How Dataverse and Microsoft Fabric powers Dynamics 365 insights

Jila Yadav, Principal Solutions Architect
Milinda Vitharana, Principal Product Manager
Rich Black, Senior Solutions Architect

Agenda

Transition to modern data insights with Dataverse

Link to Fabric & drive action with insights

Export data with Synapse Link

Roadmap

Previous data integration patterns

- Data Export Service (DES)
- Bring Your Own Database (BYOD)

- Export to Data lake
- Synapse Link (classic) with CSV

Dynamics 365 Apps had several services that enabled data export for insights and integration

Microsoft Dataverse

Enterprise grade low-code, data platform that manages your data and business logic across the cloud

Dynamics 365
Intelligent Business Apps

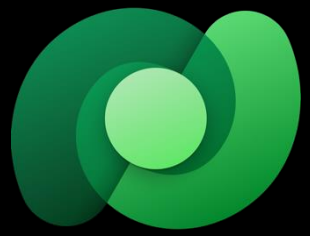
AI builder

Power Apps
Application development

Power Automate
Workflow automation

Power Virtual Agents
Intelligent virtual agents

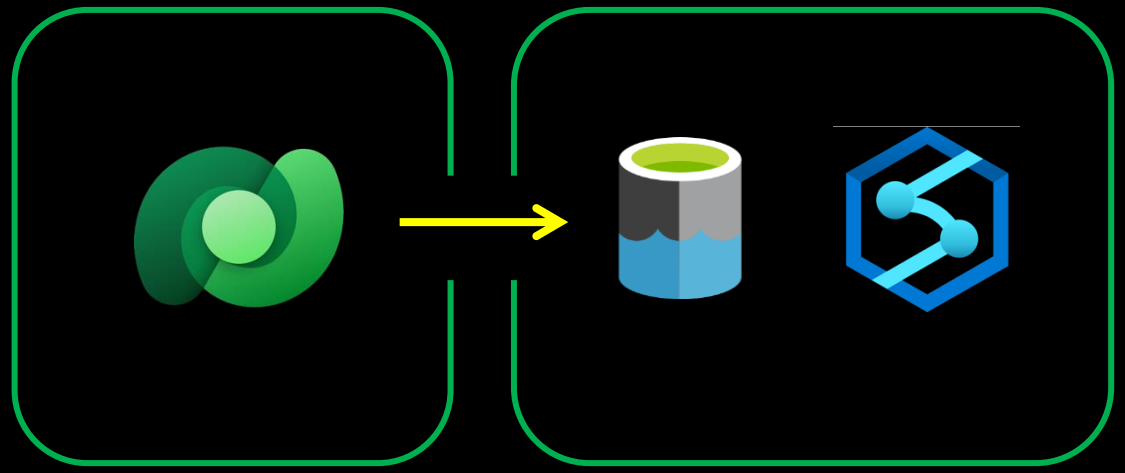
Power Pages
Webpage development



- Business Logic
- AI + Analytics
- Integration
- App + Data Lifecycle
- Data Storage
- Security + Governance

Insights & data integration simplified …

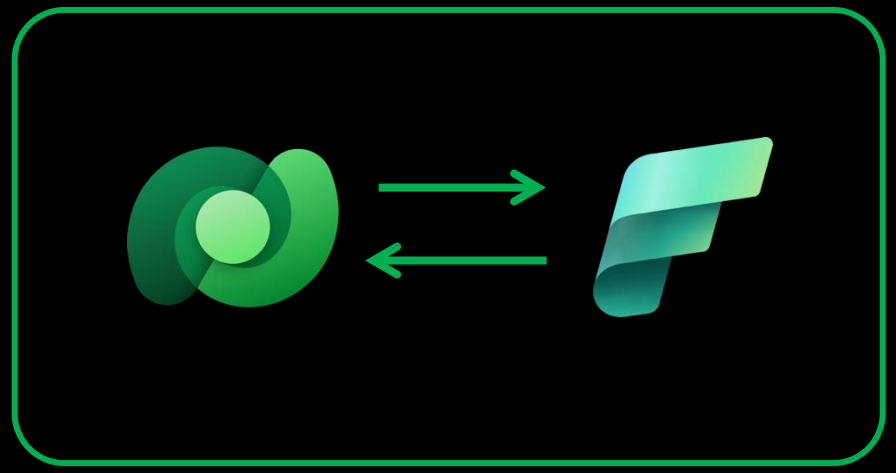
Synapse Link for Dataverse



Continuous export to Data lake enables easier integration for IT admins and Data engineers

Upgrade from Export to Data lake, BYOD and DES
With minimal investments

Link to Microsoft Fabric

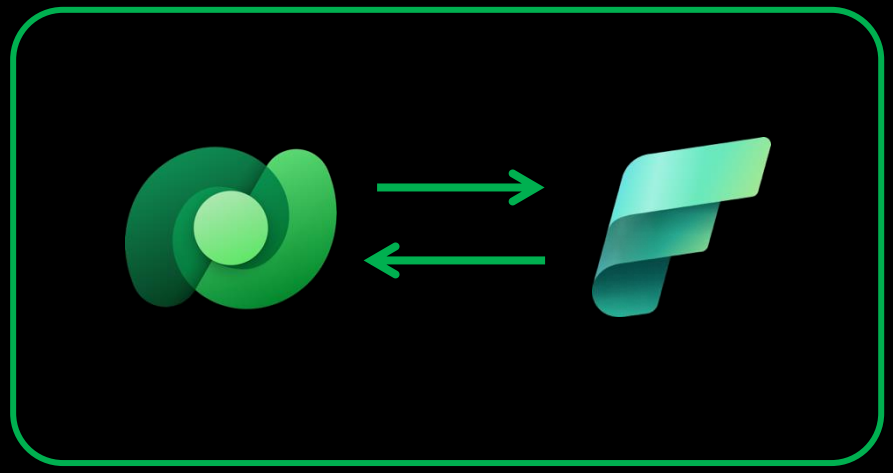


No copy, No ETL, two-way integration enables Low code users to do more with data

Transition to Fabric and get even more value

Link to Fabric deep dive

Link to Microsoft Fabric



No copy, No ETL, two-way integration enables
Low code users to do more with data

Transition to Fabric and get even more value

- Demo
- Before and after
- Cost/ Benefit

Work | Power Platform admin center | Power Apps | Home

https://admin.powerplatform.microsoft.com/home?geo=Na

Microsoft Dynamics 365 for Operations Lab

Power Platform admin center

JY

- Home
- Environments
- Environment groups
- Advisor
- Analytics
- Billing
- Settings
- Resources
- Help + support
- Data integration
- Data (preview)
- Policies
- Admin centers

Add cards | Share feedback

Service health

0 incidents or advisories.

