Microsoft

Microsoft Fabric Roadshow

Ottawa | 27/11/2025

Fabric + Databricks

Integrating Microsoft Fabric and Azure Databricks

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Data is the fuel that powers AI

72%

of CIOs report data is the biggest challenge for AI implementation[1]

$3.7x

Is the return of investment for every $1 invested in Gen AI[2]

[1] MIT Technology Review Insights, 2023

[2] IDC, The Business Opportunity of AI, 2024

And the path to successful AI application development is grounded with Enterprise data

Establish a central repository for all data

1

Integrate disparate data sources into a unified data platform and data lake with built-in data governance and security

Prepare data for AI innovation

2

Improve the quality of your data, to ensure it is complete, accurate, and governed

Create data agent(s) for AI development

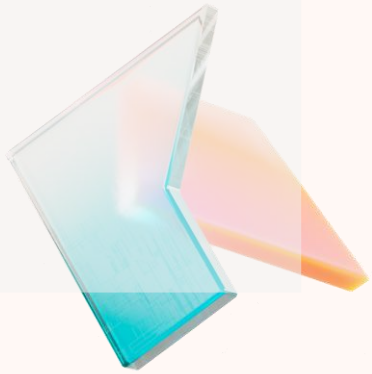
3

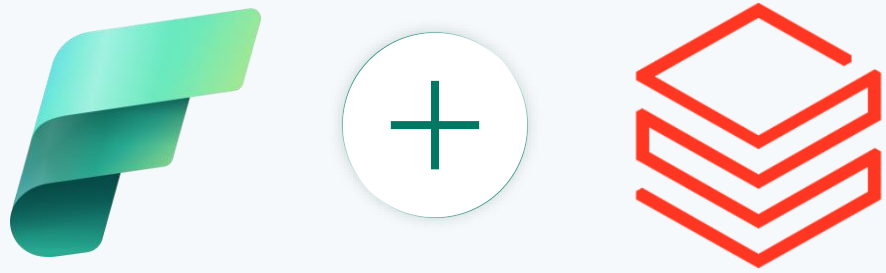
Leverage a seamless and accelerated path to your AI application development

Build custom AI experiences grounded with your data

4

Enhance the breadth and depth of data-driven experiences by creating agentic and autonomous AI solutions



