



Azure Synapse and Datalake Decommissioning



Agenda

- Landscape Overview and Trends
- History Lesson and What's in the future
- Review Options and Considerations





Nathan Clouse

- Technical Architect @ Armanino
- Based out of Detroit, MI
- Worked with AX / F&O for 15 years
- Microsoft Business Applications MVP 5X
- www.atomicax.com
- www.dynamics.fo
- NathanClouseAX on LinkedIn, Twitter, few others





Overview

Industry Trends:

- A continued move to the cloud
- A push for “AI Everything”
- Low-code / No-code / AI generated code

Gartner separates market into:

- Cloud Database Management
- Business Intelligence
- Data Science and Machine Learning

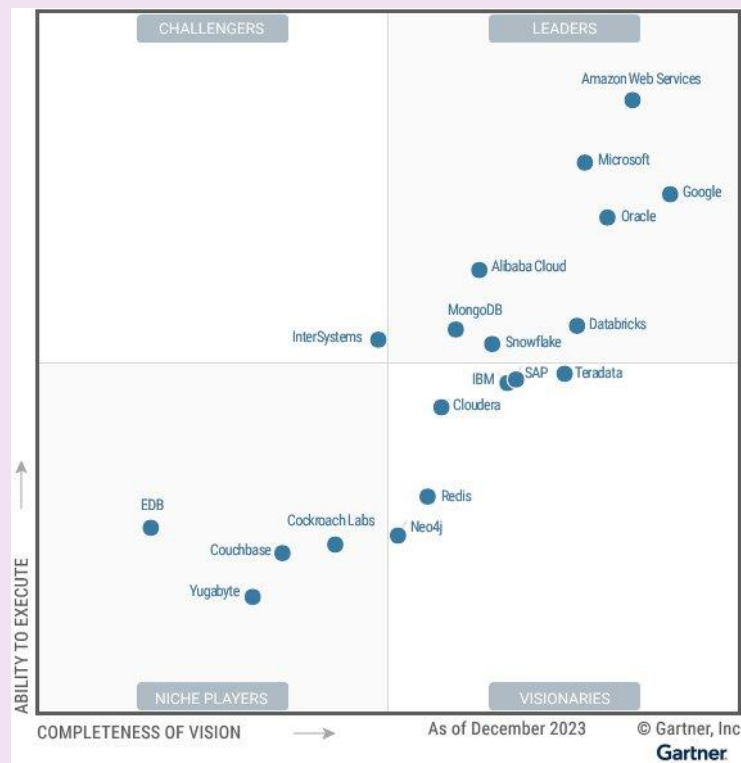




Gartner: Cloud Database Management

Microsoft

- Comprehensive Azure Ecosystem
- Scalable and Flexible Solutions
- Strong Security Features
- Seamless Integration Capabilities





Gartner: Business Intelligence

Figure 1: Magic Quadrant for Analytics and Business Intelligence Platforms



Gartner (June 2024)

Gartner.

Microsoft

- Alignment with Office, Teams, Synapse / Fabric
- Flexible Power BI pricing
- Integration with Power Platform
- AI-Powered Future



Gartner: Data Science and Machine Learning

Microsoft

- Alignment with Synapse / Fabric
- Integration with Power Platform
- AI-Powered Future

Figure 1: Magic Quadrant for Data Science and Machine Learning Platforms





Azure Analytics Options

- Various flavors of databases (Postgres, MySQL) and engines (e.g. HDInsight, Databricks) exist.
- We'll focus on:
 - Power BI
 - SQL Server
 - Azure Synapse
 - Fabric





Export To Data Lake



- Deprecation of the Export to Data Lake feature, effective October 15, 2023
- You can continue to use it until November 1, 2024*