Message center

54 unread messages

- **Finance and Operations - Notification for New Proactive Quality Update Release Train Schedule**
- **Dynamics 365 Field Service - Service Update for Station 5**
- **Dynamics 365 Customer Insights - Journeys - Automatic Update Scheduled**
- **Microsoft Dataverse – Service Update 9.2.24042.00000 for NAM**

Show all

Documentation

- Power Platform admin center
- Activate Managed Environment
- Licensing overview for Microsoft Power Platform

Advisor

Recommendation provided on 4/15/2024. Recommendation may show for up to a week once acted on.

78 apps have not been used in last 60 days.

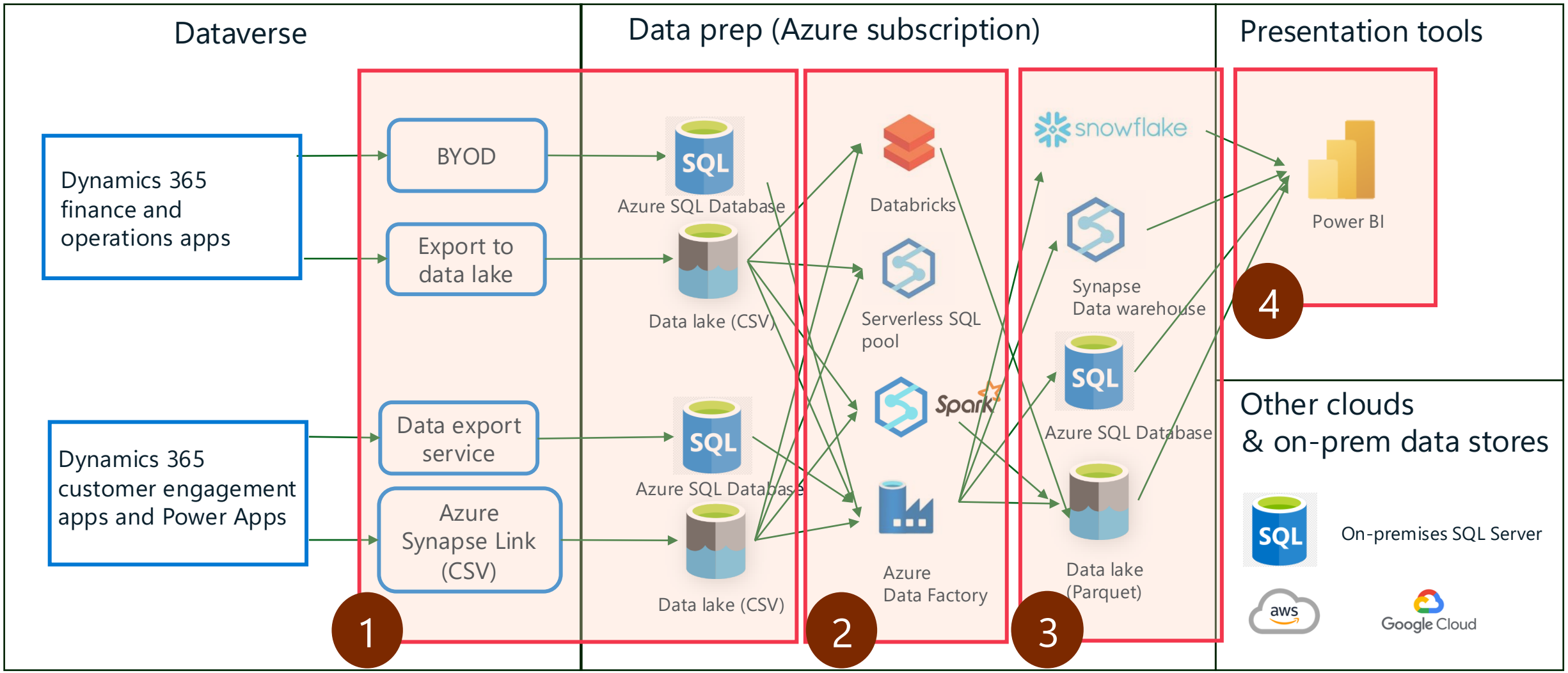
These apps were not used in the last 60 days or were never used. Review them and take an appropriate action to maintain the hygiene of your tenant.

