

# Nyheter i Microsoft Fabric

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Good AI, needs  
clean data



Since general availability  
18 months ago



21,000+

Fabric customers



70%

F500 customers

50%+

Using 3+ workloads

# Microsoft Fabric

The unified data platform for AI transformation



Data  
Factory



Analytics



Databases



Real-Time  
Intelligence



Power BI

Fabric Platform



AI



OneLake



Security & Governance



# Fabric Automation & CI/CD Landscape

Git  
Integration

Variable  
library

fabric-cicd  
Library  
(OSS)

Fabric REST  
APIs

Command  
Line  
Interface

Deployment  
Pipelines

Sempy Labs  
Library  
(OSS)

Terraform  
Provider

.Net SDK &  
Workload  
Dev Kit





# Fabric Tooling Layers



## High Level Tools

Enhance usability and automation

Terraform Provider  
fabric-cicd OSS Library  
Sempy Labs OSS Library



## Abstraction Layer

Provide direct interaction with the APIs

Command Line Interface  
.Net SDK & Workload Dev Kit



## Foundation Layer

Serve as the base for all interactions

Fabric REST APIs



Generally available

# Fabric CLI is here

Announcing Fabric  
Command Line  
Interface is  
generally available!

```
murgu@MRG01: ~  
fab:/$ create ws2.workspace  
Creating a new workspace...  
* 'ws2.Workspace' created  
fab:/$ cd ws2.workspace  
* Switched to 'ws2.Workspace'  
fab:/ws2.Workspace$ create lh2.lakehouse -P enableSchemas=true  
Creating a new Lakehouse...  
* 'lh2.Lakehouse' created  
fab:/ws2.Workspace$ cp /_ws_cli.workspace/nb1.notebook nb1.notebook -f  
Copying '/_ws_cli.Workspace/nb1.Notebook' → '/ws2.Workspace/nb1.Notebook'...  
* Copy completed  
fab:/ws2.Workspace$ job start nb1.notebook  
Starting job (async) for 'nb1.Notebook'...  
* Job instance 'e00356cc-0187-4e2a-a148-17995310374b' created  
→ To see status run 'job run-status /ws2.Workspace/nb1.Notebook --id e00356cc-0187-4e2a-a148-17995310374b'  
fab:/ws2.Workspace$
```

# Fabric as a Filesystem

## Fabric Hierarchy

Tenant



Workspace



Item

OneLake

## Commands

ls/dir

pwd

cd

rm/del

ln/mklink

mkdir/create

cp/copy

mv/move

import

export

get

set

assign

unassign

exists

open

start

stop

acl

label

job

table

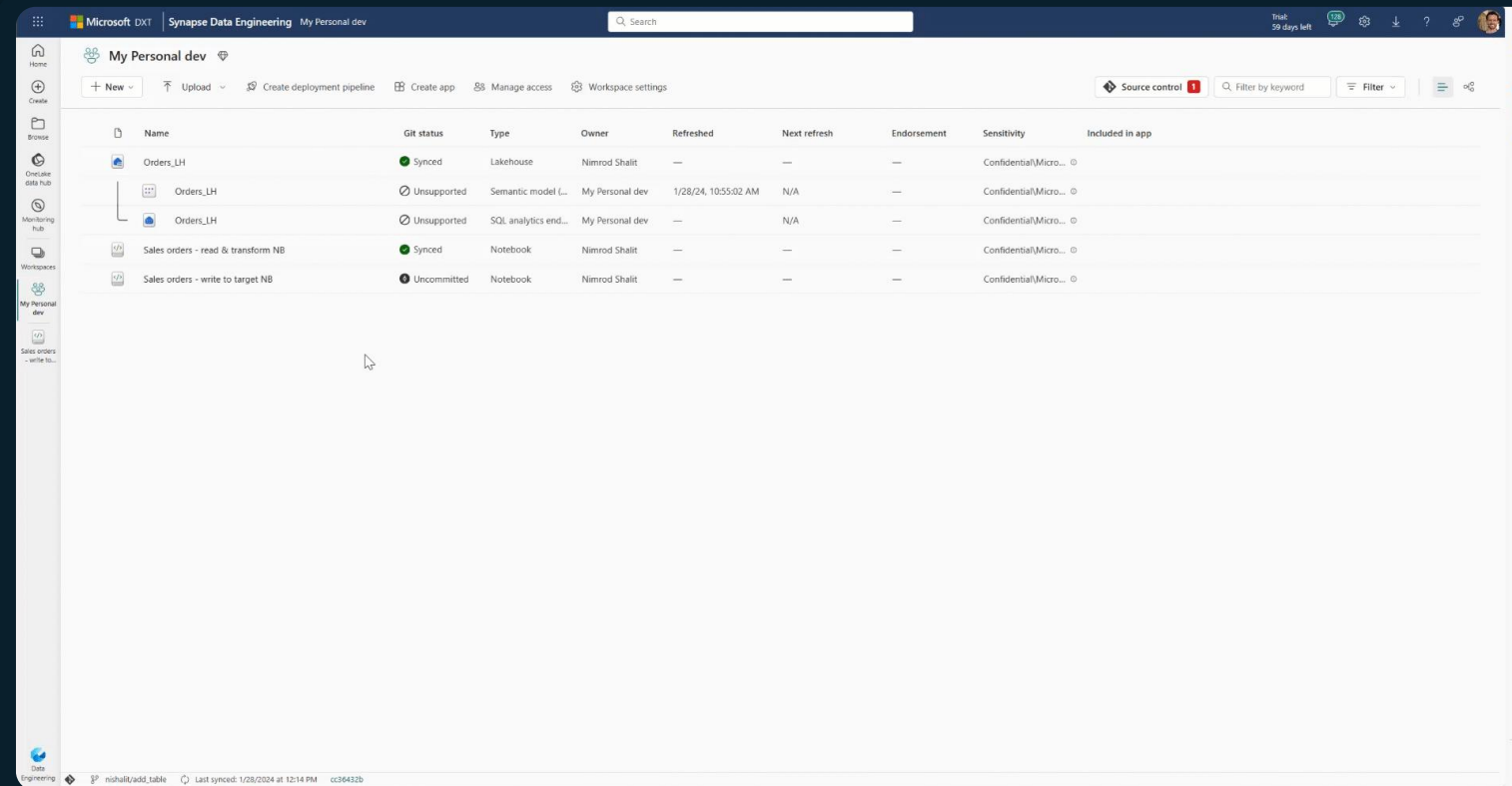
api

auth

config

desc

# Git Integration



The screenshot shows the Microsoft DXT Synapse Data Engineering interface. The top navigation bar includes 'Home', 'Create', 'Browse', 'Onboard data hub', 'Monitoring hub', 'Workspaces', 'My Personal dev', and 'Data'. The main content area displays a table of workspace items under the 'My Personal dev' workspace. The table has columns for Name, Git status, Type, Owner, Refreshed, Next refresh, Endorsement, Sensitivity, and Included in app. The items listed are 'Orders\_LH' (Lakehouse, Synced), 'Orders\_LH' (Semantic model, Unsupported), 'Orders\_LH' (SQL analytics end..., Unsupported), 'Sales orders - read & transform NB' (Notebook, Synced), and 'Sales orders - write to target NB' (Notebook, Uncommitted).

Name	Git status	Type	Owner	Refreshed	Next refresh	Endorsement	Sensitivity	Included in app
Orders_LH	Synced	Lakehouse	Nimrod Shalit	—	—	—	Confidential/Micro...	
Orders_LH	Unsupported	Semantic model (...)	My Personal dev	1/28/24, 10:55:02 AM	N/A	—	Confidential/Micro...	
Orders_LH	Unsupported	SQL analytics end...	My Personal dev	—	N/A	—	Confidential/Micro...	
Sales orders - read & transform NB	Synced	Notebook	Nimrod Shalit	—	—	—	Confidential/Micro...	
Sales orders - write to target NB	Uncommitted	Notebook	Nimrod Shalit	—	—	—	Confidential/Micro...	