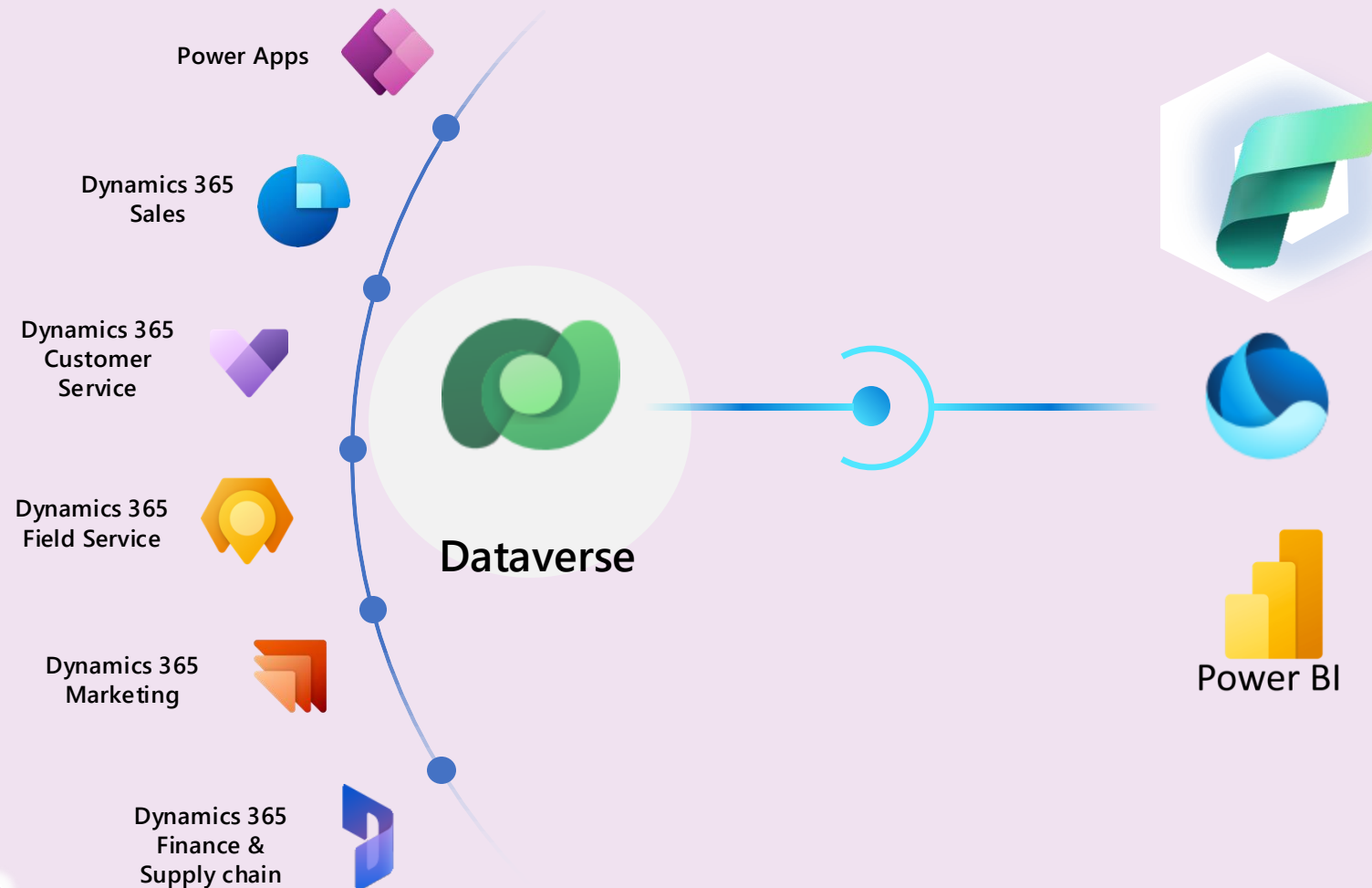


High Level D365 Export Options

Option	Dataverse	F&O (FSC)
Power BI Direct	Works with Dataverse tables (not including virtual tables).	OData connection to data entities Applies D365 security
Power Platform	Works with Dataverse tables and virtual tables	Pre-built connectors Can respond to Business and Data Events
BYOD	N/A	Data entity only DMF issues Not recommended for new projects.
Synapse Link & Fabric Link	Dataverse tables (including virtual tables) All defaulted for Fabric Link	~70% data entities as virtual tables Tables are supported Export to Data Lake available until Nov 1, 2024