82°F Mostly cloudy

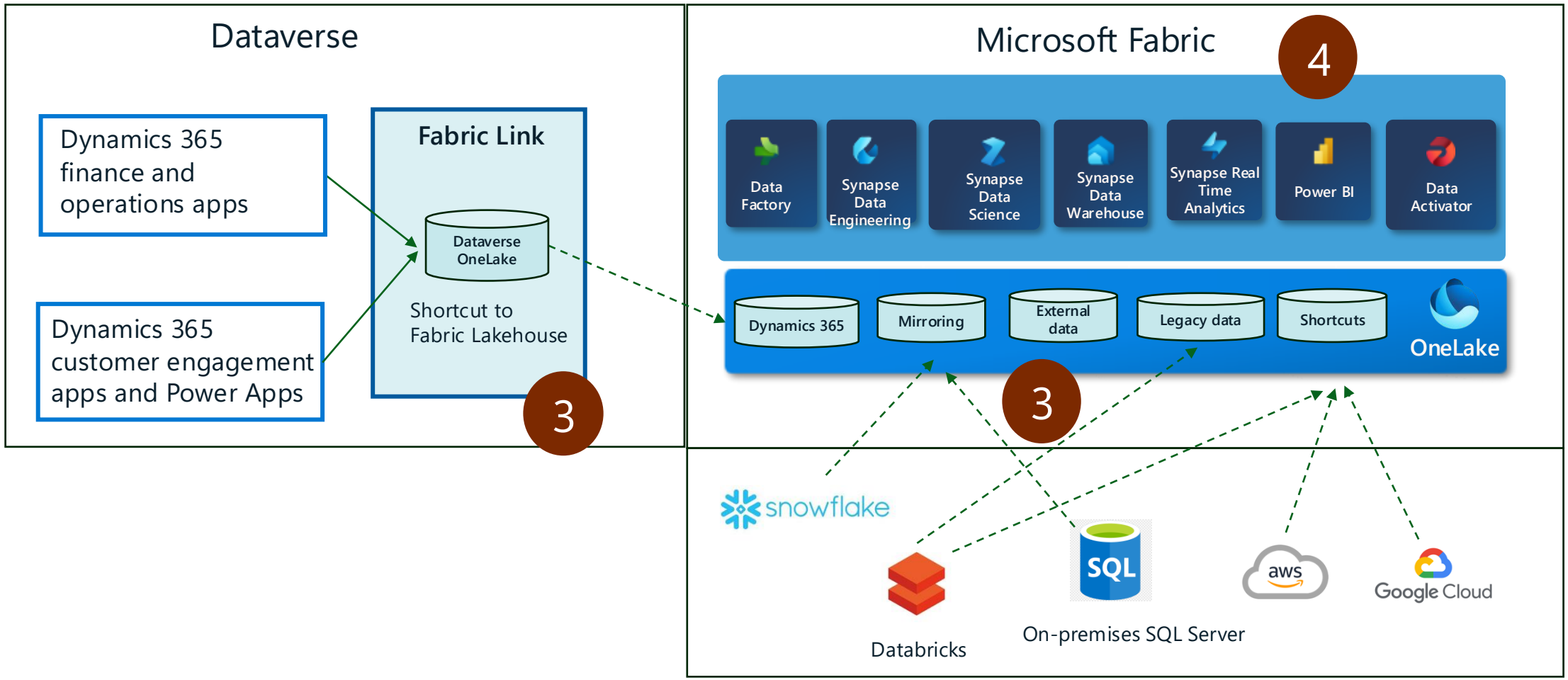
Search

5:48 PM Apr 16, 2024

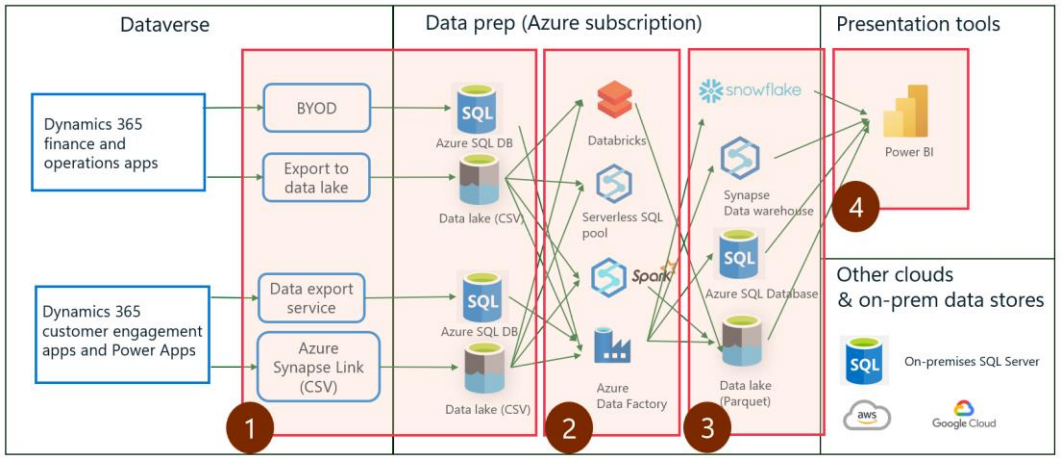
“Before solution” we have seen with many customers



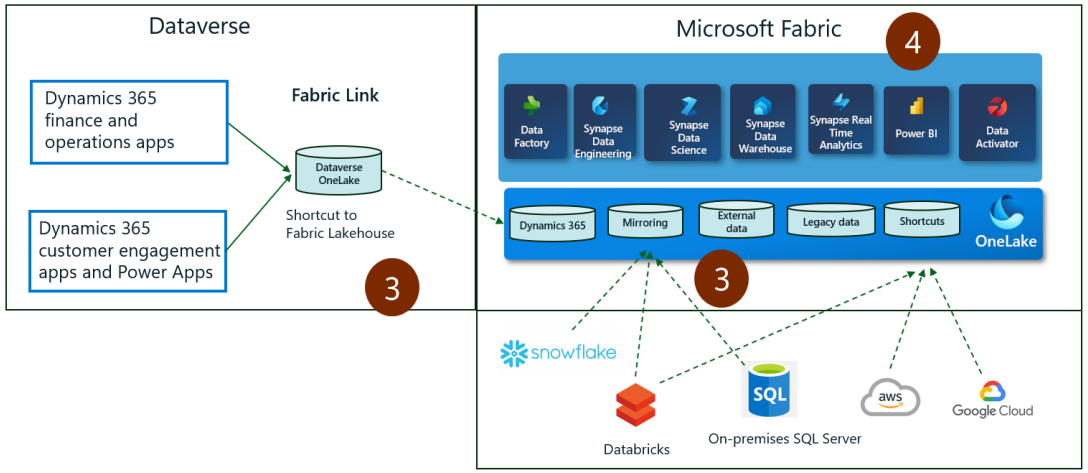
“After solution” with Fabric Link simplifies data integration



Technical innovations behind the simplification …



Before – Export to Data lake



After – Fabric Link

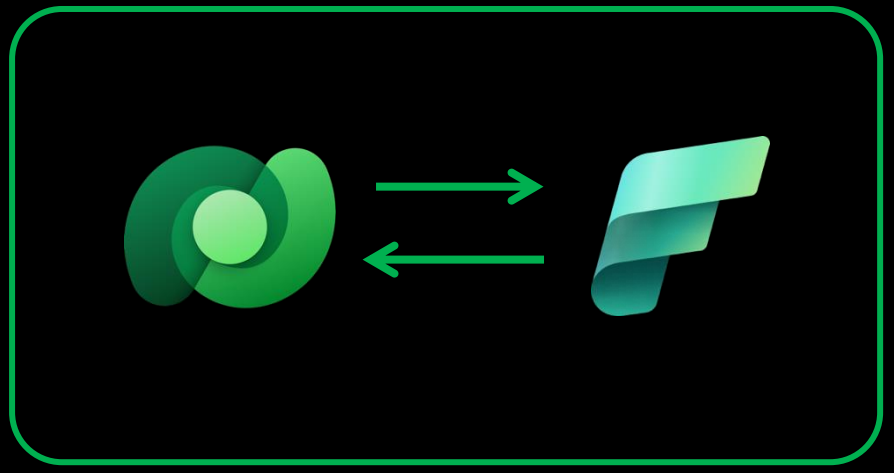
	Feature	Benefit
3	Dataverse built-in OneLake store	Your data doesn't leave Dataverse governance boundary. Authorized users in Fabric can work with data
3	Delta/parquet format	Improved query performance, compressed data sizes – no need to maintain additional data copies and aggregations
3	Integrated toolset in Fabric	Integrated billing, source control and security enables simpler management and governance
4	Reporting and Insights	DirectLake mode reports, integrated copilots… quicker time to insights, less expert skills needed

