB data from a Spark Pool dataframe and SQL code within the Spark Pool, demonstrating the ability to query Cosmos DB data. Furthermore, serverless SQL pools are utilized to query Cosmos DB from Synapse. Finally, a new item is added to Cosmos DB, and its reflection in the Spark notebook and SQL scripts is verified by invoking the final code blocks.