D365/Dataverse Data Convergence



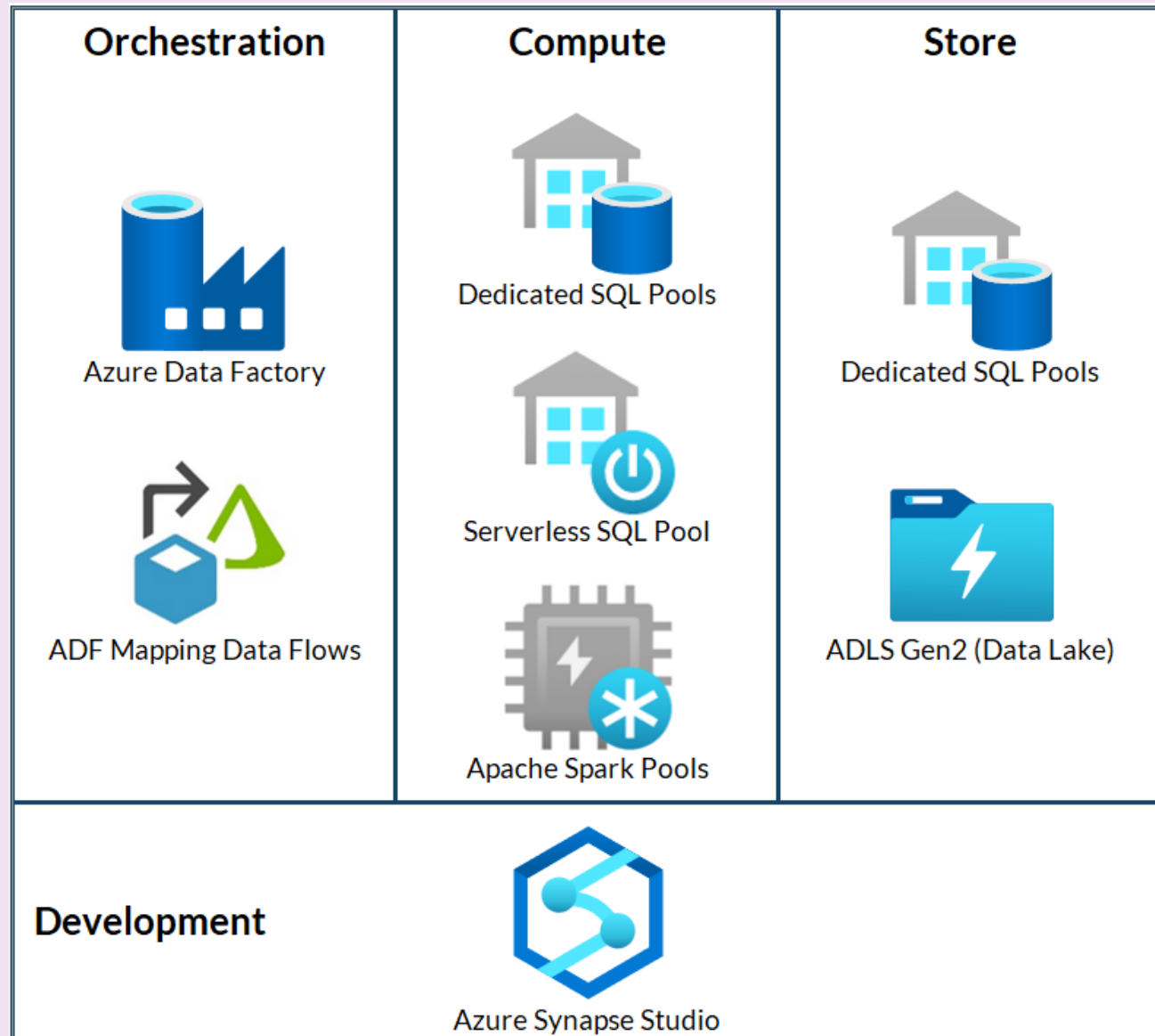


Fabric Link vs Synapse Link

Fabric Link (aka "Microsoft Managed")	Synapse Link (aka "BYOS")
"SaaS"	Separate Azure storage, Spark cluster
Data stays in Dataverse	CSV or Delta
Currently all tables added are defaulted	Accessible through Fabric, Synapse, SQL Server 2022+
\$40 / GB / month	\$0.023 / GB; \$800 - \$1,600 for spark cluster / month
	Synapse Serverless is \$5/TB processed