Sync a WS to a Git branch

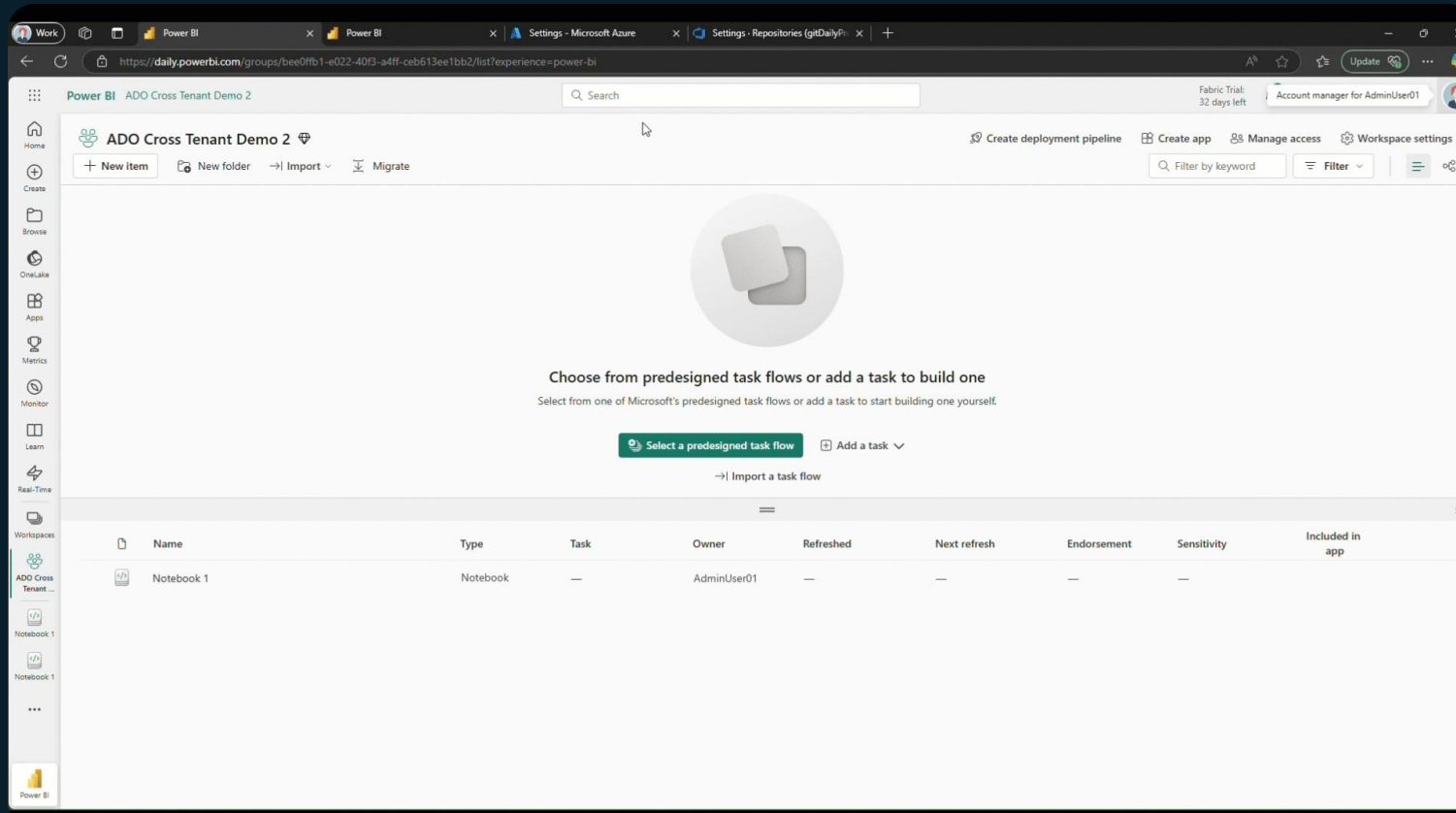
Supports ~80% of Fabric items

Git providers – Azure DevOps, GitHub, GitHub Enterprise

Fabric APIs – REST APIs, Service principal support

# Git Integration Enhancements

NEW!



Service Principal support for  
**Azure DevOps** (June)

**Cross-tenant** Authentication with  
Azure DevOps (June)

**Scheduler CI/CD** – Part of an  
item definition when scheduler  
is configured (June)

**Workspace folders** retained in  
repos (released)



# Variable Libraries

Public preview

The screenshot displays the Microsoft Fabric user interface. On the left, a sidebar shows navigation options like Home, Workspaces, OneLake, Monitor, Deployment pipelines, Real-Time, and Functions hub. The main area shows a workspace named 'Contoso Corp - Data Tier' with a data pipeline diagram. The pipeline includes tasks such as 'ML Scoring', 'ML Training', 'GraphQL Endpoints', 'AI Skills', 'Invoice Generation', 'Inventory & Chat', 'Shopping Cart', and 'Orders/Transactions'. Below the diagram is a table listing items in the workspace.

Name	Git status	Type	Task
_ShoppingCartInteractions	Uncommitted	Semantic model	Te...
_ShoppingCartStore	Uncommitted	Mirrored data...	Sh...
ContosoDB	Uncommitted	SQL database	In...
ContosoDB	—	Semantic mod...	In...
ContosoDB	—	SQL analytics ...	In...
ContosoDB Reporting	Unsupported	Dashboard	Ac...
copyjob1	Uncommitted	Copy job	Ex...

On the right, a 'New item' dialog is open, showing a grid of available items for creation. The items are categorized under 'Get data' and include options like Copy job, Data pipeline, Dataflow Gen1, Dataflow Gen2, Dataverse (preview), Eventstream, and various mirrored database options.

New Fabric item to **define and manage variables** at the workspace level

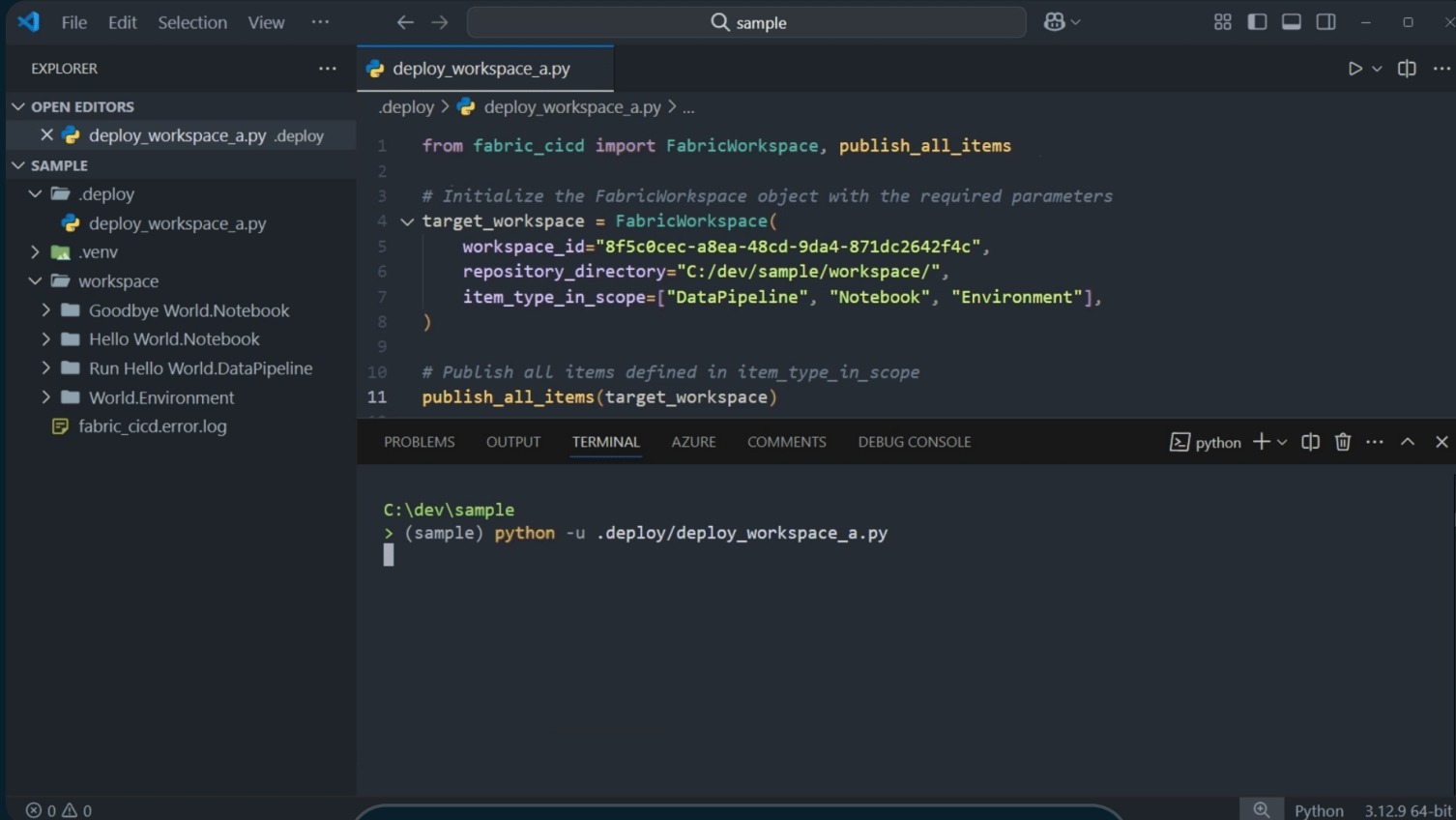
Create **environment-specific configurations** for different deployment stages

**Centralized management** with support for multiple variable types

Use in **Data pipelines**

# fabric-cicd OSS Library

Public preview



The screenshot shows a Visual Studio Code editor window. The Explorer sidebar on the left shows a project structure with a `.deploy` folder containing `deploy_workspace_a.py`, a `.venv` folder, and a `workspace` folder. The main editor area displays the `deploy_workspace_a.py` file with the following Python code:

```
1 from fabric_cicd import FabricWorkspace, publish_all_items
2
3 # Initialize the FabricWorkspace object with the required parameters
4 target_workspace = FabricWorkspace(
5     workspace_id="8f5c0cec-a8ea-48cd-9da4-871dc2642f4c",
6     repository_directory="C:/dev/sample/workspace/",
7     item_type_in_scope=["DataPipeline", "Notebook", "Environment"],
8 )
9
10 # Publish all items defined in item_type_in_scope
11 publish_all_items(target_workspace)
```

At the bottom, the Terminal panel shows the command being executed:

```
C:\dev\sample
> (sample) python -u .deploy/deploy_workspace_a.py
```