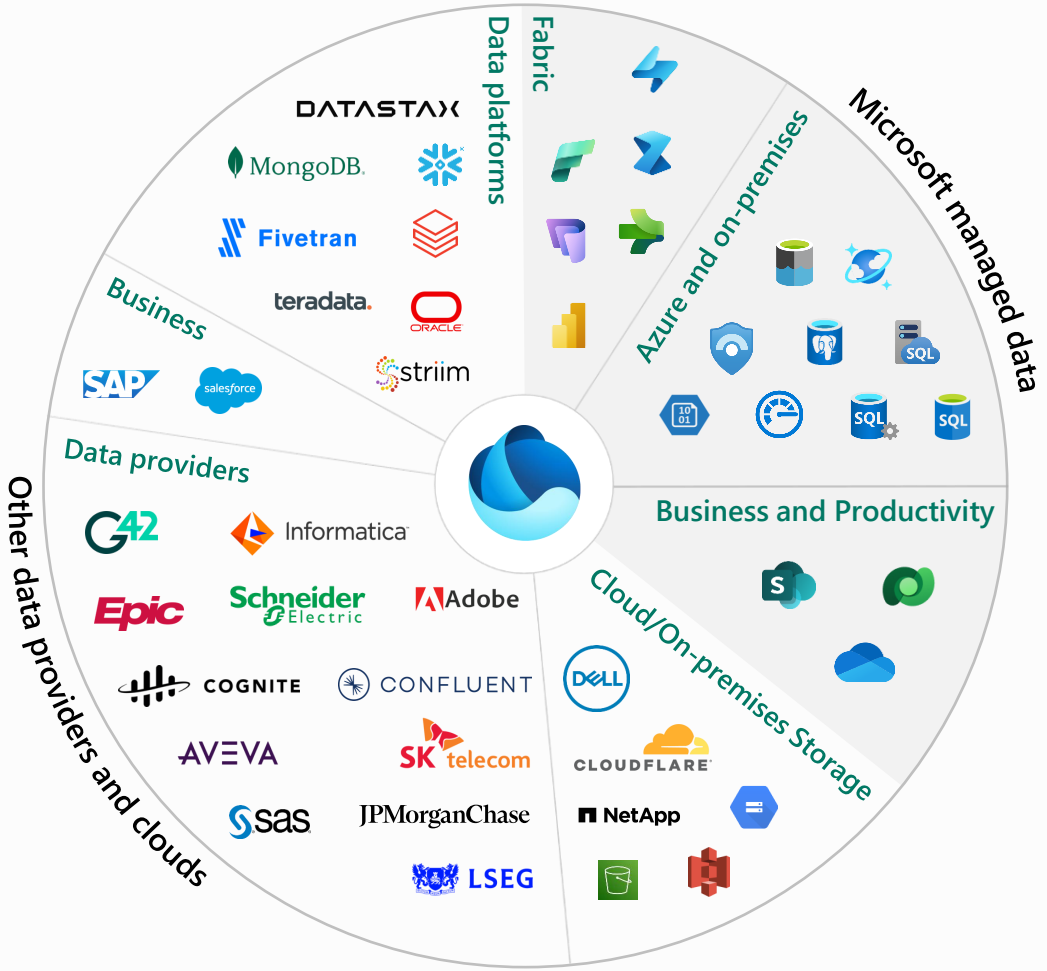


Bringing Fabric and Azure Databricks together

A vast data landscape

Data comes from all over

OneLake Unifies a Complicated Data Landscape



All Fabric data is available in OneLake

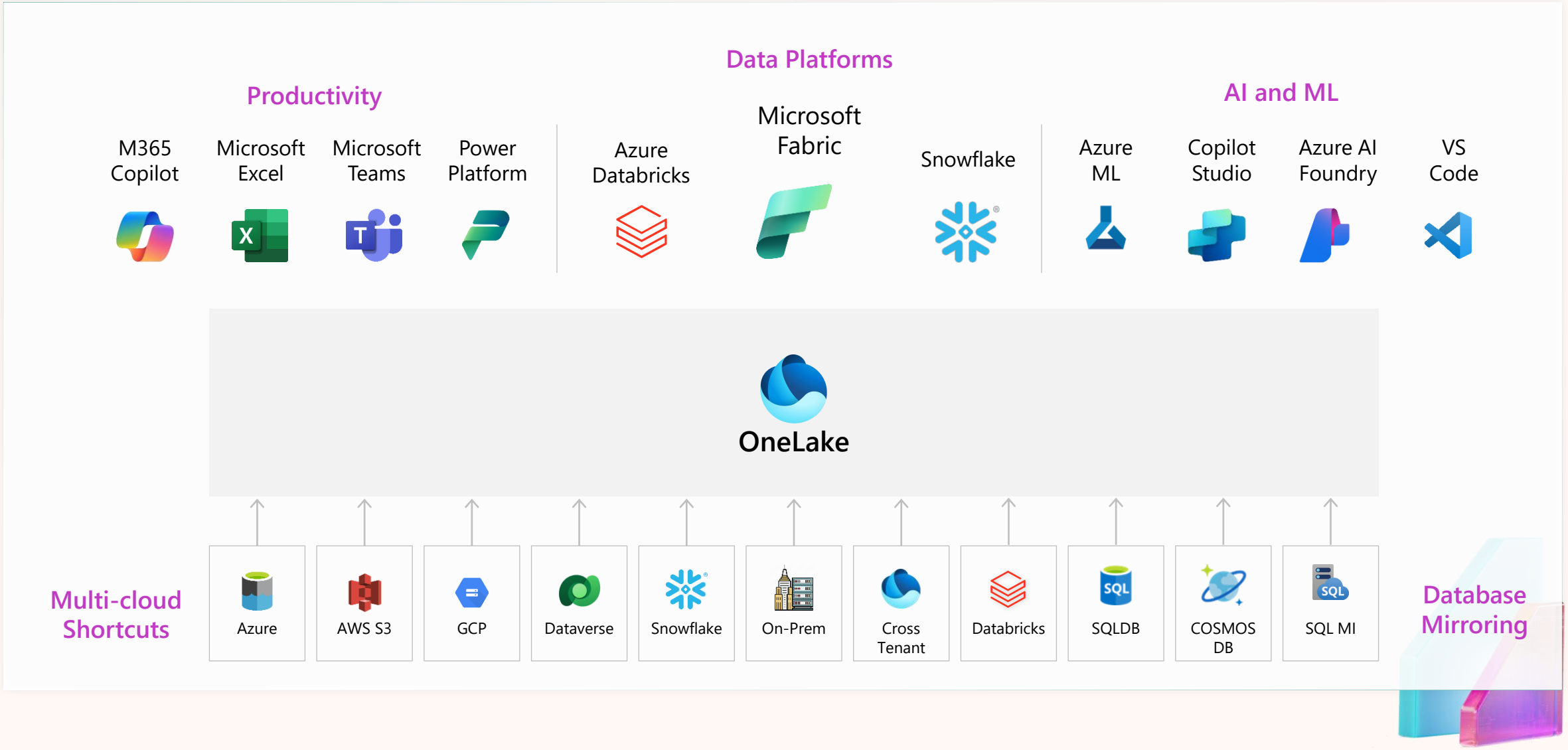
Microsoft data including Azure Data and Dynamics 365

Non-Microsoft data platforms and services

Data stored on-premises or cross cloud. In open or proprietary storage

Structured and unstructured data

OneLake data is available everywhere



Unify external Catalogs into OneLake

Mirroring

Connect **external** catalogs (Operational DBs, Lakes, Business platforms)

Metadata is automatically **synchronized** (Tables, columns)

Data connected through **shortcuts** when stored in open storage or CDC replication and landed in open storage formats (storage is free)

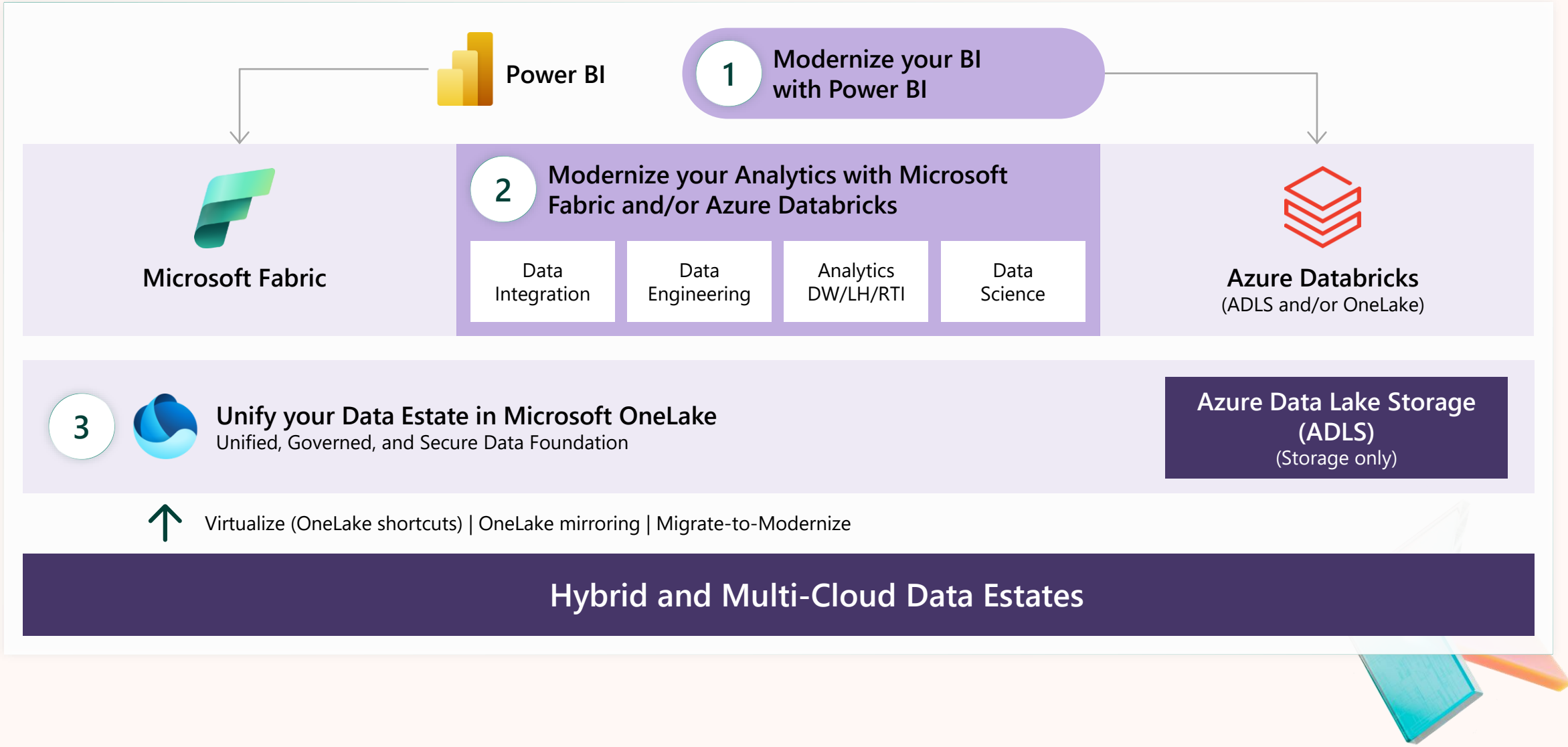
Microsoft OneLake

OneLake security

How do we do it?