Simplification yields cost reductions…

Category / Line item	Before cost - **Export to data lake**	After cost - **Fabric Link**
Set-up & configuration	Need to use multiple tools - Pay for multiple software licenses/ subscriptions - System configuration efforts - effort to build/ validate data pipelines - continued governance, management, and monitoring - training of users	Simpler configuration experience in Power platform. Purchase Fabric capacity and pay for use for all services. You only pay for what you use. No ETL pipelines needed for Dataverse data
Data Staging (1, 2)	Cost incurred for Azure services - Azure storage cost including cost of IO - Synapse Analytics (SQL serverless query) - Data Factory jobs to copy data - Staging data stores (ex. SQL DB)	Cost increase in Dataverse DB storage Ex. if you sync 500GB of data from D365, Dataverse storage may increase by ~100GB (5~8x data compression)
Operating Costs - Data Prep (3)	- Azure storage staging area - Data pipelines - Data ingestion into SQL or Dwh - Development/ maintenance Data	Spend shifts to Fabric where you pay for consumption with a shared capacity.
Operating Costs – Reporting (4) - Power BI datasets - Reporting	Synapse analytics (SQL Query) Power BI capacity and storage for import mode reports	As your data is compressed, (ex. 1/3 ~ 1/6 original size) your reporting and query costs reduce accordingly. New features like DirectLake reporting reduces consumption of Power BI storage consumption.

Link to Fabric simplifies data integration

Link to Microsoft Fabric



No copy, No ETL, two-way integration enables
Low code users to do more with data

Transition to Fabric and get even more value

No data copy, no ETL, no third-party tools

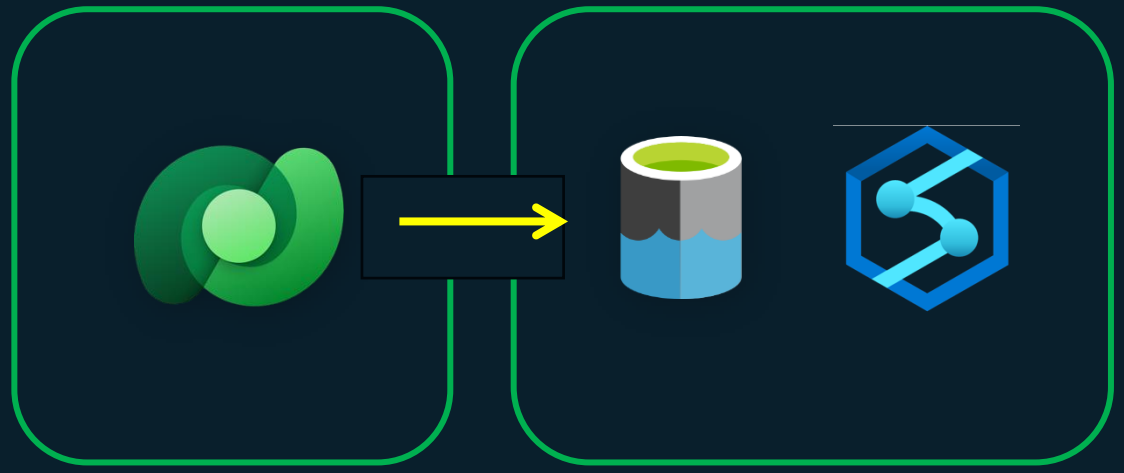
- Data stays in Dataverse – secure access in Fabric
- No need to bring storage - uses DV storage
- No impact to operational workloads

Upskill your Low code users to do more with data

- Easy to configure and manage
- Get work done faster with Fabric Copilots
- Bring back insights from OneLake into Power platform to drive action

Synapse Link deep dive

Synapse Link for Dataverse



Continuous export to Data lake enables easier integration for IT admins and Data engineers

