

WELCOME



Azure Synapse Link

Cosmos DB, SQL db & Dataverse



Learn, Share, Grow.

- 11+ years of journey around data & cloud.
- B2B SaaS for Big Data, BI and Analytics.
- Passionate about Azure and Low code.
- Holistic growth ⇔ knowledge sharing.



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Product Manager

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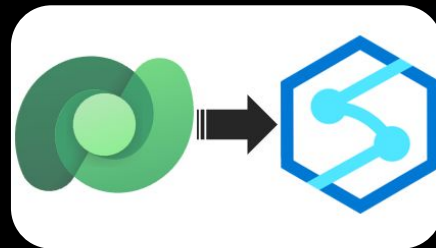
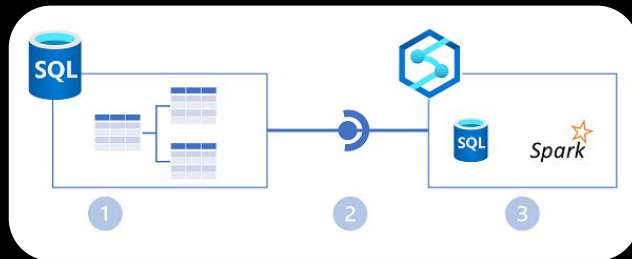
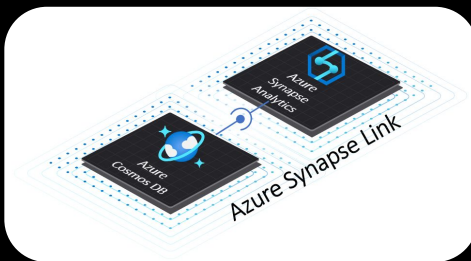
Agenda