Connecting Databricks to OneLake

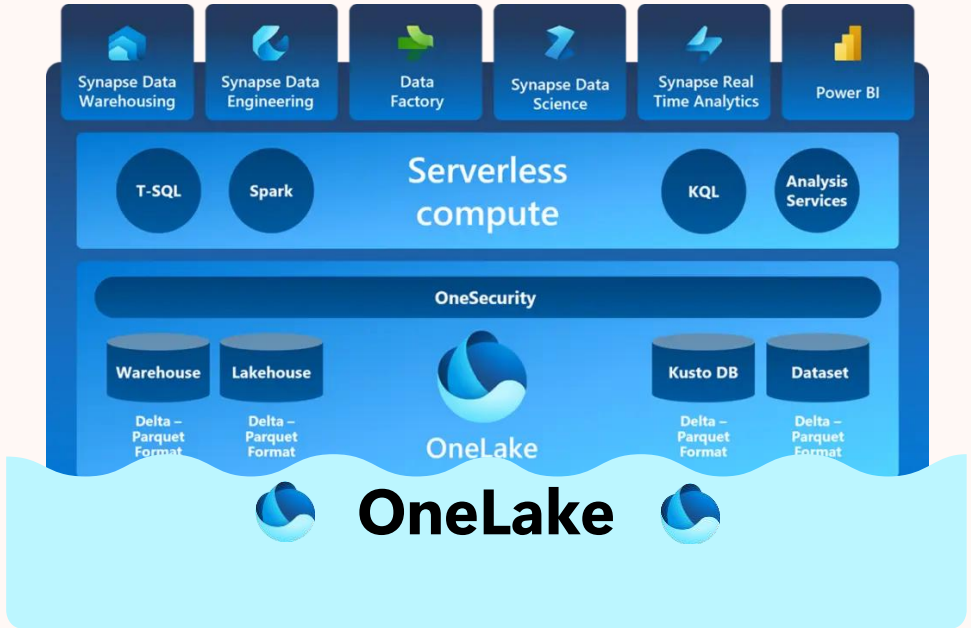
Create a unified data foundation with Fabric and Azure Databricks



Simple OneLake Narrative

Use the right tool for the job

Microsoft Fabric



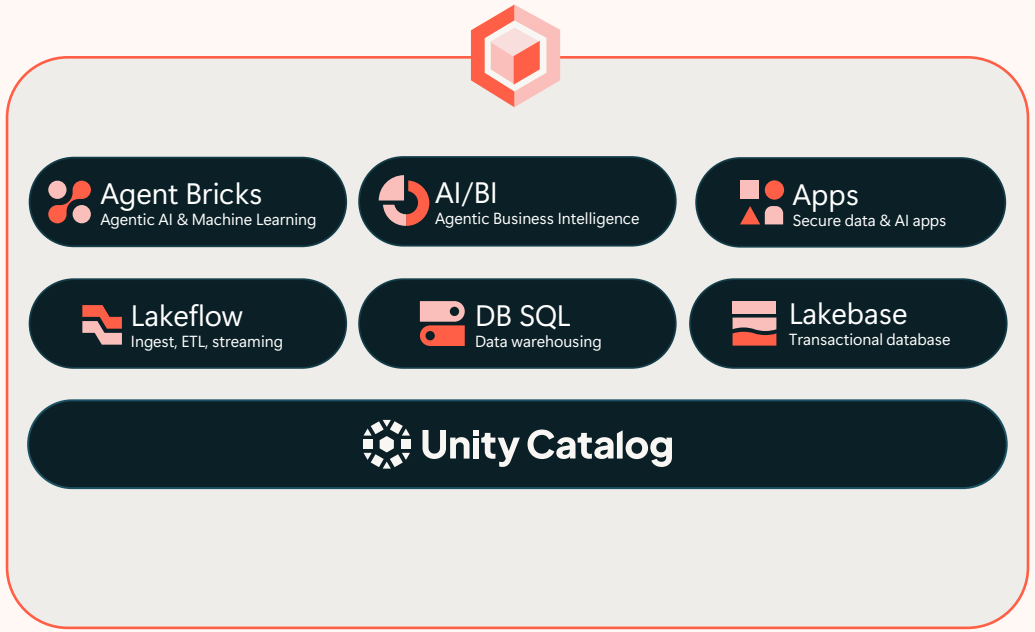
All Azure Databricks data available in OneLake

GA
Mirroring

Early 2026
"Mirroring"

Coming soon
"Write"

Azure Databricks



All Fabric/OneLake data available in UC

*via OneLake Cat Federation

Integrating Fabric and Azure Databricks together

Today's focus

1 

Mirror your Azure Databricks data to OneLake with just a few clicks, allowing you to access the data and keep it in sync in near-real time—and then apply OneLake security to securely share, use it to support Fabric Data Agents, real-time Power BI reports, and so much more

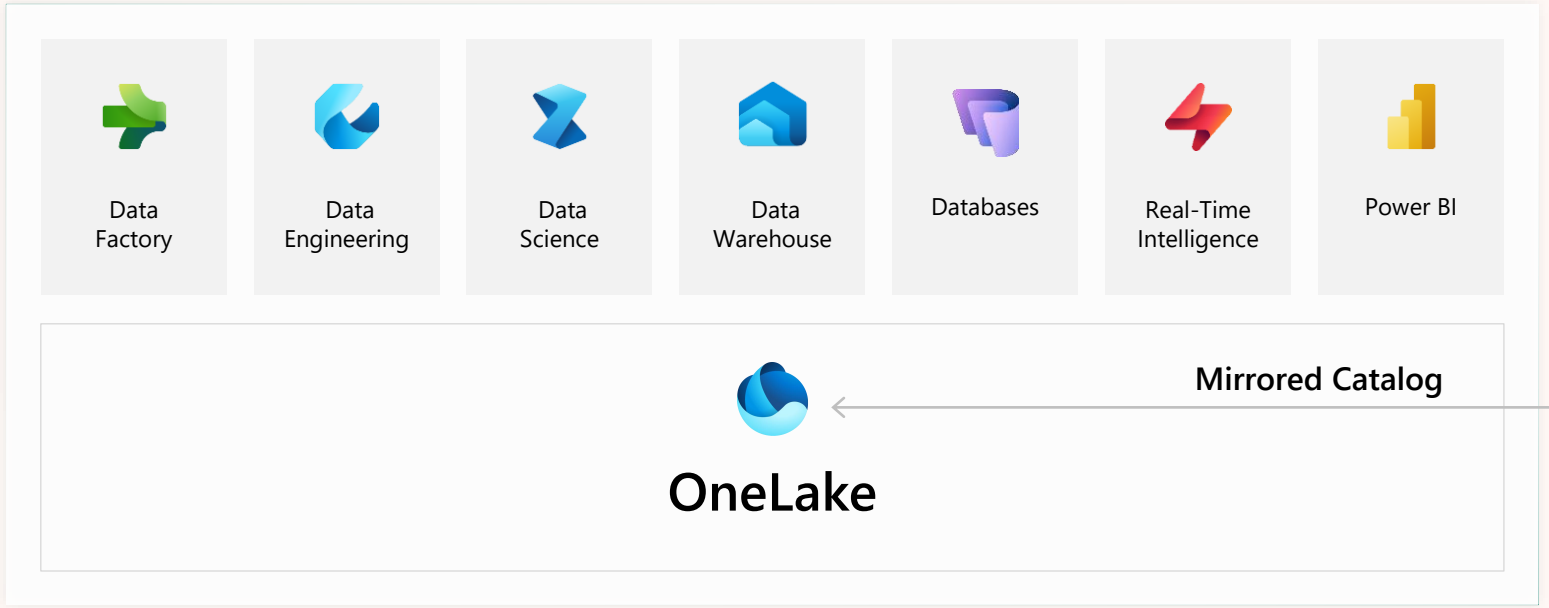
2 

Use Fabric Data Factory to **orchestrate Azure Databricks transforms** and to ingest and load data from 100s of other sources for transformation in Azure Databricks