Upgrade from Export to Data lake, BYOD and DES
With minimal investments

- Demo
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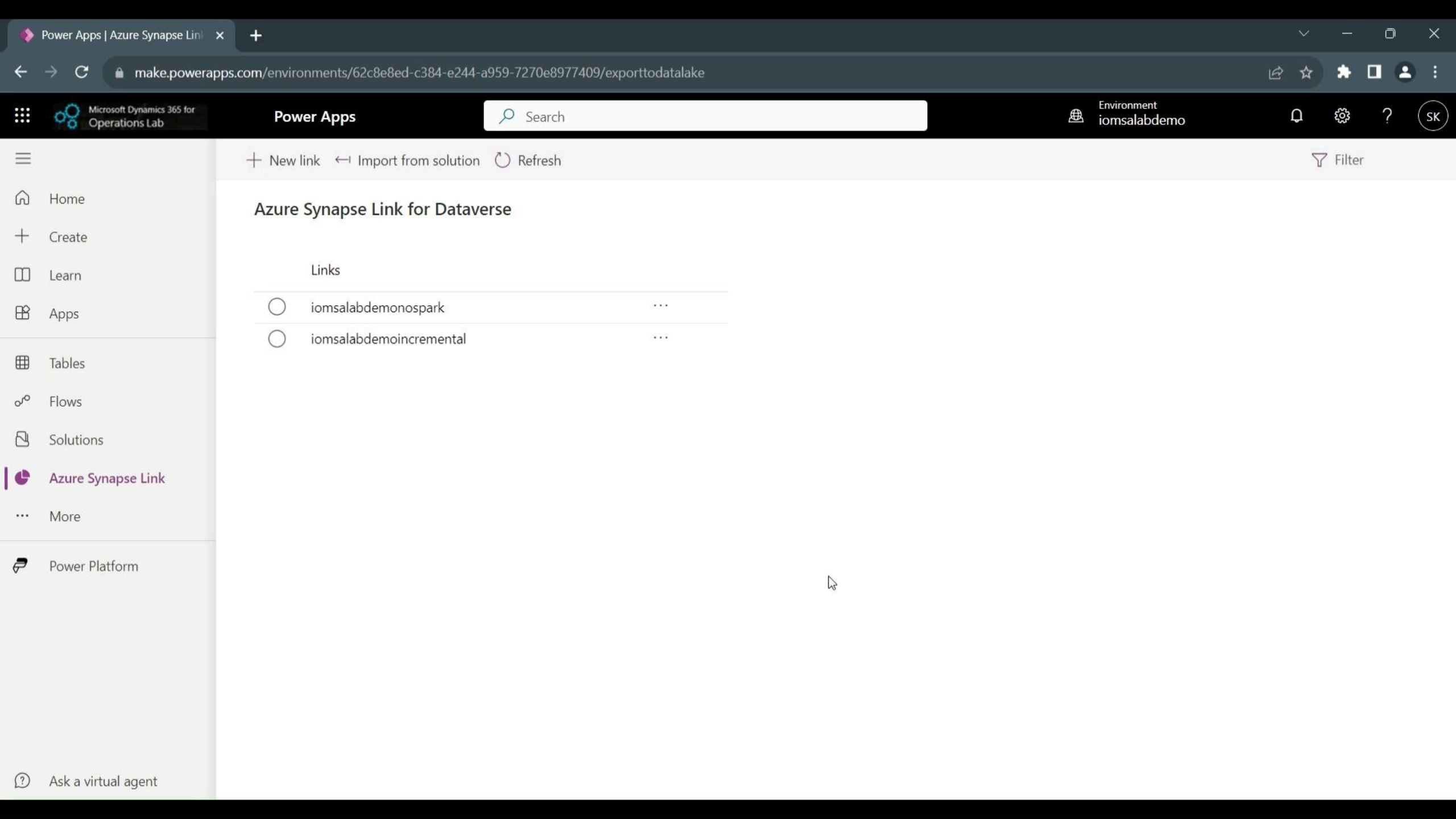
Power Apps | Azure Synapse Lin
make.powerapps.com/environments/62c8e8ed-c384-e244-a959-7270e8977409/exporttodatalake
Microsoft Dynamics 365 for Operations Lab
Power Apps
Search
Environment
iomsalabdemo
SK
New link