1. OLTP & OLAP

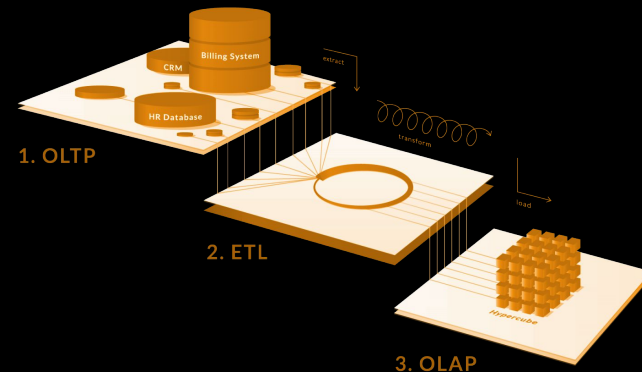
2. Synapse Link

3. When/Why use?

4. Demo



OLTP vs OLAP



OLTP - Day to day
OLAP - Decision support

Function

Usage

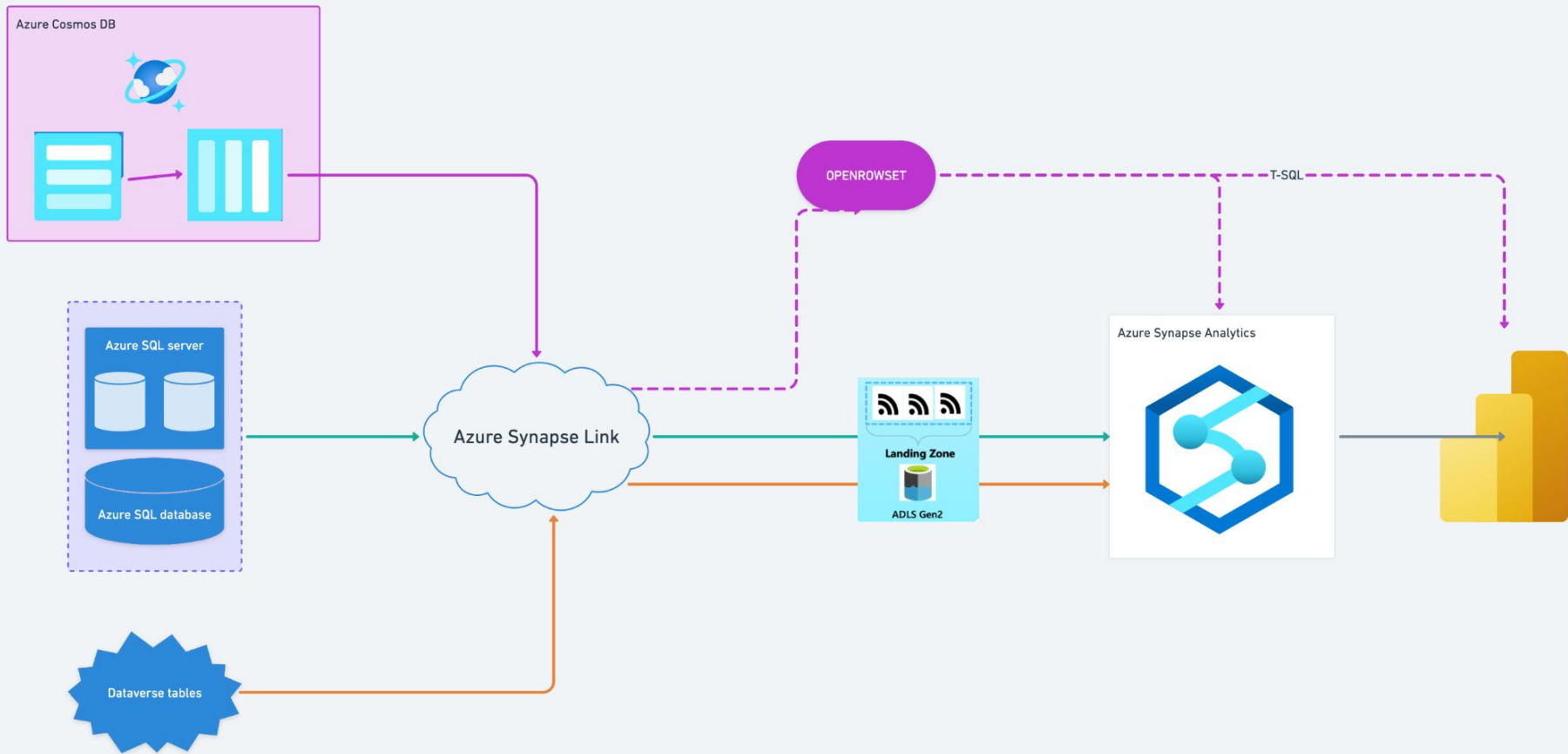
OLTP - Often & Repetitive
OLAP - Ad-hoc

OLTP - Simple (CRUD)
OLAP - Complex (Select)

Query

Time of data

OLTP - Current, up-to-date
OLAP - Historical, dimensional





Demo

1. Enable

Enable analytical store in a Cosmos DB container



2. Link

Create Cosmos DB linked service in Synapse Studio.