<https://aka.ms/fabric-cicd/docs/>

Python Open-Source Library

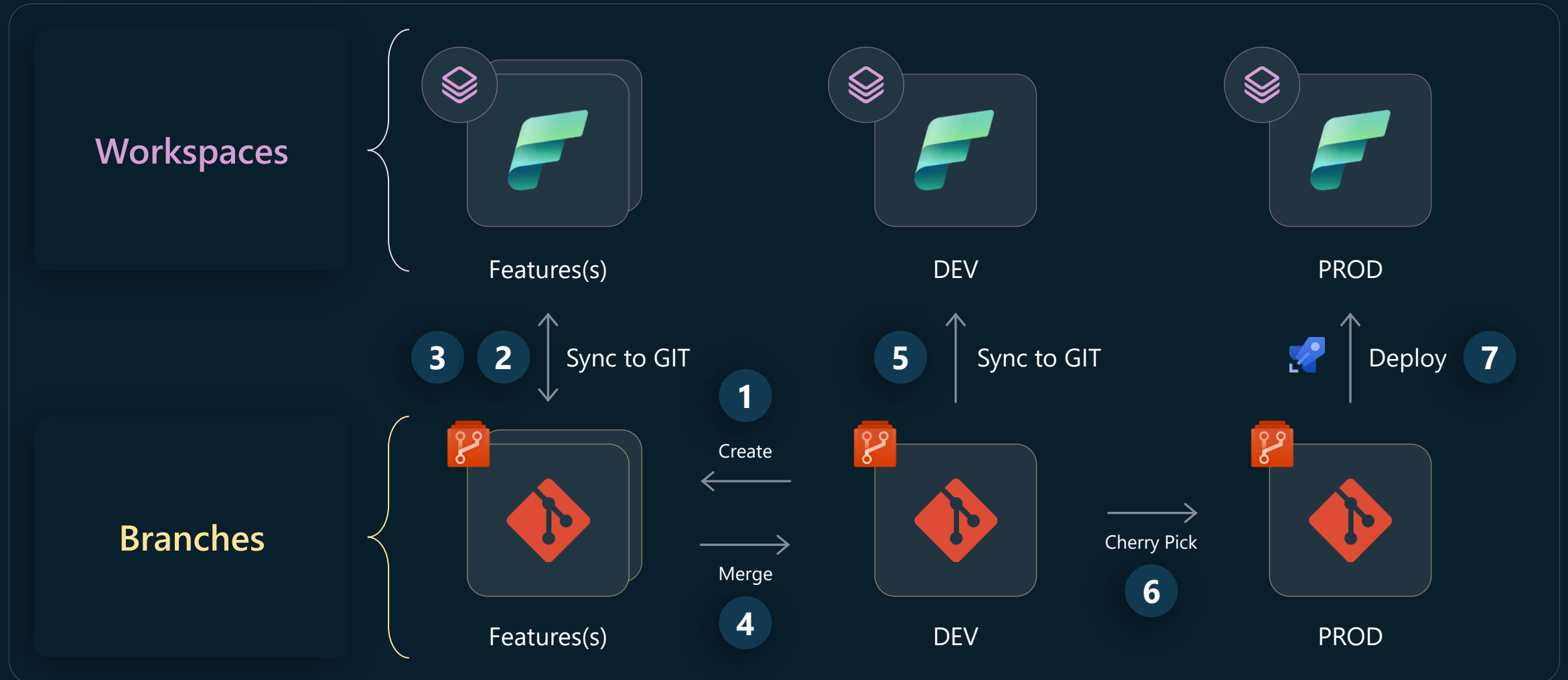
Deploy Fabric items with  
script-based deployments

Integrates with Azure DevOps  
and GitHub Actions

Create environment-specific  
parameterization for different  
deployments

Goal to support all item types  
with APIs and Source Control

# Sample Flow





Announcing

# Cosmos DB in Fabric

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Public Preview

# Cosmos DB in Fabric

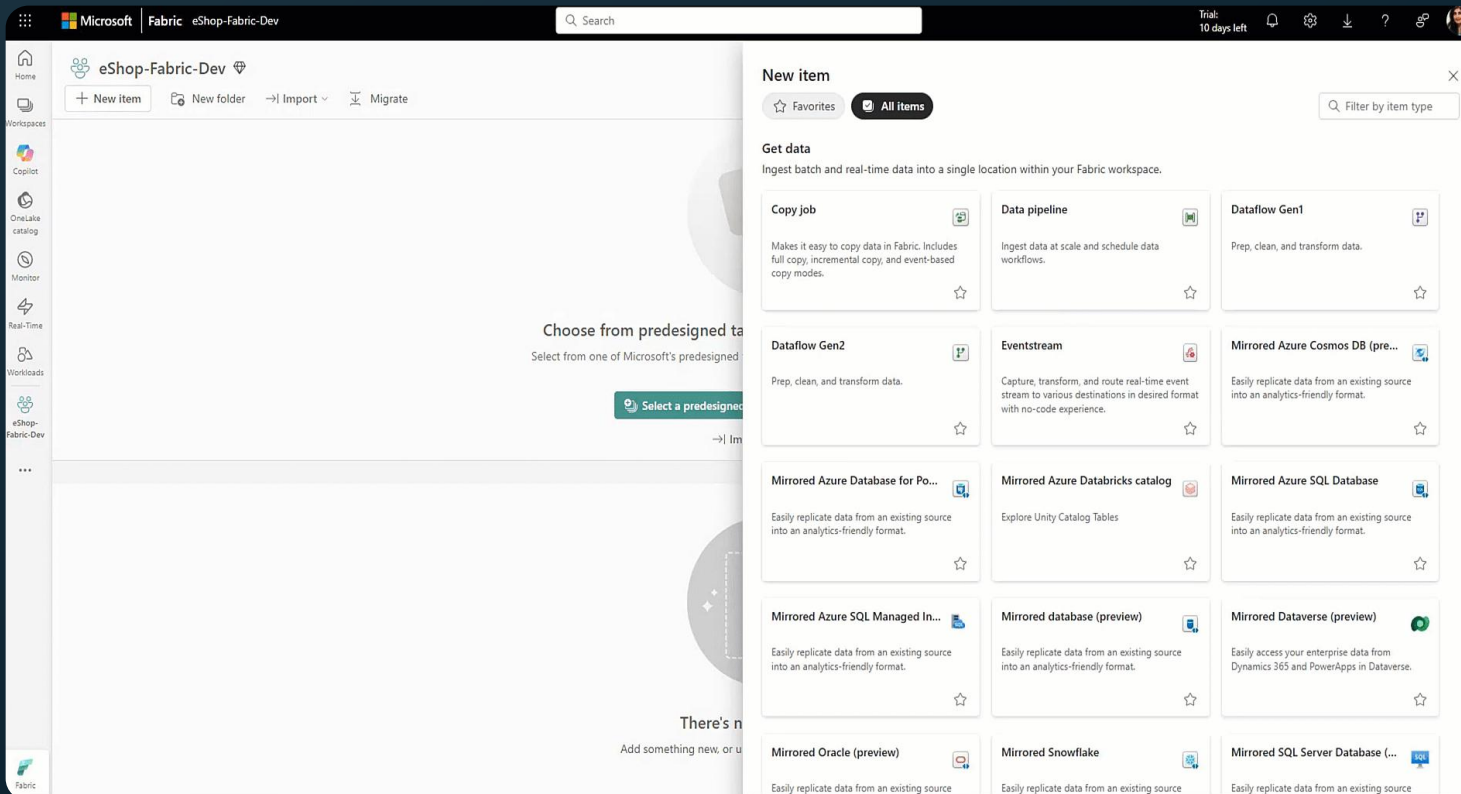
Public preview

Enterprise grade Azure Cosmos DB built into the Fabric unified SaaS platform

The most scalable NoSQL database with extreme low latency servicing of semi-structured data

All the data is available in OneLake unifying operational and analytical data

Available for all Fabric capacities



# Achieve the best price performance with the Native Execution Engine

Generally available

## TPC-DS 1 TB performance results



~2.5X faster execution  
over Fabric Spark

Entirely in C++ based on OSS  
projects Velox & Gluten

Fully compatible with Apache  
Spark and Delta Operators –  
no vendor lock-in

Available at no additional cost

# ML Model endpoints

Public preview

The screenshot shows the Microsoft Fabric ML Model endpoints interface for a 'churn-model'. The interface includes a sidebar with navigation options like Home, Workspaces, Copilot, OneLake, Monitor, Real-Time, Workloads, Customer churn, and churn-model. The main content area displays a list of model versions (Version 1 to Version 7) on the left. The right panel shows details for the selected version (Version 7), including properties (Version name, Created time, Last modified, Created by, Experiment name, Run name), version details (ML model version metrics, parameters, tags, input/output schema), and endpoint details (Version endpoint URL, Default version, Status, Auto sleep).

**Properties**

Property	Value
Version name	Version 7
Created time	5/9/2025 3:22 PM
Last modified	5/9/2025 3:22 PM
Created by	Eren Orbey
Experiment name	customer-churn-e...
Run name	reverent_matsum...