Import from solution
Refresh
Filter
Home
Create
Learn
Apps
Tables
Flows
Solutions
Azure Synapse Link
More
Power Platform
Ask a virtual agent
Azure Synapse Link for Dataverse
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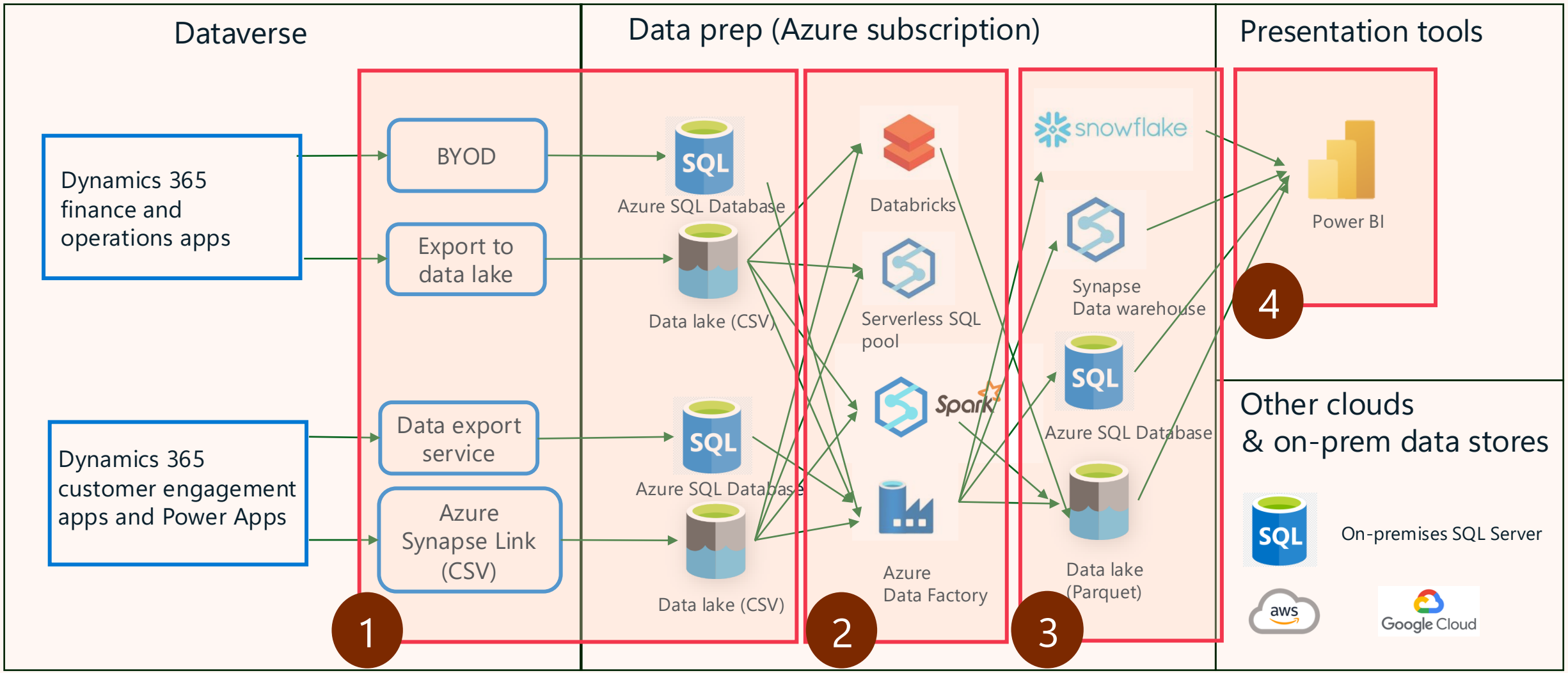
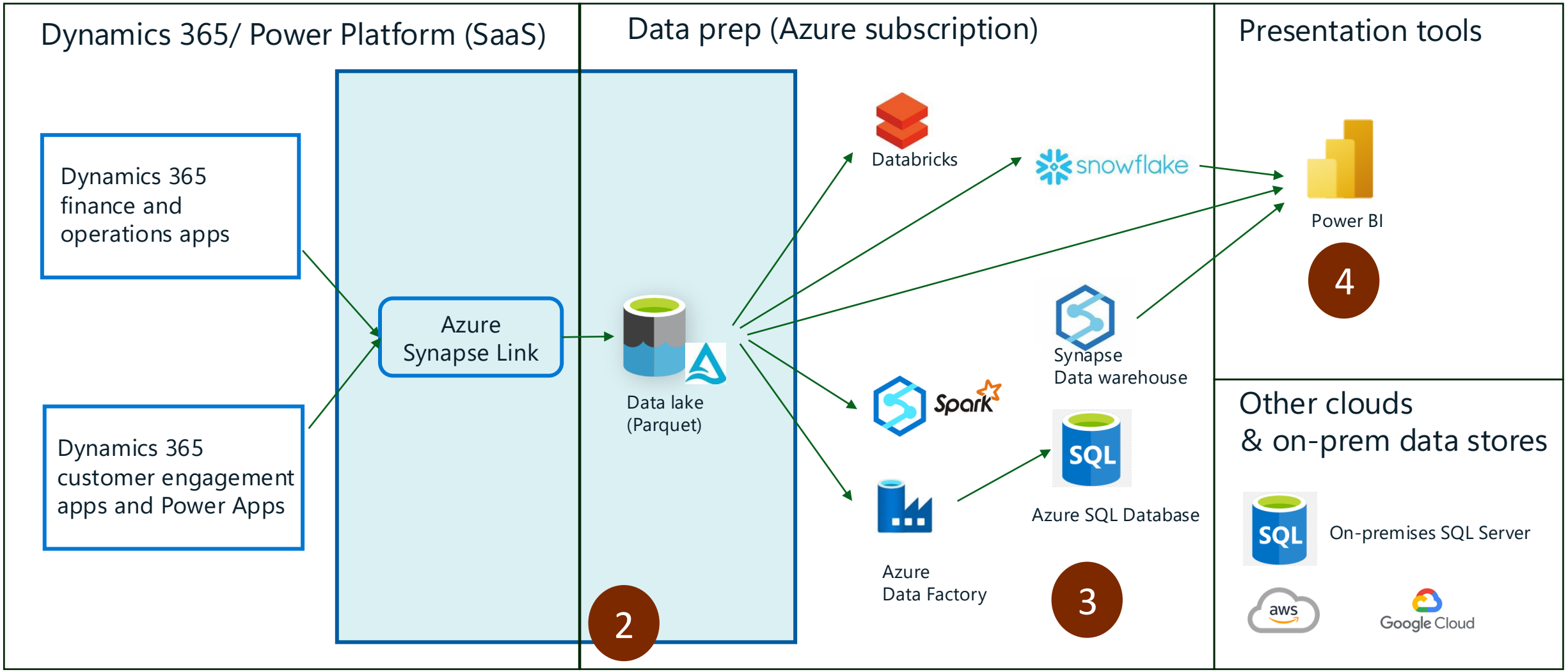
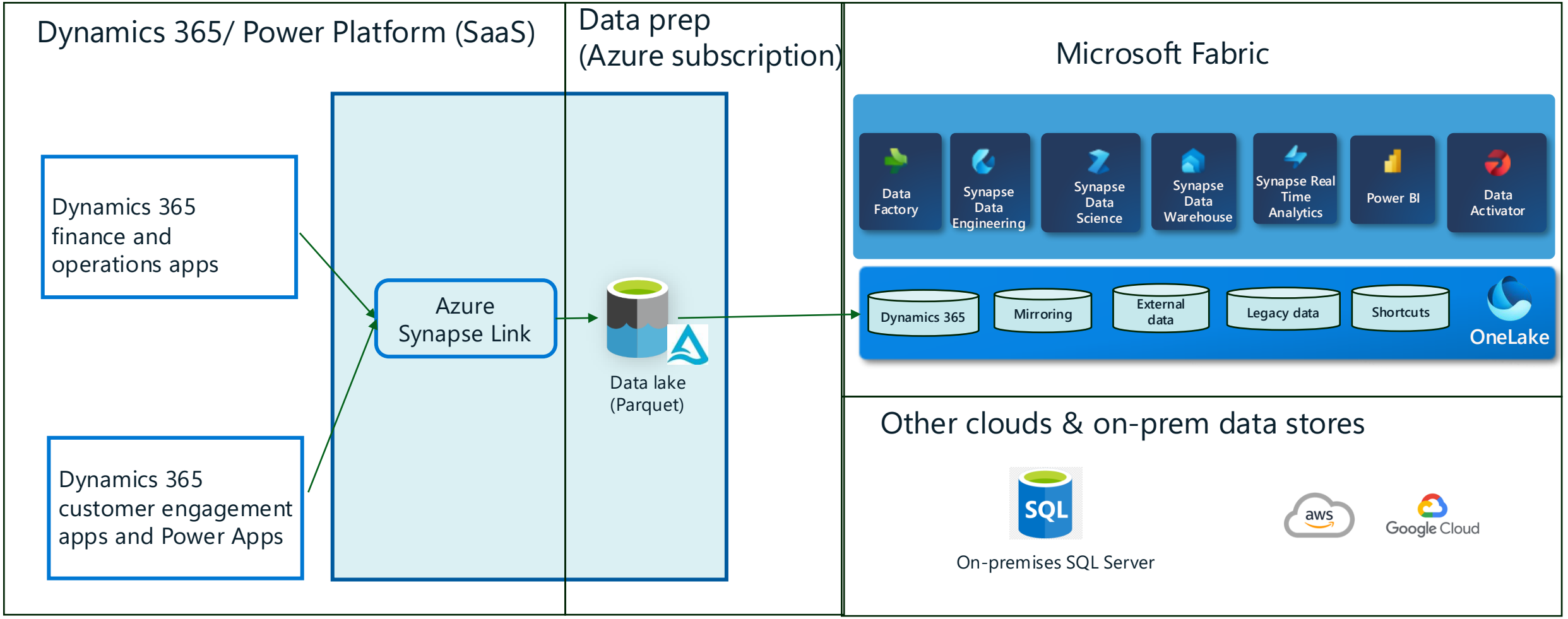
“Before solution” we have seen with many customers