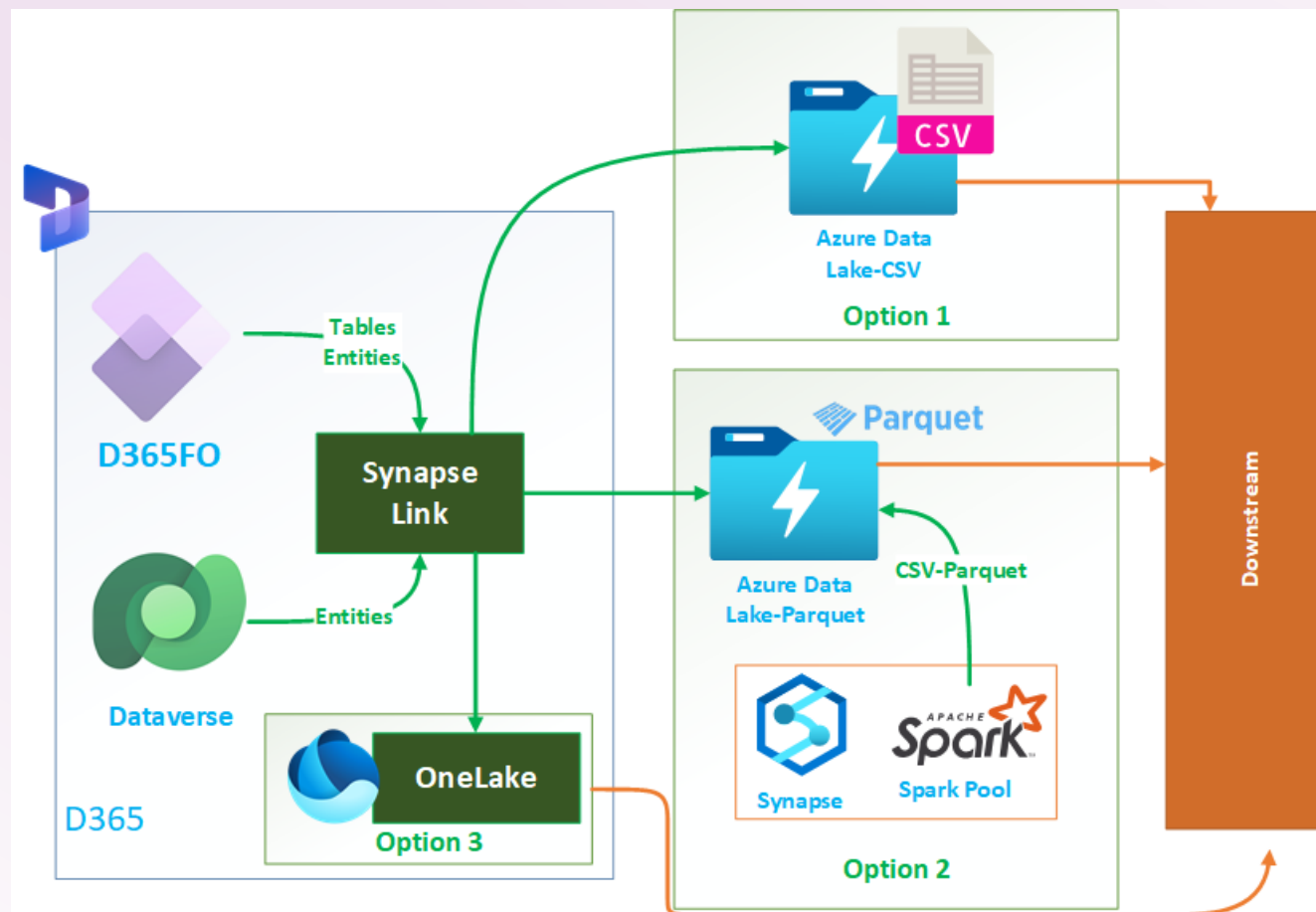


What's The Difference?