**Version details**

- ML model version metrics (0)
- ML model version parameters (0)
- ML model version tags (0)
- Input schema (40)
- Output schema (1)

**Endpoint details**

Property	Value
Version endpoint URL	https://dxtapi.fabric.microsoft.com/v1/workspaces/24e9de86-b377-4439-a926-e6a8ac34144...
Default version	No
Status	Inactive
Auto sleep	Off

Serve real-time predictions with secure, scalable, and fully managed endpoints

Activate, customize, and query endpoints with a REST API or a low-code interface

Save costs with auto-scaling enabled out of the box

Consume predictive insights from custom apps or other Fabric experiences

Announcing

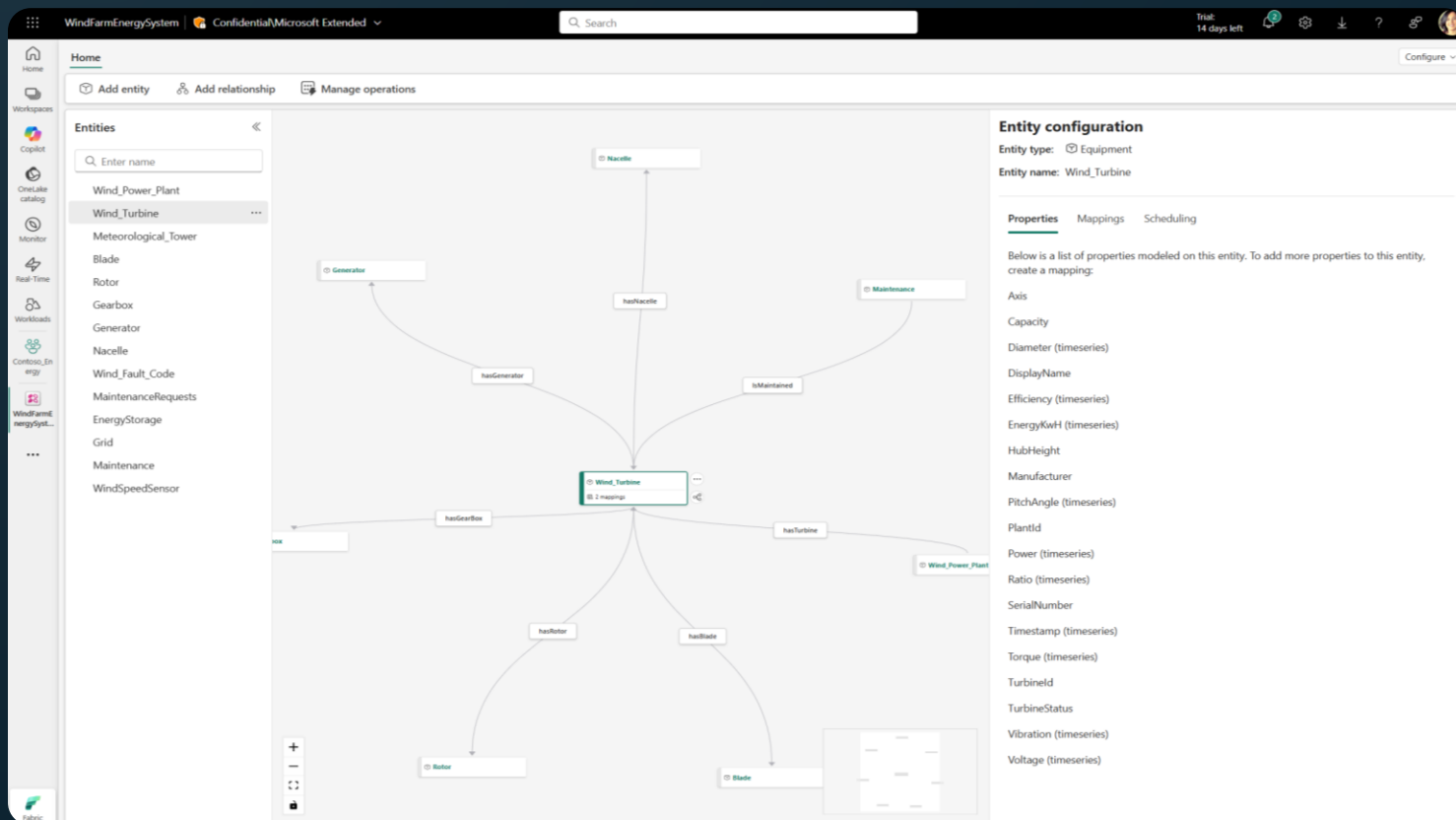
# Digital twin builder

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Public Preview

# Digital twin builder

Public preview



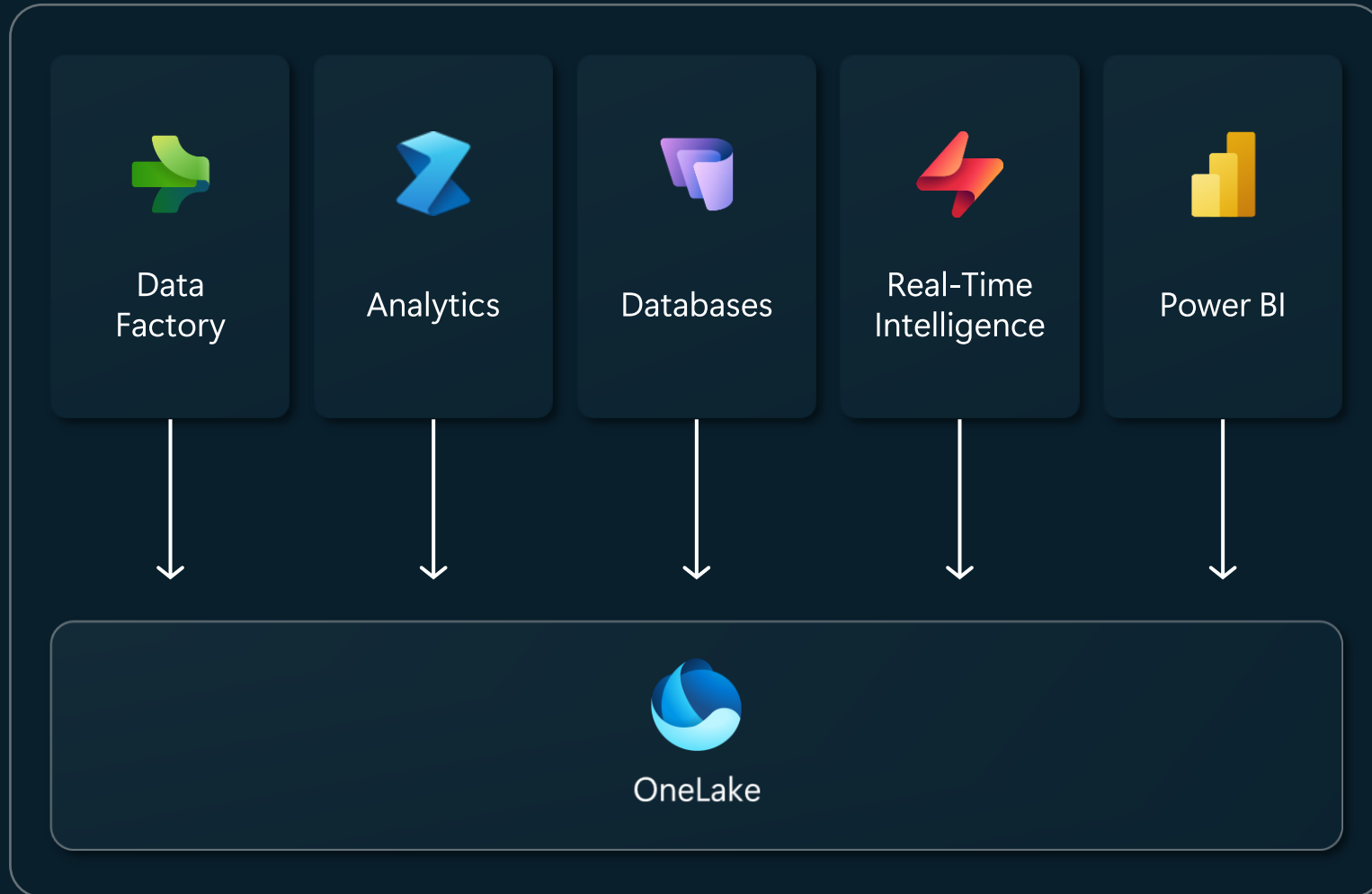
Simpler, faster way to build and manage digital twins with a **low-code/no-code** approach

Easily **contextualize and map** data to model assets, processes and systems and create a digital twin