3. Query

Query via T-SQL query using OPENROWSET



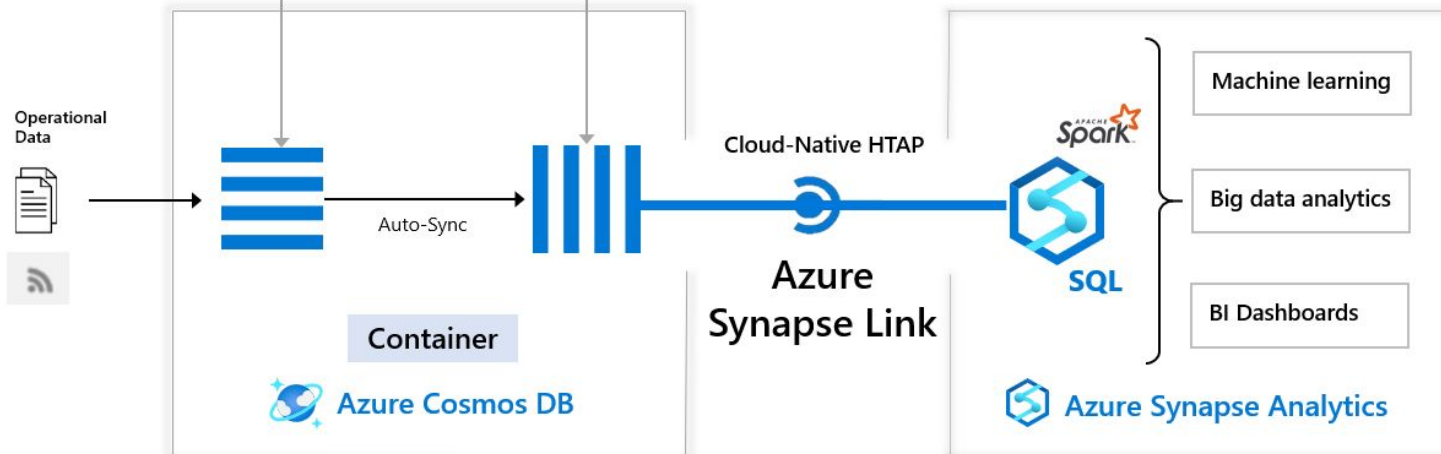
Synapse Link - Cosmos db

Transactional Store

Row store optimized for transactional reads and writes

Analytical Store

Column store optimized for analytical queries





Demo

1. Enable

Create Linked service with Azure SQL



2. Link

Choose tables to be in sync with Synapse

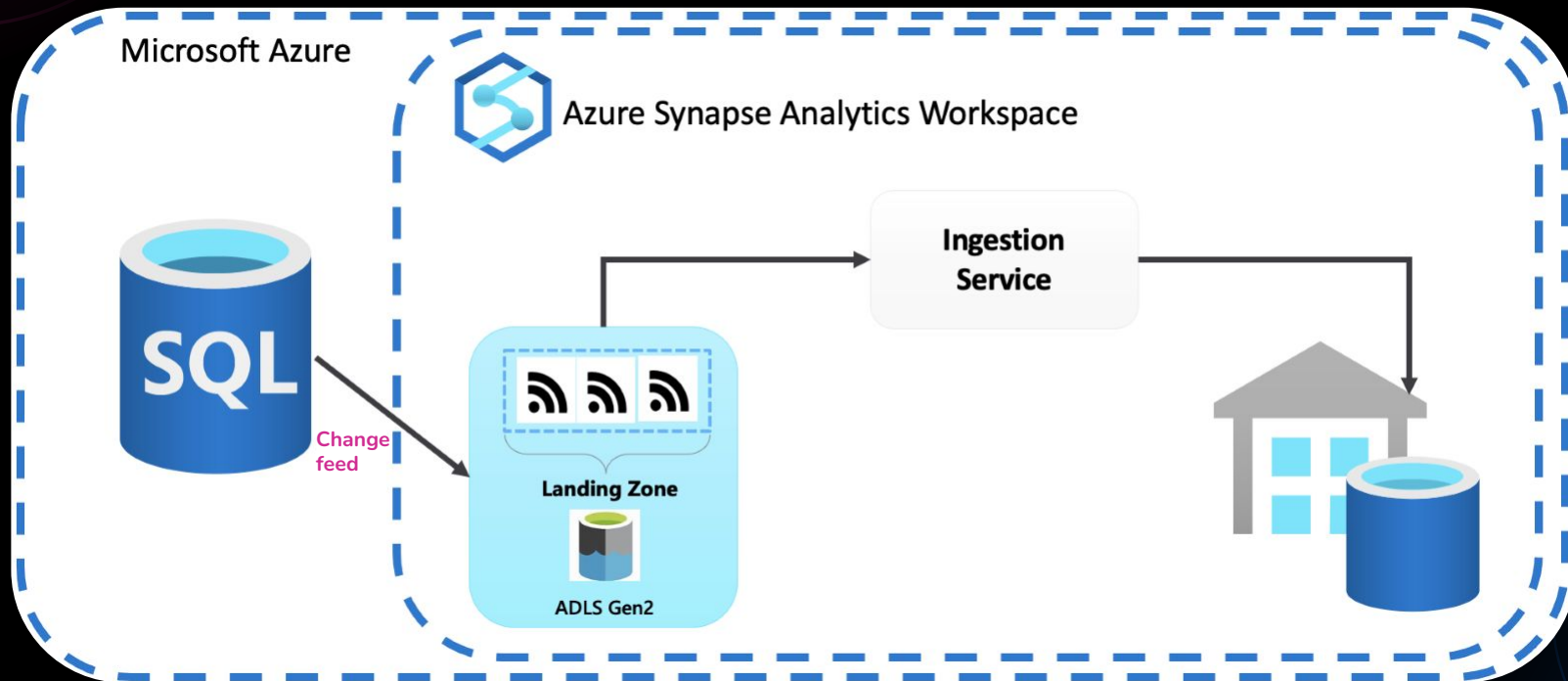


3. Query

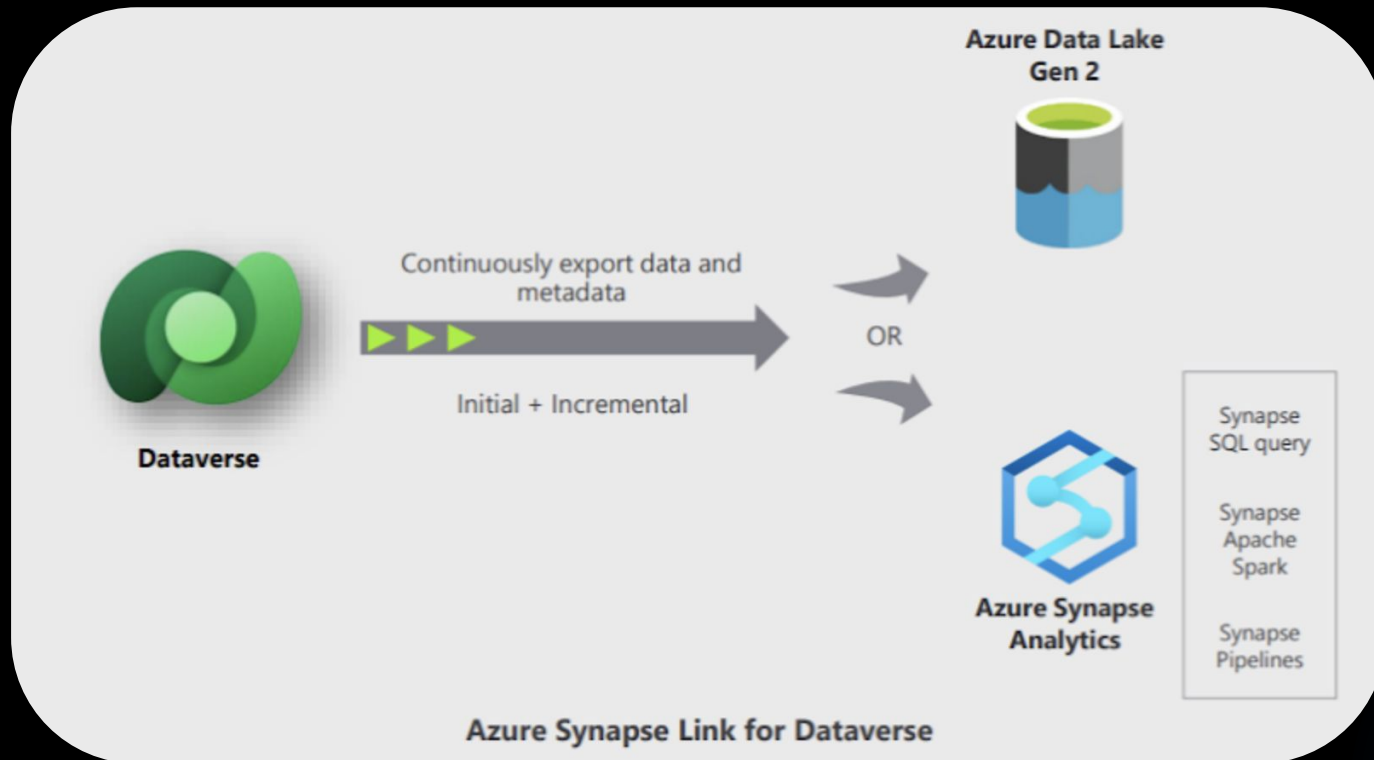
Realtime T-SQL querying



Synapse Link - Azure SQL



Synapse Link - Dataverse





Todo - 1

- Dataverse setup with Synapse link -