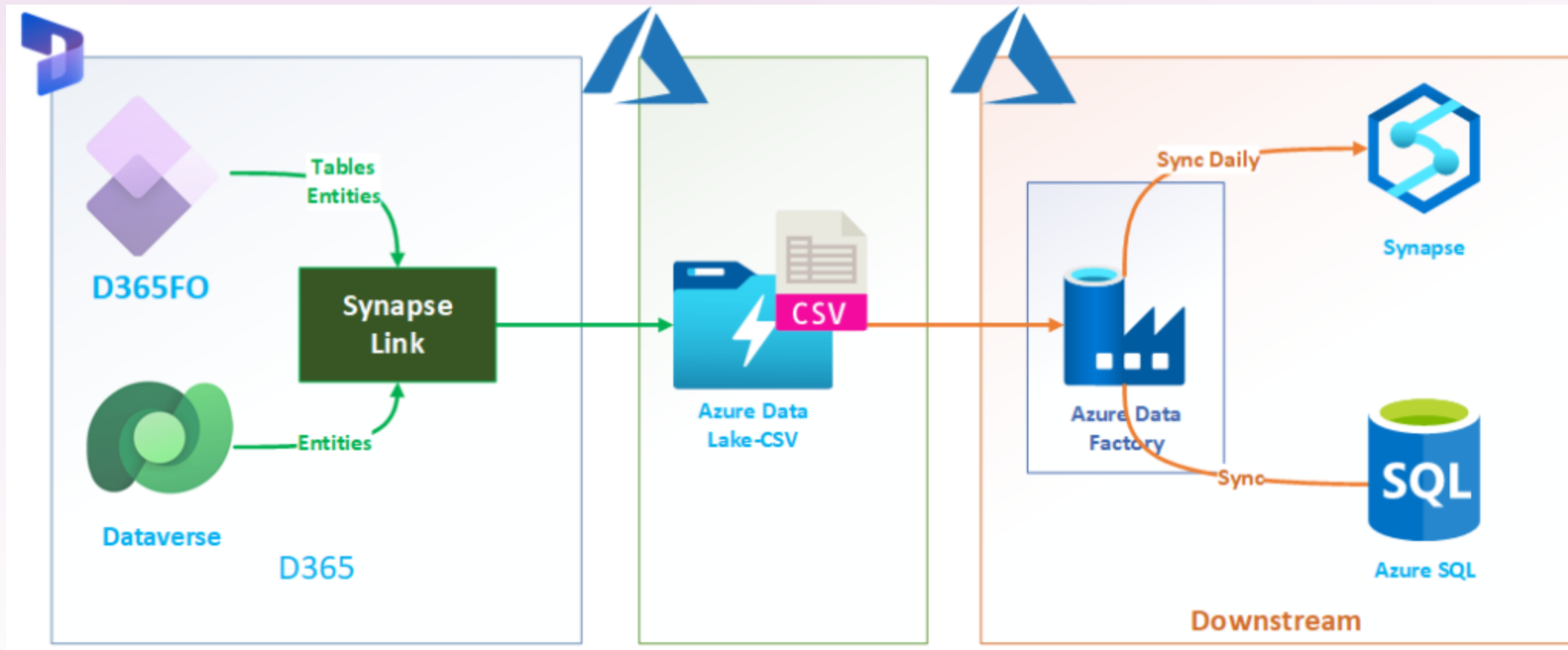


CVS Vs. Parquet