**Drill down** to explore relationships and derive contextualized high value insights

**Unlock insights** with digital twin data in Power BI Copilot and Real-Time Dashboards

# OneLake is the OneDrive for data



Single SaaS lake for the whole organization

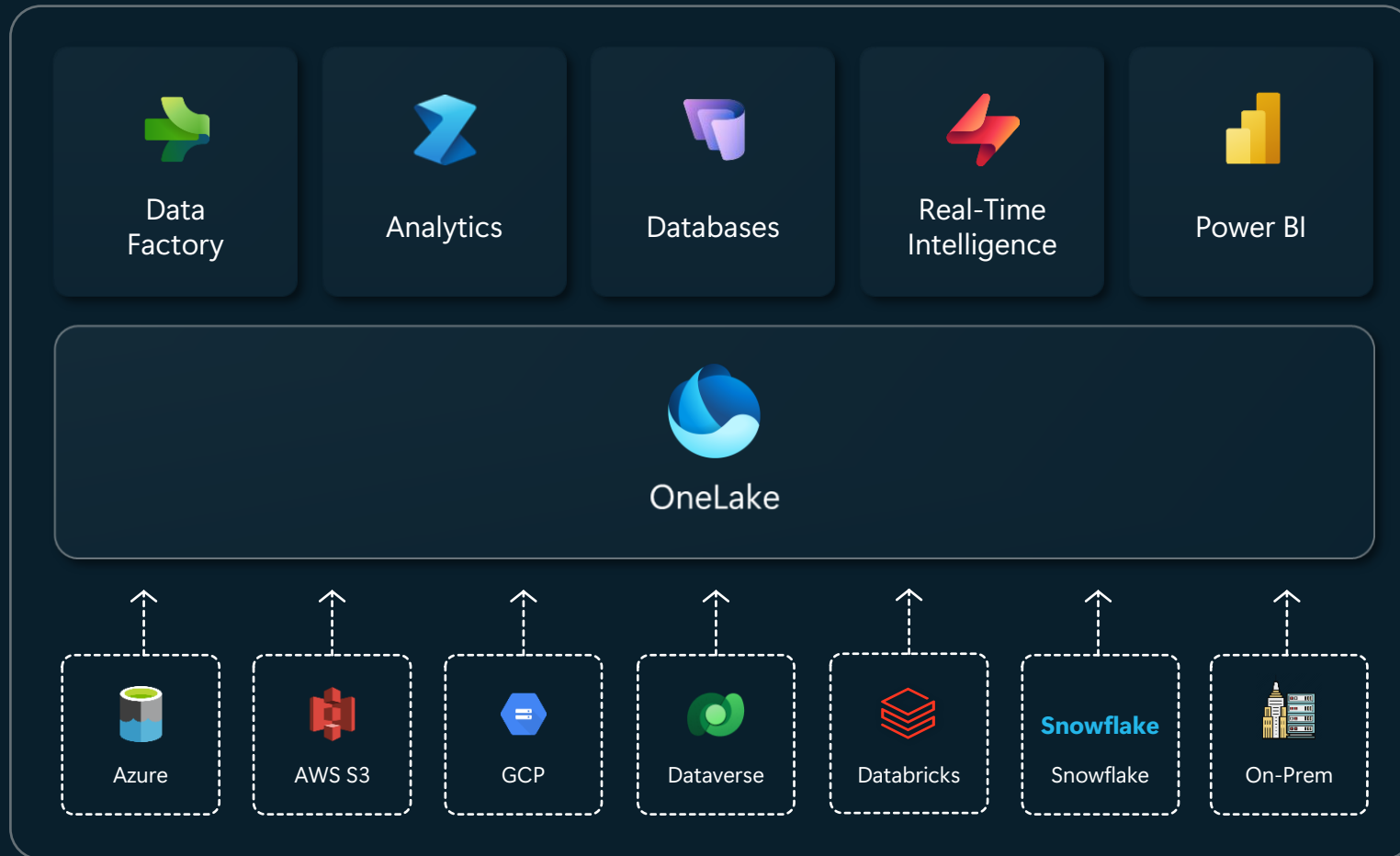
Single open format used by all workloads to store and query data

Automatically indexed for discovery, MIP labels, lineage, PII scans, sharing, governance and compliance



# Unifying data in OneLake

## Cross-cloud shortcuts & mirroring



First multi-cloud  
SaaS data lake

Shortcuts for existing data cross  
clouds and on-premises

Shortcuts are instantaneous, with  
no data duplication or movement

Mirroring creates a reflection of  
an entire database in OneLake

# Unify data in OneLake with zero ETL

Shortcut & mirroring sources

Generally available



Azure  
SQL DB



Azure Data  
Lake store



Microsoft  
OneLake



Google Cloud  
Storage

Snowflake

Snowflake



Amazon S3



Microsoft  
Dataverse



S3 Compatible  
(cloud/On-prem)