3 

Use mirrored Azure Databricks data to create **Direct Lake Mode semantic models** or create Direct Query semantic models to directly integrate with Azure Databricks

Connecting Azure Databricks to OneLake

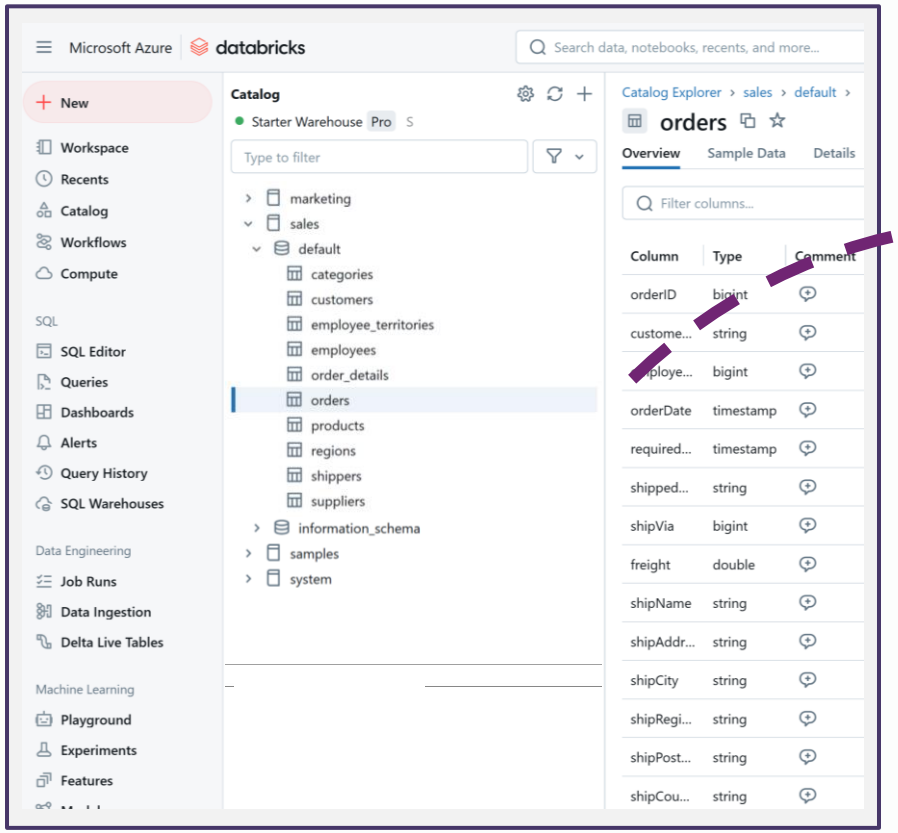


Mirror Azure Databricks data into OneLake to take advantage of all the engines connected to OneLake

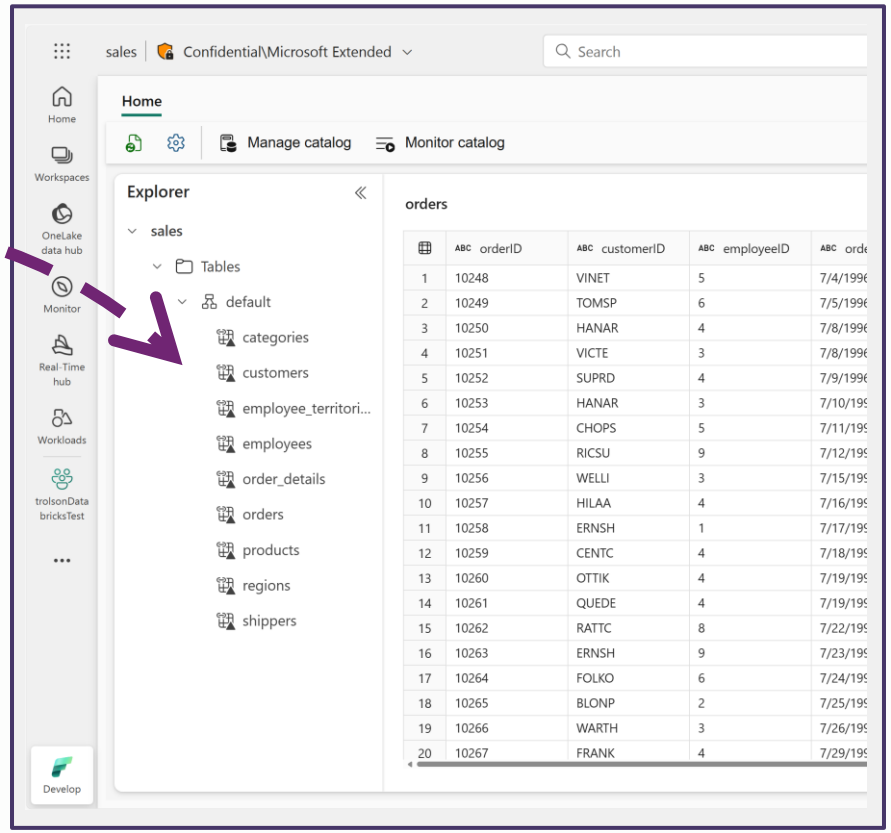
Azure Databricks Mirrored Catalog

Generally available!

Azure Databricks



Microsoft Fabric



Demo:

Azure Databricks Mirrored Catalog

Microsoft Azure | databricks

Search data, notebooks, recents, and more... CTRL + P

MirroredDBDemo

New

Workspace
Recents
Catalog
Jobs & Pipelines
Compute
Marketplace

SQL
SQL Editor
Queries
Dashboards
Genie
Alerts
Query History
SQL Warehouses

Data Engineering
Job Runs
Data Ingestion

Catalog

Serverless Starter Warehouse Serverless S

Type to search...