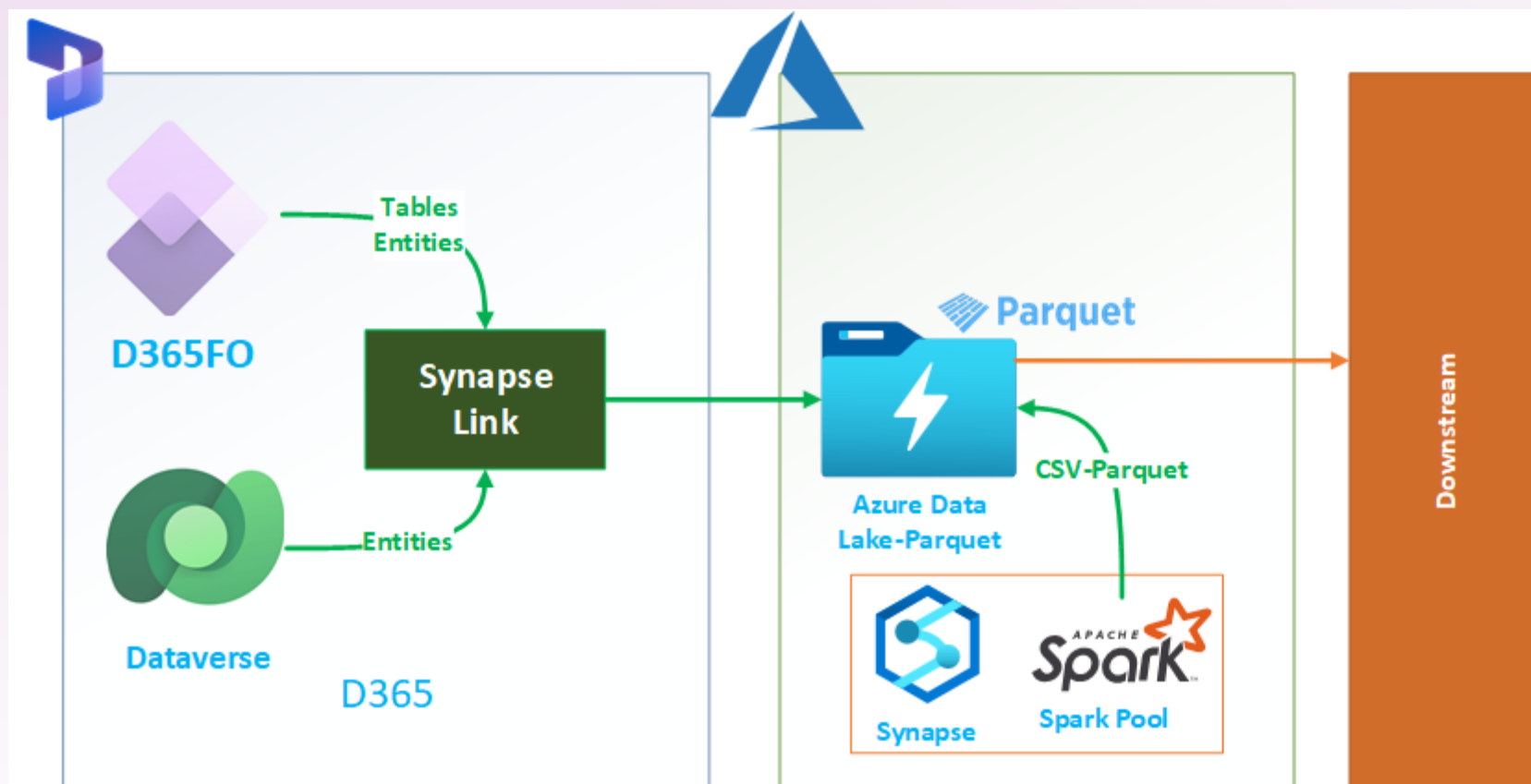


Synapse Link in CSV Format (BYOL CSV)