Public preview



Azure Cosmos DB



Azure SQL MI



Azure PostgreSQL



Databricks Catalog



SQL Server 2025



Azure Blob storage

Coming soon



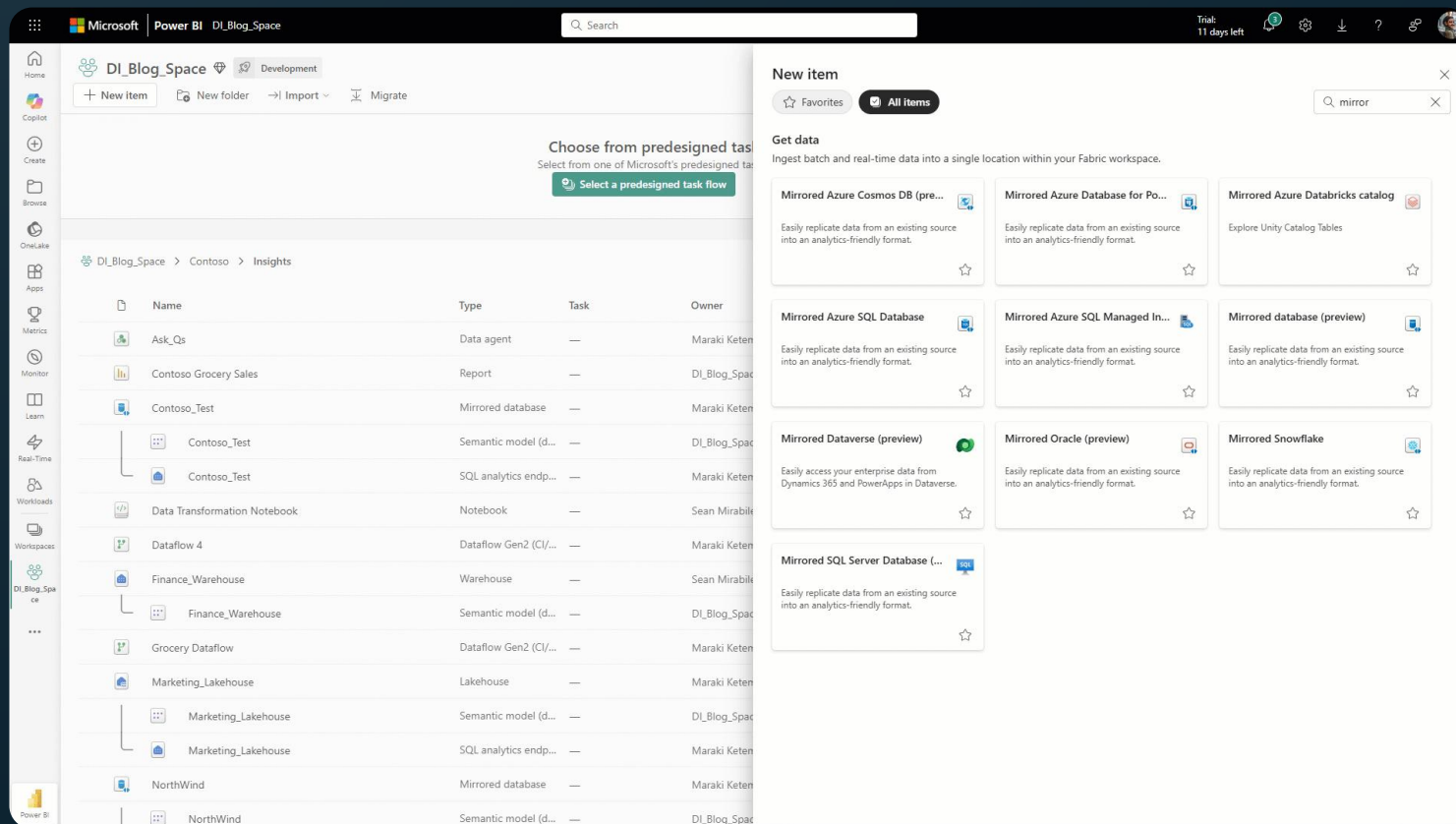
Oracle DB



Google BigQuery

# Open Mirroring

Generally available

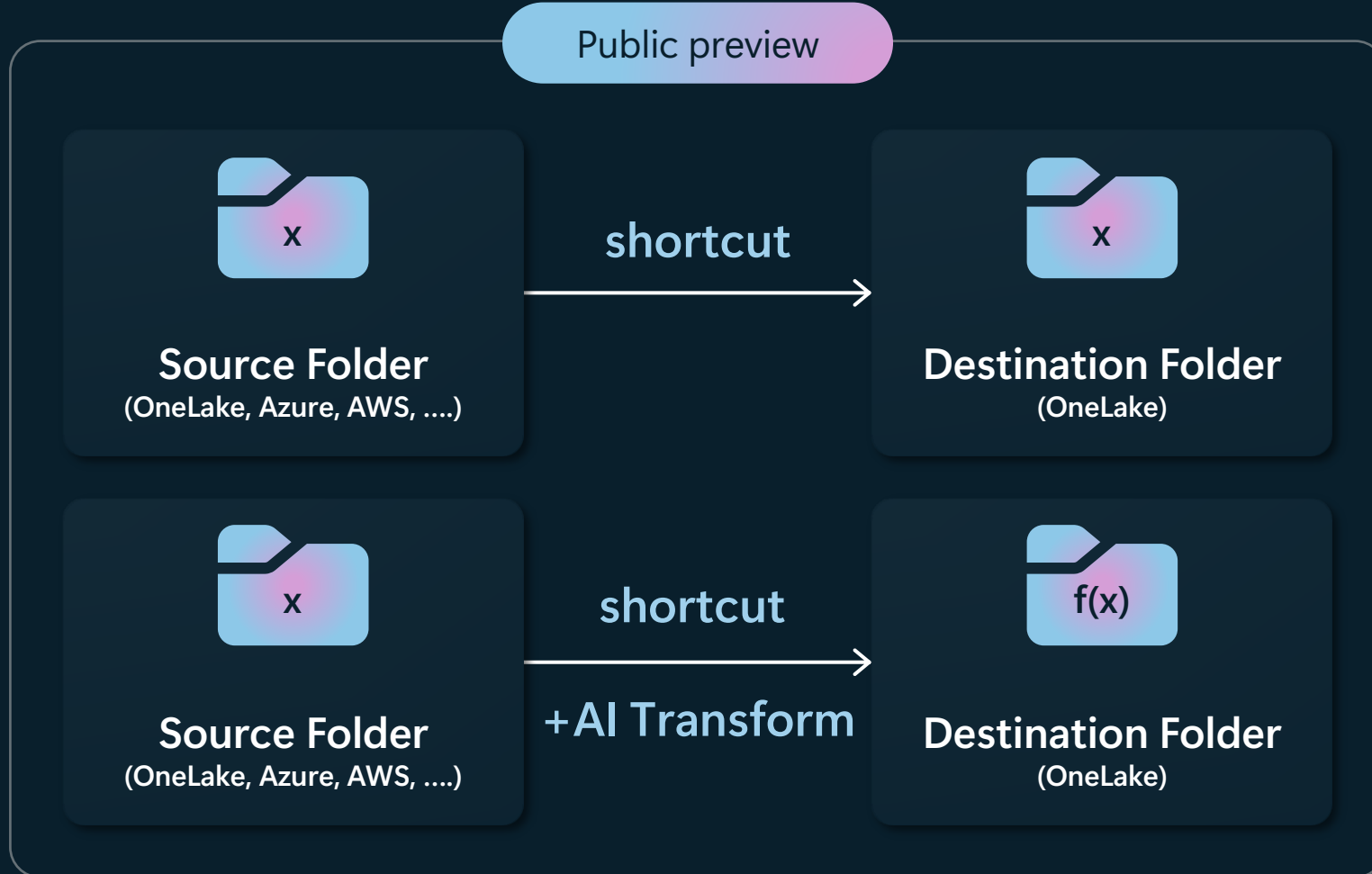


Simplifies building custom mirroring solutions and handling of complex data changes for easy data integration into OneLake via Mirroring

Open Mirroring enables landing parquet or CSV data via API or manually via drag-and-drop

Automatically converts parquet and CSVs into Delta before replication to optimize your BI and AI workloads in Fabric

# Shortcut Transformations



AI Transformations built directly into OneLake

Available as an extension of Shortcuts; simply shortcut to a source folder and add a transformation definition

Automatically track all changes in source and sync the destination

Demo

# Shortcut transformations

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Public Preview

support\_call\_transcripts - Power BI

Home

Workspaces

Copilot

OneLake

Monitor

Real-Time

Workloads

Customer Support ...

support\_call\_transcripts

...

Fabric

https://dxt.powerbi.com/groups/97a12bfd-d5e9-43be-bb20-9fb03a4da17a/lakehouses/d4fef8cb-b0e0-4c5e-80be-a7e97adc2114?experience=power-bi

Get dataNew semantic modelOpen notebookManage OneLake data access (preview)Update all variables

Explorer

Search tables

support\_call\_transcripts

Tables

customerreturns

Files

daily\_sales

original\_transcripts

redacted\_transcripts

Home

Workspaces

Copilot

OneLake

Monitor

Real-Time

Workloads

Customer Support ...

support\_call\_transcripts

...

Fabric

Home

Get data

New semantic model

Open notebook

Manage OneLake data access (preview)

Update all variables

Explorer

Search tables

support\_call\_transcripts

Tables

customerreturns

Files

original\_transcripts

Files > original\_transcripts

Showing 6 items

Search files

Name	Date modified	Type	Size
support_call_1 1.txt	5/14/2025, 6:30:56 PM	txt	331 B
support_call_2 1.txt	5/14/2025, 6:47:29 PM	txt	327 B
support_call_3 1.txt	5/14/2025, 6:47:29 PM	txt	330 B
support_call_4 1.txt	5/14/2025, 6:30:56 PM	txt	329 B
support_call_5 1.txt	5/14/2025, 6:47:29 PM	txt	307 B
support_call_6 1.txt	5/14/2025, 6:47:29 PM	txt	318 B

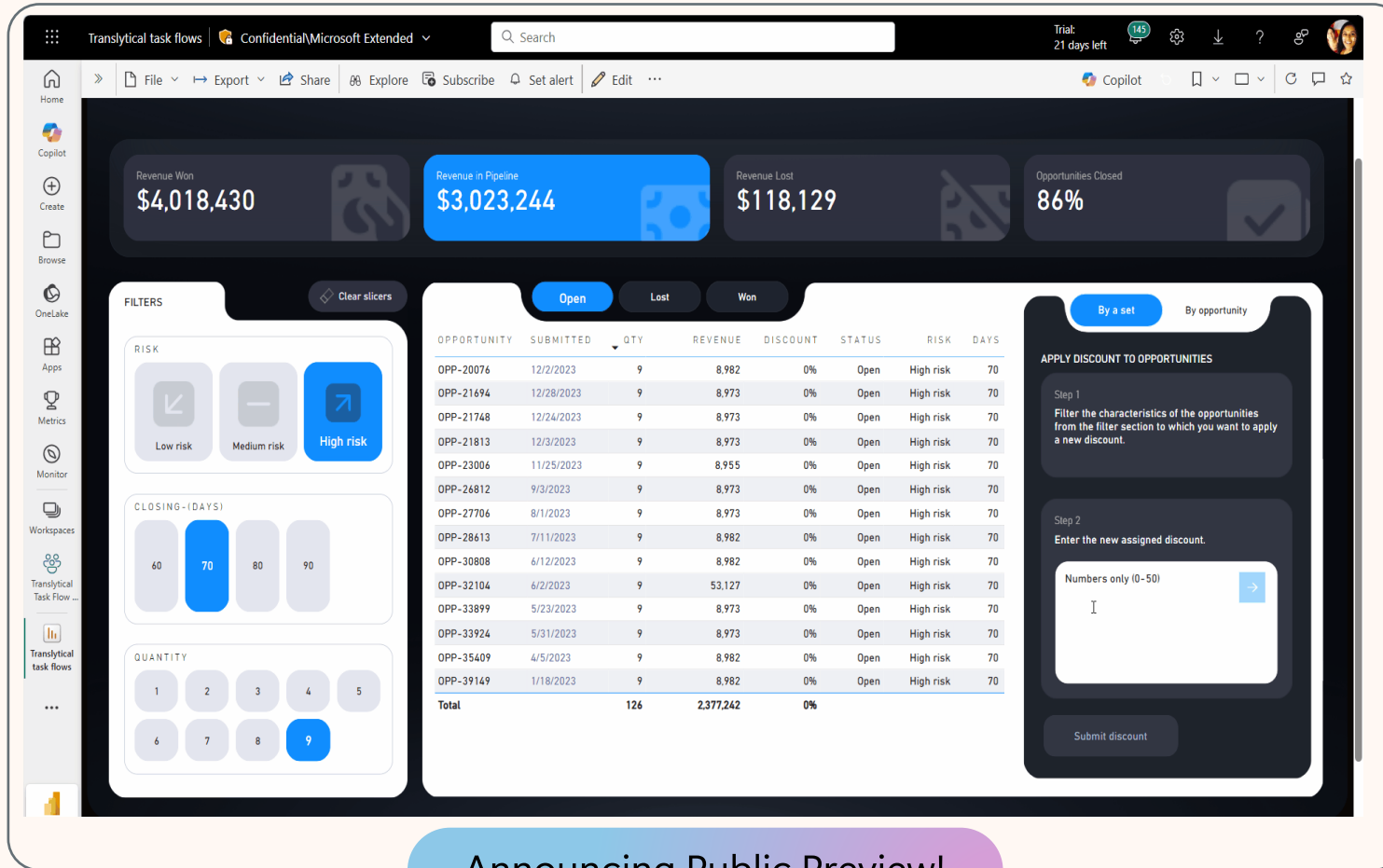
Succeeded (0 sec 232 ms)

Folders 0 Files 6



# Translytical task flows

Bridging the gap between data and decisions



Announcing Public Preview!

Translytical task flows marks a major evolution in Power BI reports, enabling automated action and data writeback directly within the report—streamlining decision-making and operational follow-through.

Powered by Fabric User data functions, this new capability allows users to automate tasks such as updating records, dynamic notifications, and even triggering workflows across other systems.