My organization
- mirroreddbdemo
- system
- <testcatalog>
- contosoretail
  - consumerinsights
    - customerfeedback
    - inventorylevels
    - marketingcampaigns
    - salestransactions
  - default
  - information_schema
- nipuneth
- performancetest
- amber-uc
- hyphenated-catalog
- testprivateendpoint

Delta Shares Received

Catalog Explorer > contosoretail >

consumerinsights

Use with BI tools | Share | Create

Overview | Details | Permissions

Description

Add description

Filter tables

Sort

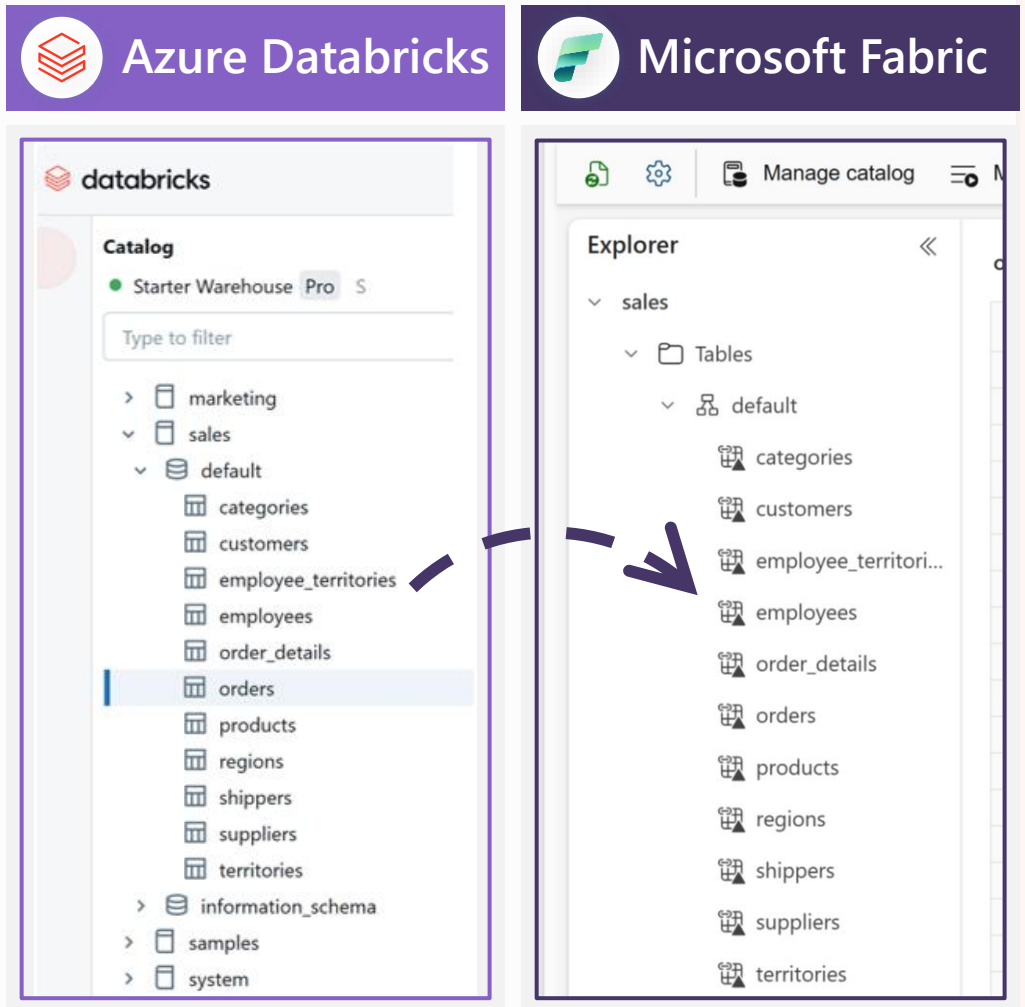
Tables 4 | Volumes 0 | Models 0 | Functions 0

Name	Owner	Created at	Popularity
customerfeedback	preshah@microso...	Aug 29, 2025, 01:...	
inventorylevels	preshah@microso...	Aug 29, 2025, 01:...	
marketingcampaigns	preshah@microso...	Aug 29, 2025, 01:...	
salestransactions	preshah@microso...	Aug 29, 2025, 01:...	

About this schema

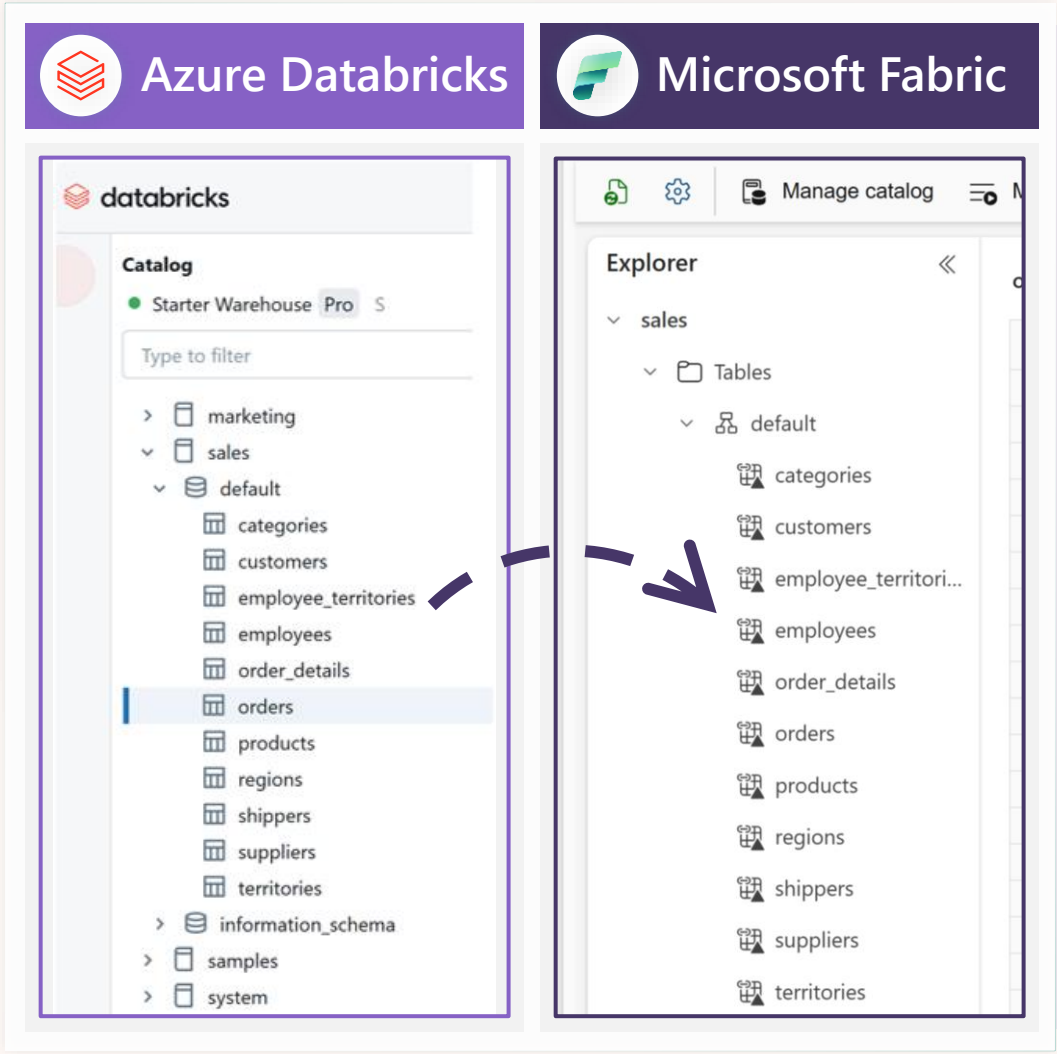
Owner Premal Shah

Metadata mirroring Databricks Catalogs



- Only metadata is mirrored. Shortcuts are used to bring the data over
- Each Mirrored Azure Databrick Catalog item maps to a single catalog within UC
- Catalog structure is replicated. **Data is never copied** yet it is **always in sync**
- Mirror the entire catalog or any combination of schemas and tables
- Set static mapping to only mirror a subset of objects
- Set dynamic mapping to automatically mirror added and removed schemas and tables
- No compute required on Azure Databricks at runtime