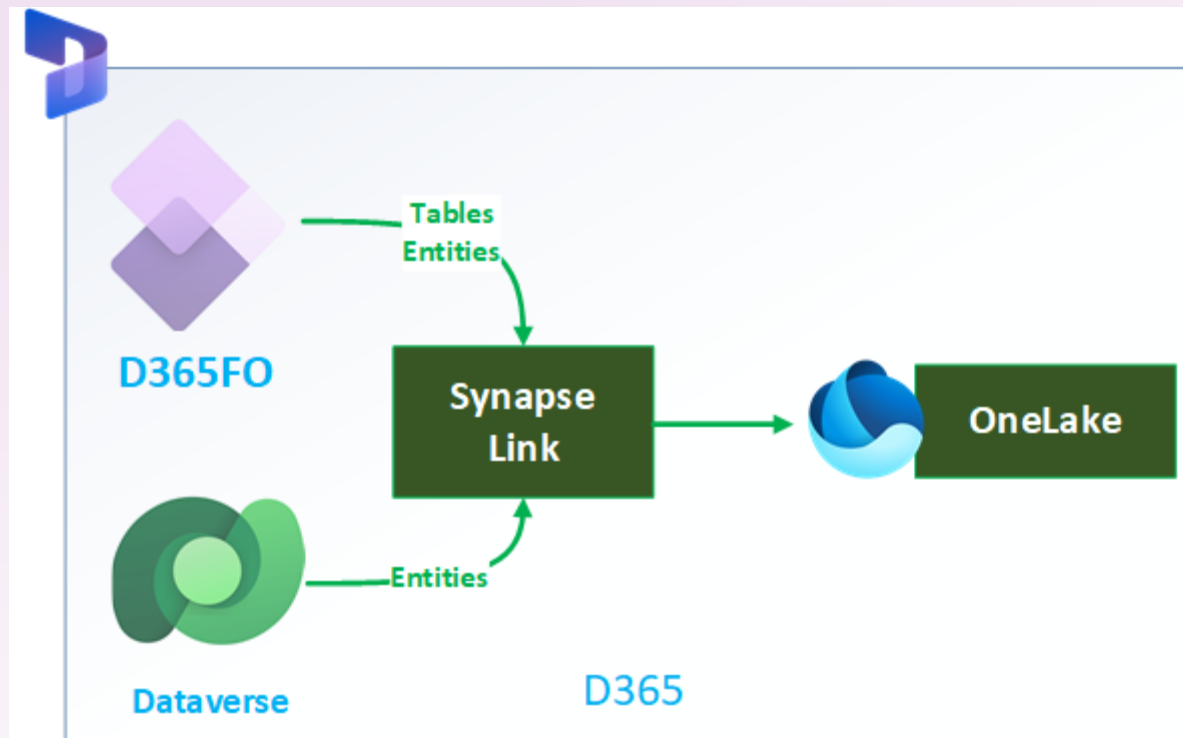


Synapse Link in Delta Parquet Format





Export to Fabric Link





Comparison

Criteria	(Option1) Synapse link BYOL (CSV)	(Option2) Synapse link BYOL (Delta)	(Option3) Microsoft Fabric
Ease of Administration	Customer managed PaaS resources – Storage account	Customer managed PaaS resources – Storage account, Synapse & Spark Pool	Managed by Microsoft
Security	Firewall support on storage account	Firewall support on storage account and synapse workspace	Managed by Microsoft
Query Performance	Data format: CSV No read-write contention when reading completed Incremental update folder.	Data format: Delta No read-write contention as Delta supports ACID Better-read performance	Data format: Delta No read-write contention as Delta supports ACID Better-read performance



Comparison

Criteria	(Option1) Synapse link BYOL (CSV)	(Option2) Synapse link BYOL (Delta)	(Option3) Microsoft Fabric
End-to-End Data Freshness	Data freshness (Configurable): 15 minutes – 24 hours	Data freshness (Configurable): 15 Minutes – 24 hours	Data freshness: ~1 hour
Data Write and Storage Costs	Storage + Transaction cost	Storage + Transaction + Delta conversion – Spark pool cost	Dataverse capacity (entitlement + add-on)
Compute Cost	Downstream data pipeline cost	Downstream data pipeline cost	Fabric capacity cost



References

- <https://learn.microsoft.com/en-us/power-apps/maker/data-platform/azure-synapse-link-synapse>
- <https://learn.microsoft.com/en-us/power-apps/maker/data-platform/azure-synapse-link-data-lake>
- <https://tldr-dynamics.com/blog/setup-azure-synapse-for-dataverse>
- <https://azureintegrations.com/2023/10/21/export-data-from-d365-fo-using-synapse-link/>
- Travis Christens @ Armanino - <https://www.linkedin.com/in/travischristens/>



Resources

- **Fabric Roadmap:** <https://learn.microsoft.com/en-us/fabric/release-plan/>
- **Synapse Link Setup:** <https://learn.microsoft.com/en-us/power-apps/maker/data-platform/azure-synapse-link-select-fno-data>
- **Pipeline for SQL:** <https://learn.microsoft.com/en-us/power-apps/maker/data-platform/azure-synapse-link-pipelines?tabs=synapse-analytics>
- **Fabric Pricing:** <https://azure.microsoft.com/en-us/pricing/details/microsoft-fabric/>
- **Fabric Limitations:** <https://learn.microsoft.com/en-us/fabric/data-warehouse/limitations>
 - **T-SQL Limitations:** <https://learn.microsoft.com/en-us/fabric/data-warehouse/tsql-surface-area#limitations>
- **Dynamics F&O Synapse Link limitations:** <https://learn.microsoft.com/en-us/power-apps/maker/data-platform/azure-synapse-link-select-fno-data#known-limitations-with-finance-and-operations-tables>
- **Yammer:** https://www.yammer.com/dynamicsaxfeedbackprograms/#/threads/inGroup?type=in_group&feedId=32768909312



Questions?