# Shipped

[aka.ms/FabricSecurityWhitepaper](https://aka.ms/FabricSecurityWhitepaper)

## Network Security

GA

[Entra ID conditional access](#)

[Service tags](#)

[User audit logs](#)

[Enterprise data gateway](#)

[VNET Data Gateway Support with Private Links for Dataflows Gen2 & Semantic models](#)

[Private endpoint, tenant level](#)

[Shortcuts for ADLS Gen2 in VNET](#)

[Spark connectivity to Azure data services in a VNET](#)

[Trusted workspace access](#)

## Data Security

GA

[Workspace roles](#)

[SQL Object-level security](#)

[SQL Column-level security](#)

[SQL Row-level security](#)

[SQL Dynamic data mailling](#)

[SQL granular permissions](#)

[Lockbox](#)

Limited Public preview

[CMK for OneLake](#)

[OneLake security](#)

## Governance

GA

[Purview Information protection](#)

[Purview Sensitivity labels](#)

[Purview Audit](#)

[Endorsement](#)

[Lineage](#)

[Impact analysis](#)

[Domains & Sub Domains](#)

[Metadata scanning](#)

[Resiliency](#)

[Purview data catalog](#)

Public preview

[Admin Monitoring and Insights](#)

[Fabric Monitoring](#)