<https://www.youtube.com/watch?v=NFOUkKPAWOo>

-

Row vs Columnar database architecture

Row oriented

Serializes by row

- 001:10, Smith, Joe, 6000;
- 002:12, Jones, Mary, 800;
- 003:11, Joe, Cathy, 940;
- 004:22, Jones, Bob, 550;

Column oriented

Serializes by column values

- 10:001, 12:002, 11:003, 22:004;
- Smith:001, Jones:002,004, Johnson:003;
- Joe:001, Mary:002, Cathy:003, Bob:004;
- 6000:001, 800:002, 940:003, 550:004;



Todo - 2: Additional points to do as a slide

- Hot storage - Cold storage == Between synapse link
- Paying more if running analytical query in cosmos directly
- Change feed mechanism in cosmos also. Push mode. Change feed helps in generating materialized views.
- TTL - operational and analytical - > (less than) and < (greater than)
- Cost generation comparison.

When to use “Synapse Link”



Resources

Synapse link - FAQs

docs.microsoft.com/en-us/azure/cosmos-db/synapse-link-frequently-asked-questions

Microsoft Learn

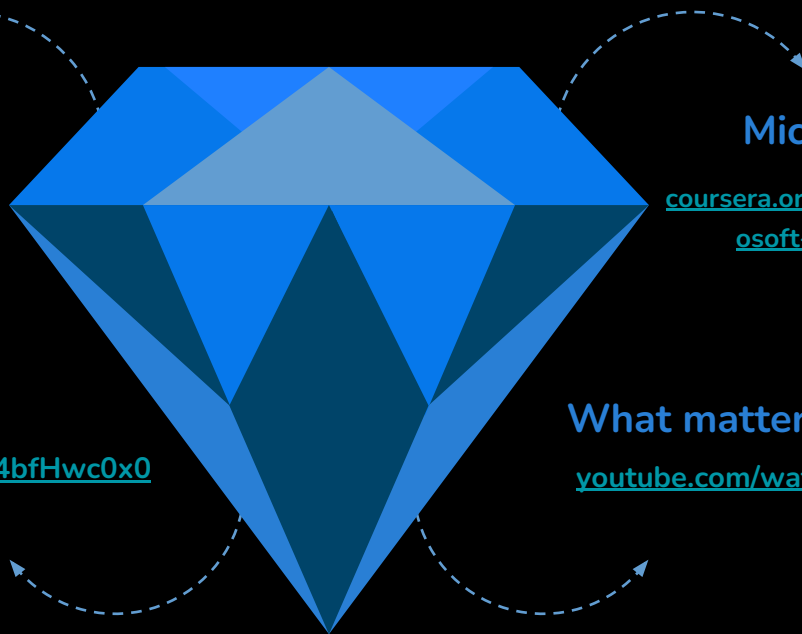
coursera.org/projects/process-data-with-microsoft-azure-synapse-link-for-cosmos-db

Setting up

youtube.com/watch?v=cA4bfHwc0x0

What matters

youtube.com/watch?v=H6Ei_t34BGs



*Thank
you!*



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