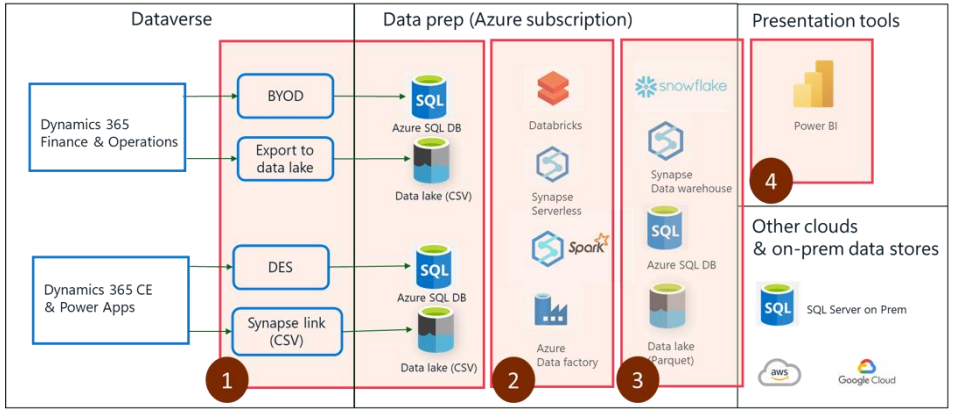
After upgrading to Synapse Link



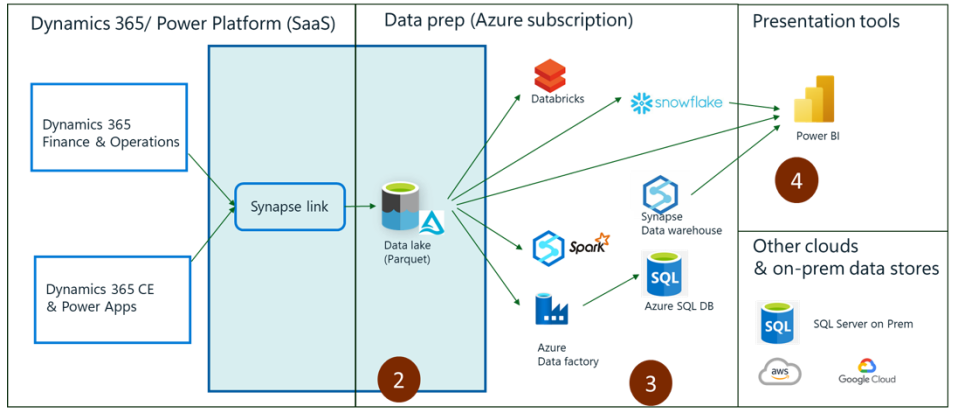
After upgrading to Synapse Link, you can still leverage Fabric



Technical innovations helping the upgrde …



Before – Export to Data lake



After upgrade to Synapse Link

	Feature	Benefit
1	Service limitations went away…	No table limits, easy to configure & maintain, unified experience for all D365 applications
2	Delta/parquet format	Improved query performance, compressed data sizes – no need to maintain additional data copies and aggregations
3	Same data formats	Continue to use existing pipelines and tools
4	Reporting and Insights	Continue to use existing reports with minimal changes. Reduction in operational reporting costs

Upgrade yields cost reductions…

Category / Line item	Before cost - **Export to data lake**	After cost – **upgrade to Synapse Link**
Set-up & configuration	Need to use multiple tools - Pay for multiple software licenses/ subscriptions - System configuration efforts - effort to build/ validate data pipelines - continued governance, management, and monitoring - training of users	Simpler configuration experience in Power platform. No ETL pipelines needed for Dataverse data
Data Staging (1, 2)	Cost incurred for Azure services - Azure storage cost including cost of IO - Synapse Analytics (SQL serverless query) - Data Factory jobs to copy data - Staging data stores (ex. SQL DB)	Synapse Link requires you to provide a spark pool to convert data to parquet format. Depending on the frequency of data sync, as well as the volume of data changes spark pool costs may vary. Ex. small/ medium data changes. - $600~2k for Hrly - $1,200~4,100 for 15min Ex. for Medium/ large data changes - $1,200~$2,500 for Hrly - @2,500~$8,300 for 15min
Operating Costs - Data Prep (3)	- Azure storage staging area - Data pipelines - Data ingestion into SQL or Dwh - Development/ maintenance Data	Same costs as before – however, you may not need to aggregate Dataverse data due to parquet conversion.
Operating Costs – Reporting (4) - Power BI datasets - Reporting	Synapse analytics (SQL Query) Power BI capacity	As your data is compressed, (ex. 1/3 ~ 1/6 original size) your reporting and query costs reduce accordingly.

Operational reporting cost comparison

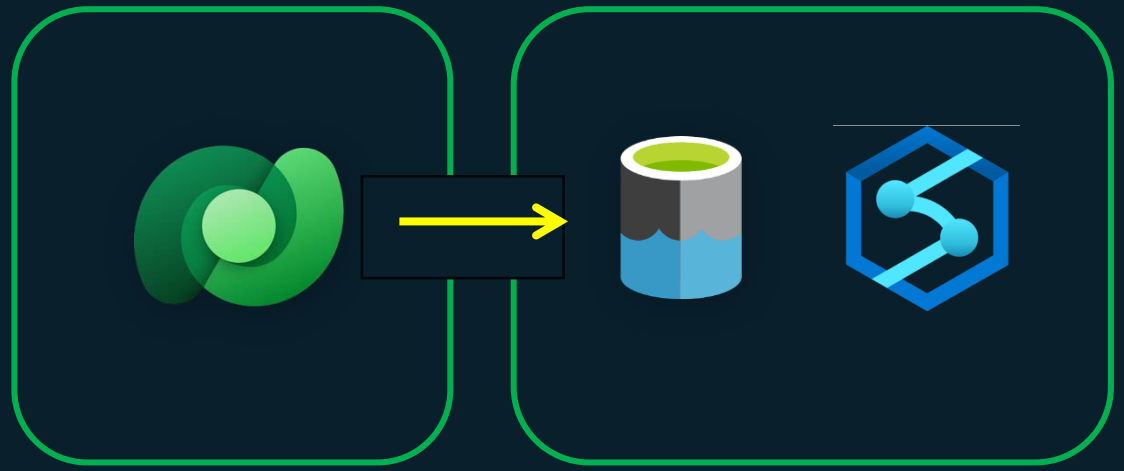
	Export to data lake (CSV)	Synapse Link for Dataverse (Delta)
Data storage	**Total DB – 615 GB** Varies by table, ex. INVENTTRANS: 1.3GB	**Total: 98 GB (6x compression)** INVENTTRANS: 360MB (6x compression)
Operating Costs – data integration	Data Factory jobs SQL or Data warehouse storage Mts. of data pipelines	Synapse analytics (spark) - +$300-$3,000 mo*
Operating Costs – Query and reporting	**Synapse query - $10,630 /month (1)**	**Synapse query - $ 1,701 /month (2) (6x reduction)**