Catalog Sync – Supported Object Types

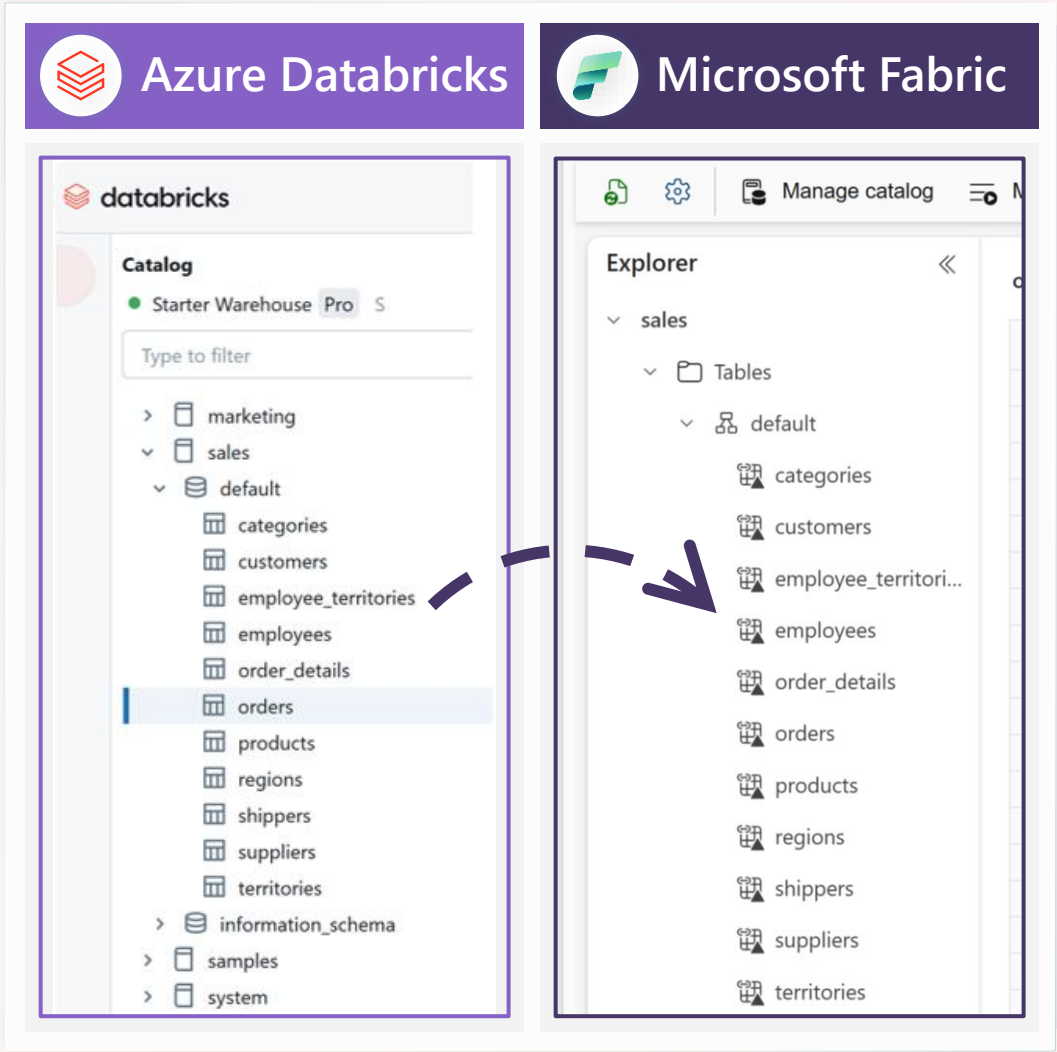


UC **Managed** and **Unmanaged** delta tables will be mirrored into Fabric

Unsupported Objects:

- Tables with RLS\CLM policies (coming soon)
- Lakehouse federated tables
- Delta sharing tables
- Steaming tables
- Other non-table object type (volumes, views, models)

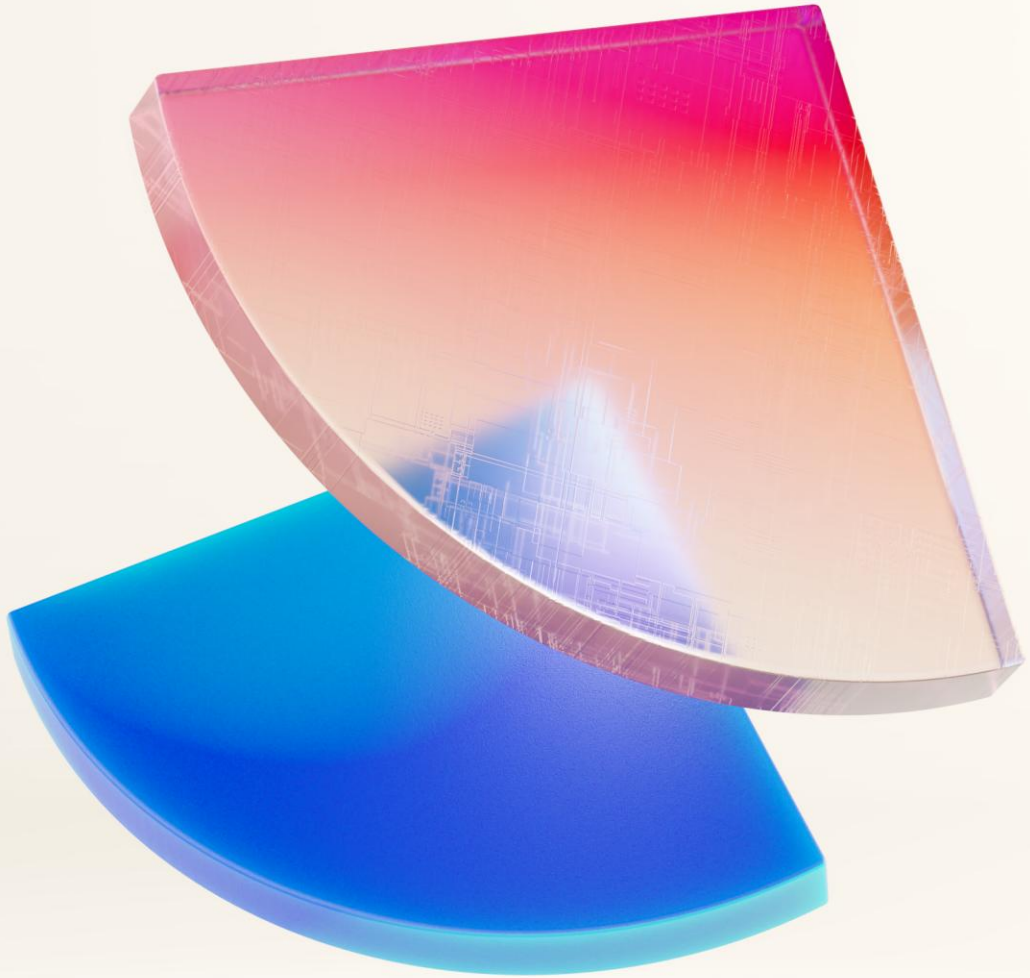
What's new in the GA release?



Network security and compliance: Supports secure access to Azure Data Lake Service (ADLS) with firewalls enabled, letting organizations enforce strict network boundaries without losing functionality.

Public APIs for automation and CI/CD: Offers public APIs to create, manage, and monitor mirrored catalog items, simplifying integration with enterprise workflows and CI/CD pipelines.

OneLake security integration: Fully integrates with OneLake security, allowing workspace admins to enforce fine-grained, enterprise-grade access controls and compliance. Policies in Unity Catalog can be replicated.



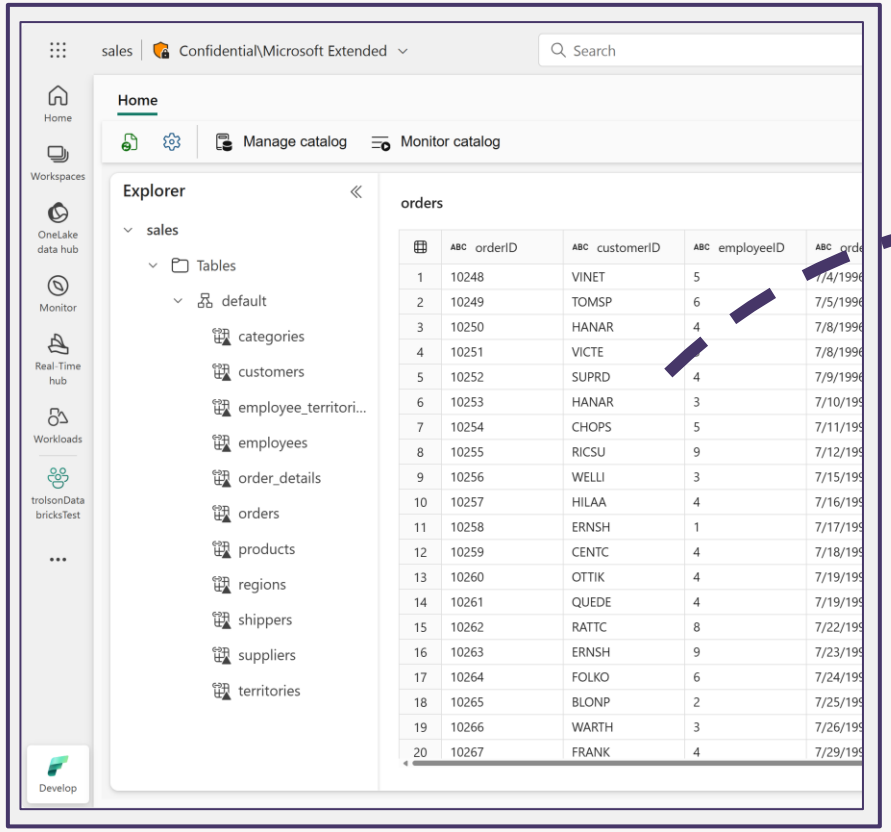
New features coming soon

Coming Soon

Reading from OneLake in Azure Databricks – Early 2026

Fabric Mirrored Catalog

Microsoft Fabric



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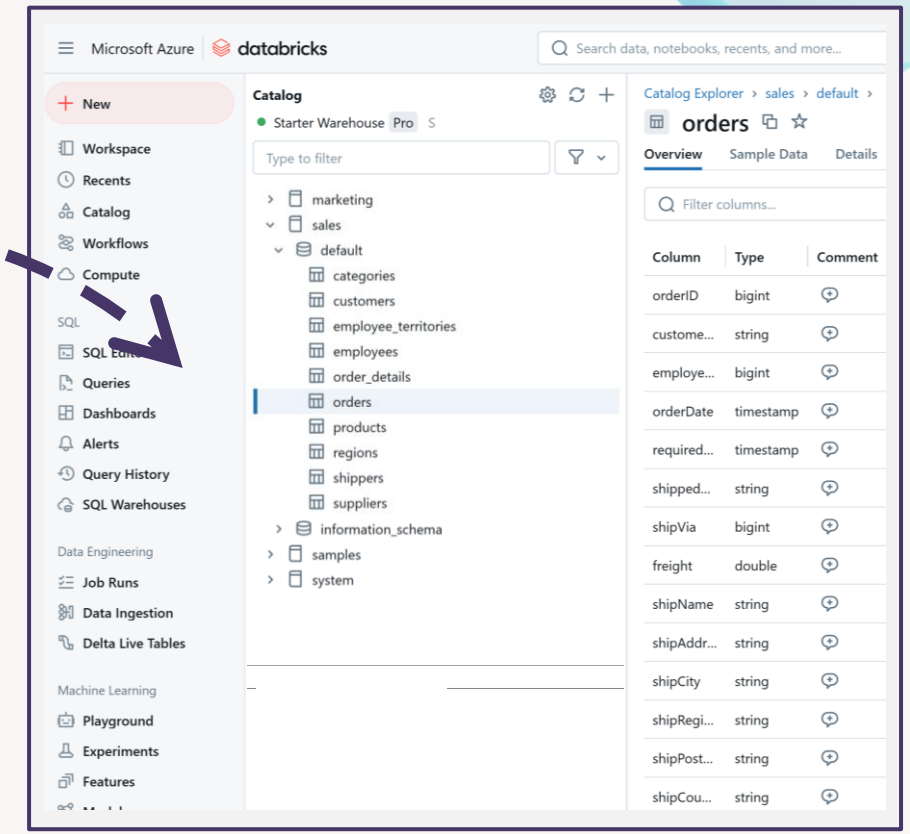
Azure Databricks