NOTE 1: Synapse Query charges based on total data processed, which in this case was 2,126 TB (@$5/TB)

NOTE 2: 10x query cost reduction due to
1. 10x data compression
2. Delta/parquet format is more efficient Partition elimination

Extend your investments by upgrading to Synapse Link

Synapse Link for Dataverse



Continuous export to Data lake enables easier integration for IT admins and Data engineers

Upgrade from Export to Data lake, BYOD and DES
With minimal investments

Extend your existing investments

- Same data shapes
- Minimal changes to existing pipelines

Reduce operational costs

- Easy to configure and manage
- Built-in integration with Synapse and Microsoft Fabric

Efficient reporting with Delta/ Parquet

- Near real time operational reporting
- Faster queries & reports, smaller files

Known issues, fixes, gaps, and roadmap

Faps and status	Type	Availability
AOS Auth fields	Gap	PU 63:7.0.7198.105 PU 62:7.0.7120.159
VarBinary Field redaction	Performance	PU 63: 7.0.7198.95 PU 62:7.0.7120.155
Faster initialization of large tables (>200M) for Delta lake	Performance	PU 63 7.0.7198.91 PU 62:7.0.7120.152
FNO set-based operations converting to row by row for tables enabled with synapse link (lite business events)	Performance	PU 63 7.0.7198.117 PU 62 7.0.7120.165
Synapse Link initial export - process 2 tables per AOS (eliminate perf impact on tier2 environnent)	Performance	Available
Synapse link stops initial sync if index on SysRowversion is not created by DAMS	Performance	Available
Support for Array Type fields	Gap	July
Export expired data from effective tables	Gap	June
Get all columns from derived tables in base table (DirPartyTable, EcoResProduct)	Gap	July
Search multiple tables to add/remove tables from synapse link	Usability	Available
Auto scale AOS for initial sink	Performance	Planning
Release Plan: Contributors Form: Simplified Link experiences from Dataverse to Synapse and Microsoft Fabric - Dynamics 365	Usability	Planning
Integrated, in-product experiences to upgrade from Export to Data lake	Usability	Planning

Classified as Microsoft Confidential

Roadmap

Today – Generally available

Data integration simplified

No Copy, No ETL, no need to bring Azure resources

Combine with your data in One Lake. Join and work using SQL and Spark

Upgrade Synapse Links with Fabric

Includes data from Dynamics 365 Finance & Operations

Summer-2024

Get value from Fabric

Easily build Apps and Automations to take action on insights

Simplified data selection experience

Build AI & Copilot enabled insights and actions

Fall - 2024

Easy transition

Built-in upgrade experiences

Enhanced security metadata in Microsoft Fabric

Call to action

Transition resources: aka.ms/TransitionToSynapseLink

Transition videos and demos aka.ms/TransitiontoSynapseLinkVideos

Product Documentation aka.ms/DataverseExtendstoFabric

Join the community, provide feedback & join weekly office hrs

aka.ms/SynapseLinkforDynamics

FAQ: {BYOD, Export to Datalake, … } is working well for me. Why did you retire these services?

As part of the platform unification project, we have consolidated several services that “exported data” in Dynamics 365 applications to a service under the brand name Synapse Link for Dataverse.

Using our learnings, we addressed many shortcomings of exiting services in Synapse Link while maintaining same data formats – so that you can upgrade your investments with minimal disruptions

Fabric Link service is a new, no-copy, no-ETL solution which enables you to leverage innovations in Fabric without having to invest in data pipelines. It’s “read-replica” of your data for authorized users in Fabric.

FAQ: Will you retire Synapse Link in the future ?

As part of the platform unification project, we have consolidated several services that “exported data” in Dynamics 365 applications to a service under the brand name Synapse Link for Dataverse.

We have also introduced Fabric Link, no-copy, no-ETL solution which enables you to leverage innovations in Fabric without having to invest in data pipelines. It’s “read-replica” of your data for authorized users in Fabric.

While many customers are excited to adopt Fabric, we also see customers who want to continue to export data and build their own integration pipelines. We do want to enable them to export data well into the future.

FAQ: Will Export to Data lake service stop after 1-Nov?

Export to Data lake service will continue to run after the deprecation date. However, our support will be limited. You can reduce the risk by beginning the transition process now.

See Transition resources at aka.ms/TransitionToSynapseLink

Join the community, provide feedback & join weekly office hrs. at aka.ms/SynapseLinkforDynamics

FAQ: My transition may run beyond deprecation date, is there a process to get an extension ?

Export to Data lake service will continue to run after the deprecation date. However, our support will be limited. You can reduce the risk by beginning the transition process now.

To help customers who may need more time, we plan to introduce an evidence based self-upgrade option within the product in Aug/ Sept timeframe

FAQ: Does Long Term Retention (LTR) work with Link to Fabric or Synapse Link?

LTR reduces storage costs by compressing/ moving cold data into cold store – the same infra used by Fabric Link feature for insights.

You can use Fabric shortcuts to access LTR data in Dataverse cold store. You can also use Synapse Link feature to export LTR data into your own archive.

In both cases, each record has a status field (..) which indicates whether the record is in cold store (ie. archived) or actively used for operations

FAQ: How can I get more information about Roadmap, Fabric Link and cost/ benefits ?

As part of the platform unification project, we have consolidated several services that "exported data" in Dynamics 365 applications to a service under the brand name Synapse Link for Dataverse.

We have also introduced Fabric Link, no-copy, no-ETL solution which enables you to leverage innovations in Fabric without having to invest in data pipelines. It's "read-replica" of your data for authorized users in Fabric.

You can access product documentation as well as the transition guide which provides an update on roadmap at aka.ms/TransitionToSynapseLink