Coming Soon

Reading from OneLake in Azure Databricks – Early 2026

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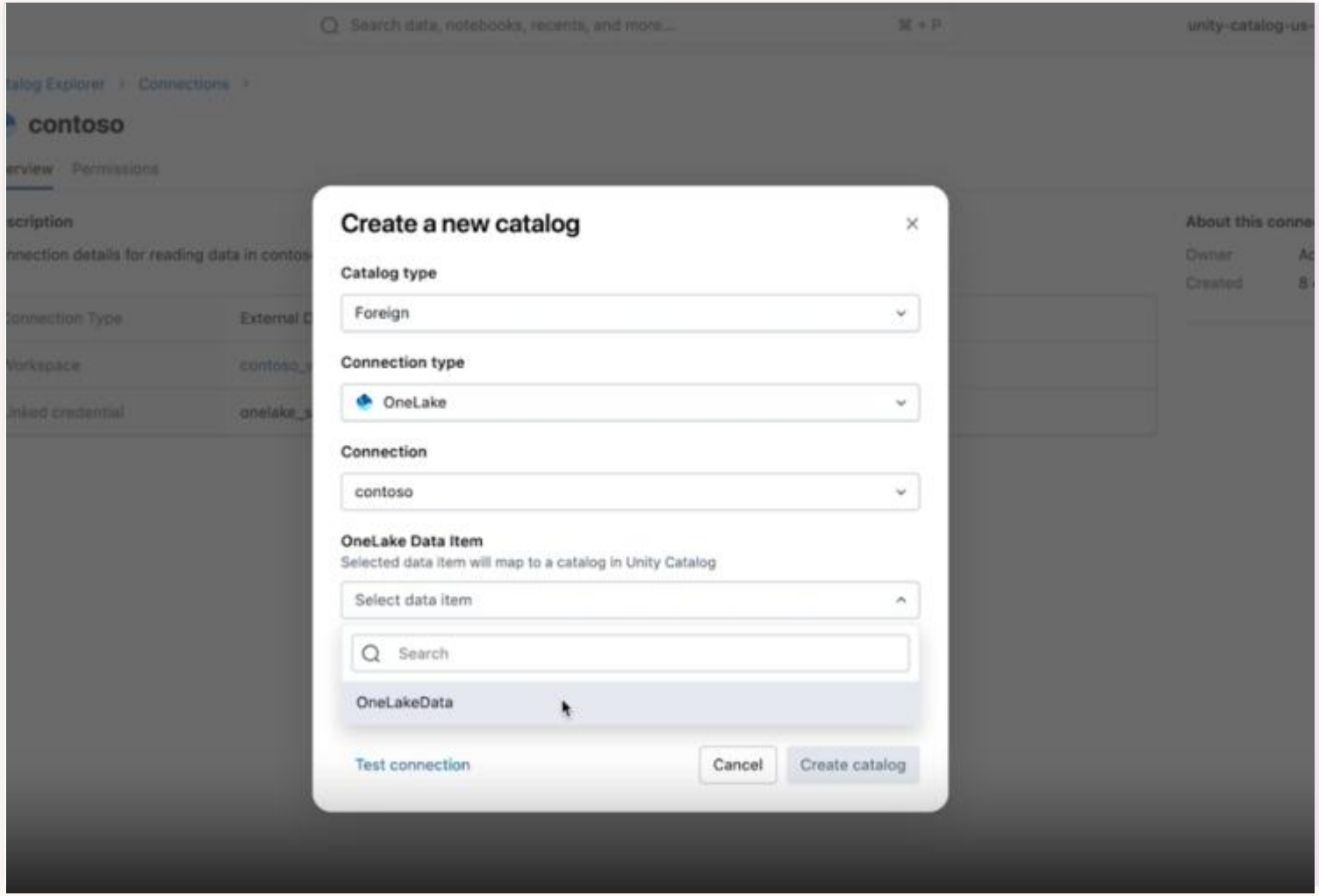
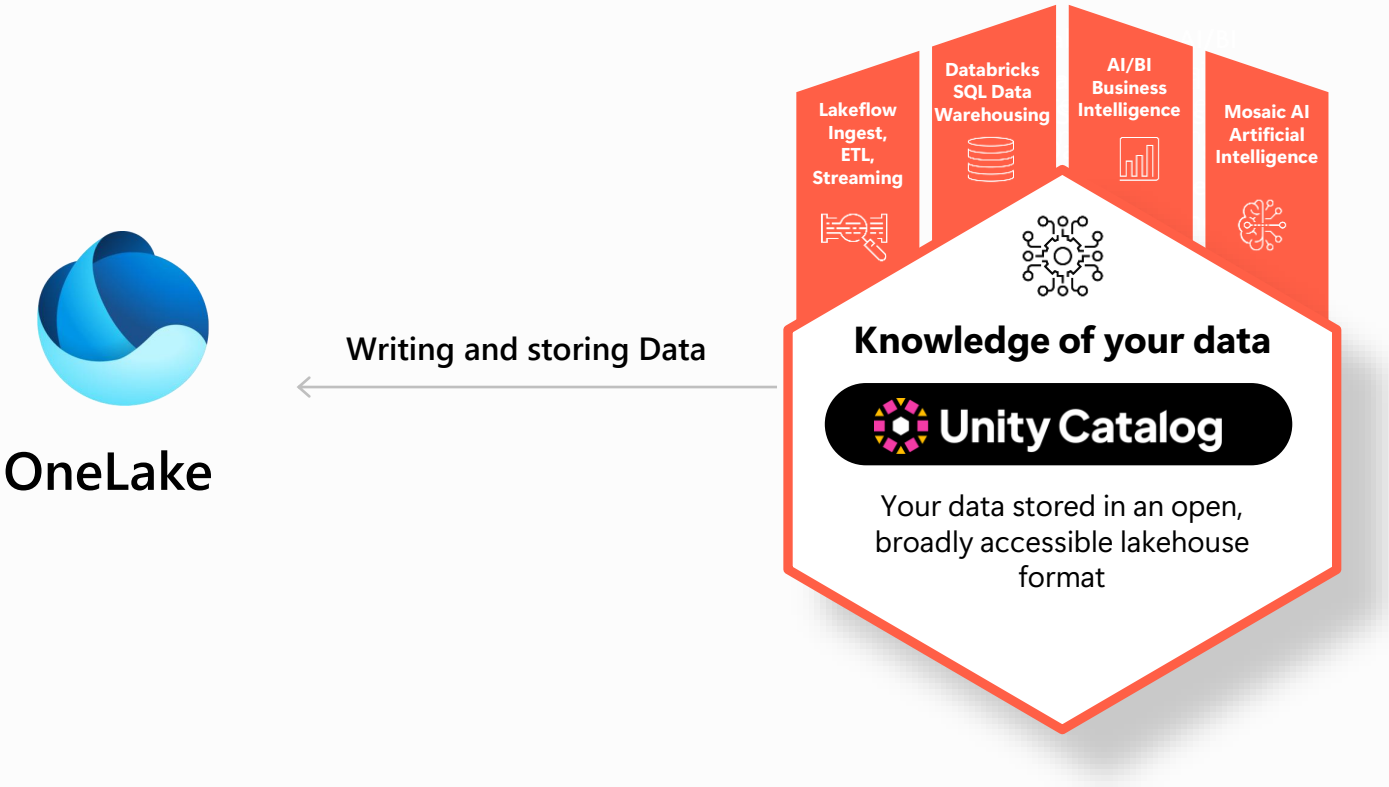


This new capability, enables Azure Databricks to read data from OneLake via their Unity Catalog Open APIs and allows all of your **OneLake data to be leveraged seamlessly in Databricks.**

Customers can create Unity Catalog Connections to OneLake based on Managed Identities from **EntraID**, and can seamlessly mount data items from any Fabric workspace, directly as a catalog in Unity.

Coming Soon

Writing and storing data natively in OneLake



Looking ahead, Azure Databricks will support **writing and storing data directly in OneLake**, without any additional storage resources to manage.

This will deliver additional simplicity and interoperability for customers building on the lakehouse architecture. **Timelines for this capability will be shared at FabCon in March 2026.**

Microsoft

Q&A

Thank you!

Microsoft Fabric + Databricks

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