## Network Security

## Data Security

June 2025

Public preview

Outbound access protection  
for a Fabric workspace

Spark

Private Links for a Fabric workspace

Summer 2025

Public preview

Workspace IP firewall

Public preview

Customer Managed Keys for OneLake

Fall 2025

Generally available

Private Links for a Fabric workspace

Outbound access protection  
for a Fabric workspace

Spark  
+ DI

Workspace IP firewall

Generally available

Customer Managed Keys for OneLake

**Real-Time Intelligence** is the difference  
between leading and lagging

# Microsoft Fabric

The unified data platform for AI transformation



Data  
Factory



Analytics



Databases



Real-Time  
Intelligence



Power BI

Fabric Platform



AI



OneLake



Governance



# Real-Time Intelligence in Microsoft Fabric



## Enterprise real-time data platforms

Azure Event Hubs

Azure Event Grid

Azure Stream Analytics

Azure Data Explorer

+



## Self-serve experiences for business users

Power BI

Activator

OneLake

+



## Intelligent insights and capabilities

AI Skills

Anomaly detection

Agents

=



## Real-Time Intelligence in Microsoft Fabric

Fully integrated

Real-time SaaS experiences

Unified data platform

# Planet-scale infrastructure for real-time data

10 EB

Events and logs per month

350 PB

Ingested daily

5.1 B

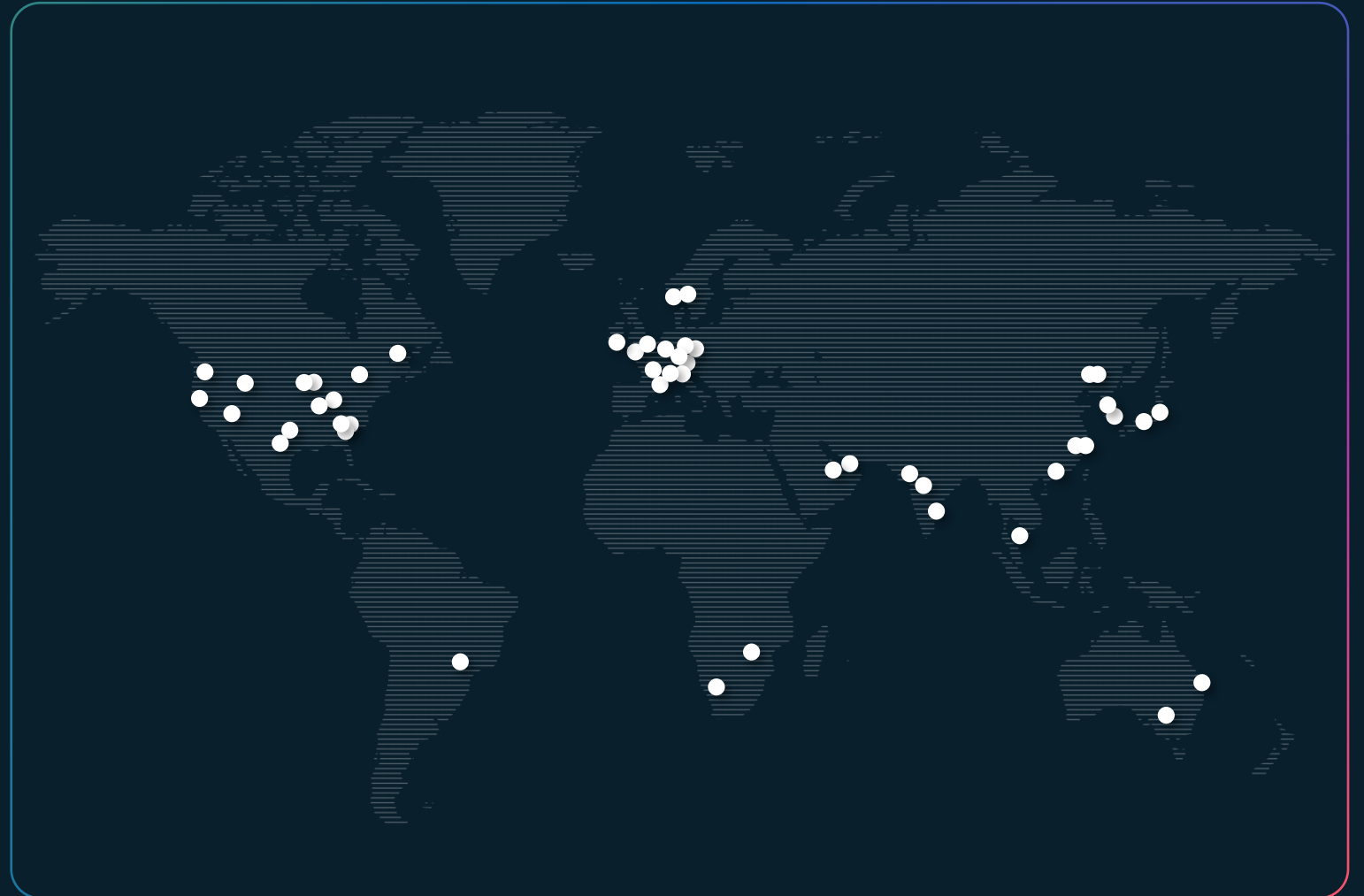
Real-time queries per day

19.2 T

Streaming events processed monthly

99.9992%

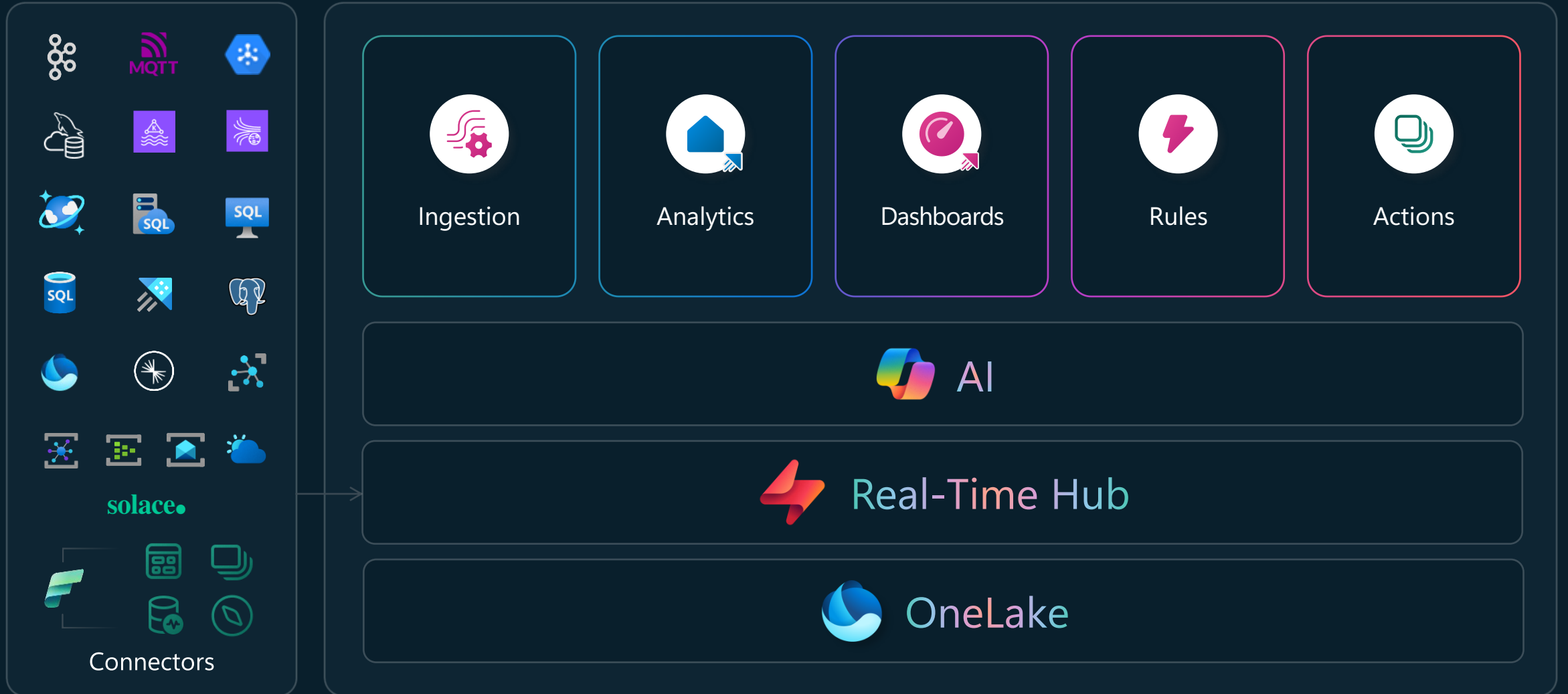
Success rate across messaging

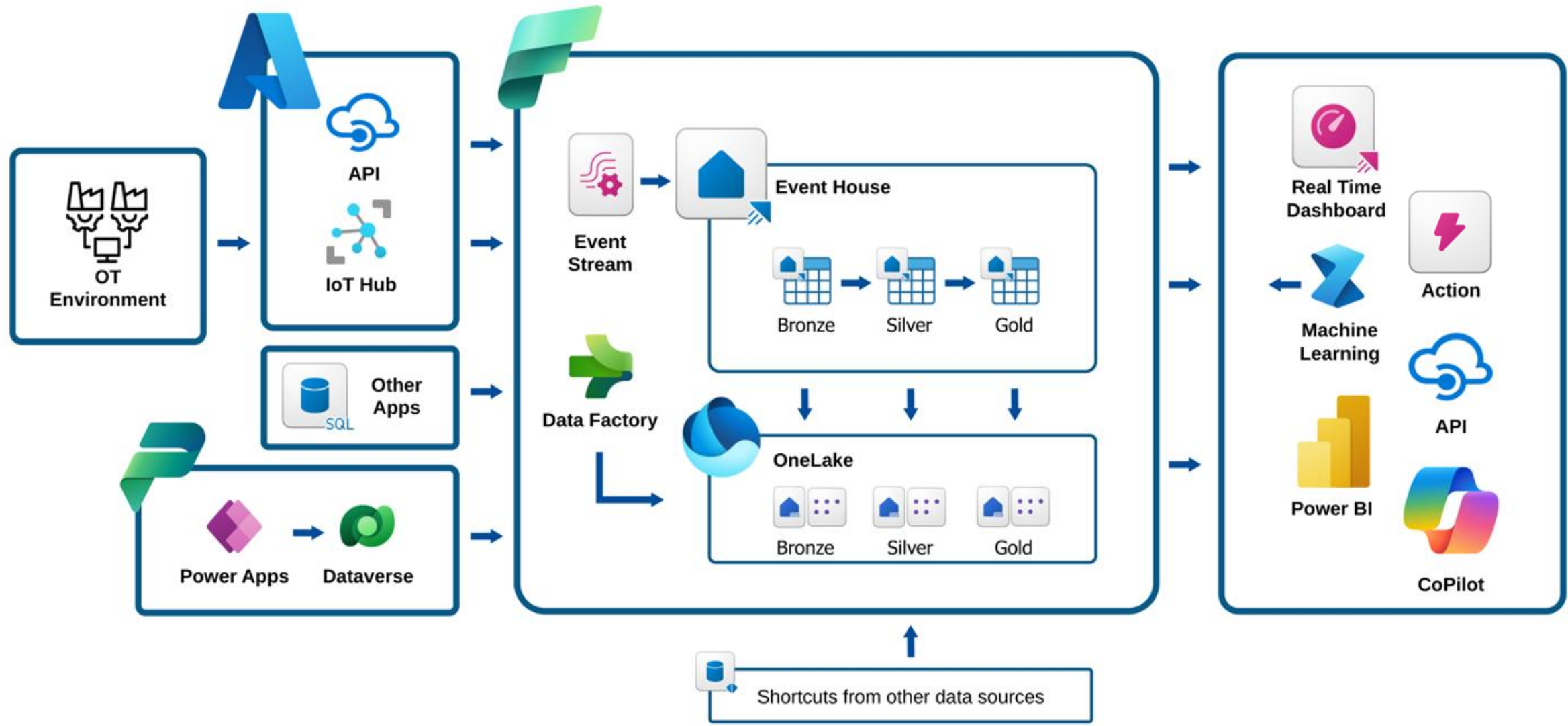




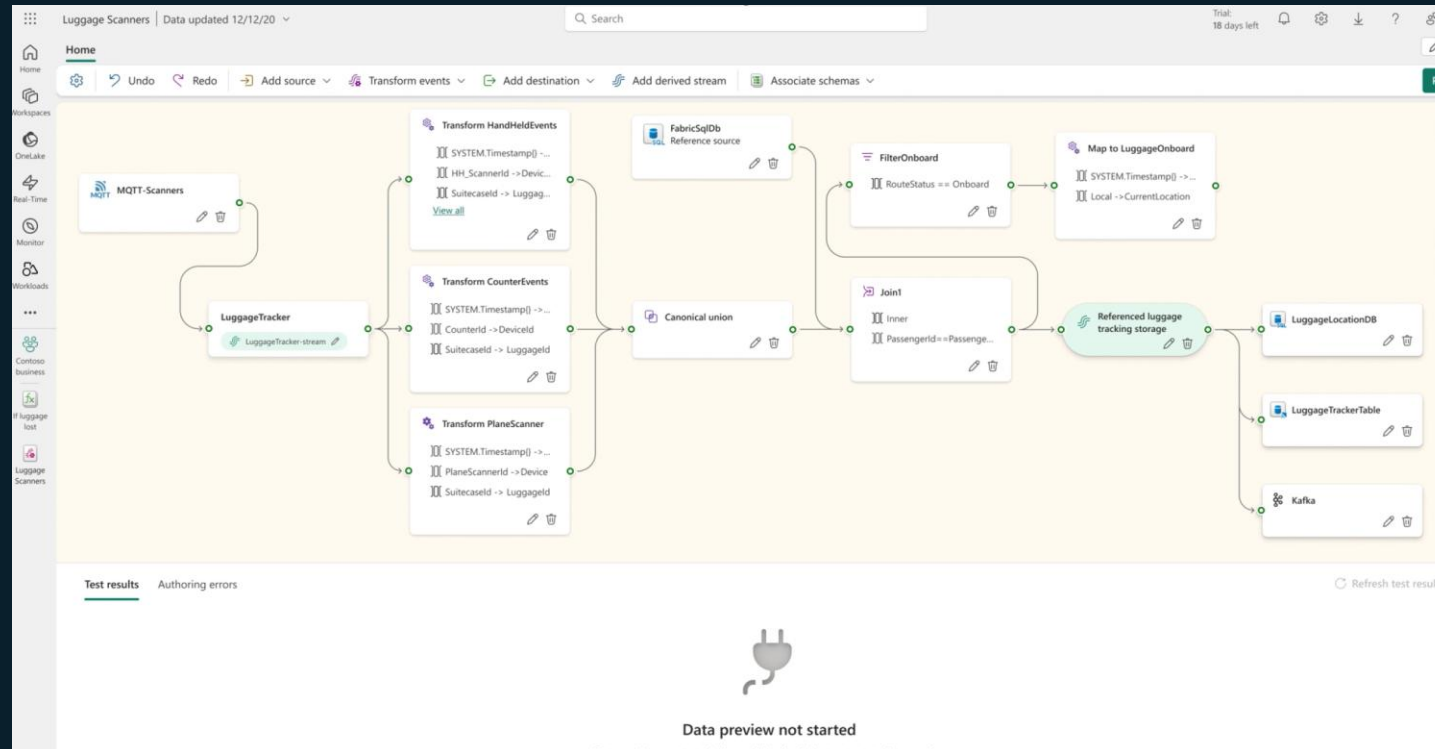


# Real-Time Intelligence in Microsoft Fabric





# Event-driven architecture



Use events to trigger applications instead of relying on schedules or manual actions

Separate event consumers and event producers, making the system more flexible and scalable

Process events as they occur, reducing the time to value for the rest of the system



# Real-Time Intelligence in Microsoft Fabric

**PrPr** – Private Preview

**PuPr** – Public Preview

**GA** – Generally available

## Current Releases

Digital Twin Builder **PuPr**

SQL custom code support  
in Eventstreams **PuPr**

Connectors **PuPr**: Weather, Solace PubSub+,  
ADX Table Streamify, MQTT v5, Event Grid  
Namespaces

Activator Fabric jobs w. parameters **PuPr**

Event Schema Set **PuPr**

Multiple Schema Inference **PuPr**

Eventstreams CI/CD & API **GA**

Managed Private Endpoint **PuPr**

Data Preview – Kafka, Confluent,  
Kinesis **PuPr**

Entra for custom endpoint **PuPr**

Fabric Events **GA**: OneLake events, Job events,  
Workspace events, Azure Storage events

Synapse Data Explorer -> Fabric  
migration tools **PuPr**

Trigger pane management in Power BI **GA**

Eventhouse DB entity map view **PuPr**

## Roadmap

Workspace level RTI private link **PrPr**

Task-oriented real-time hub

Event Schema Set **PuPr**

Connectors **PuPr**: Confluent w. Schema  
Registry, etc.

Azure SQL CES to Eventstreams  
w. custom endpoint **PuPr**

MSFT sources: Dataverse events **PrPr**,  
Azure Monitor in RT hub **PrPr**

Connector on-prem/Vnet **PrPr**

Custom business events **PrPr**

Storage events to Eventhouse **GA**

Anomaly detection **PuPr**

Eventhouse Workspace level  
network isolation **PuPr**

Activator Fabric Functions **PuPr**

Activator Trigger Pane for DW

Activator support for Power BI tables

MSFT sources: M365 Graph data in RT hub **PrPr**

Improved data exploration **PuPr**

Public Preview

# Digital Twin Builder

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Real-Time Intelligence



# Real-Time Intelligence in Microsoft Fabric

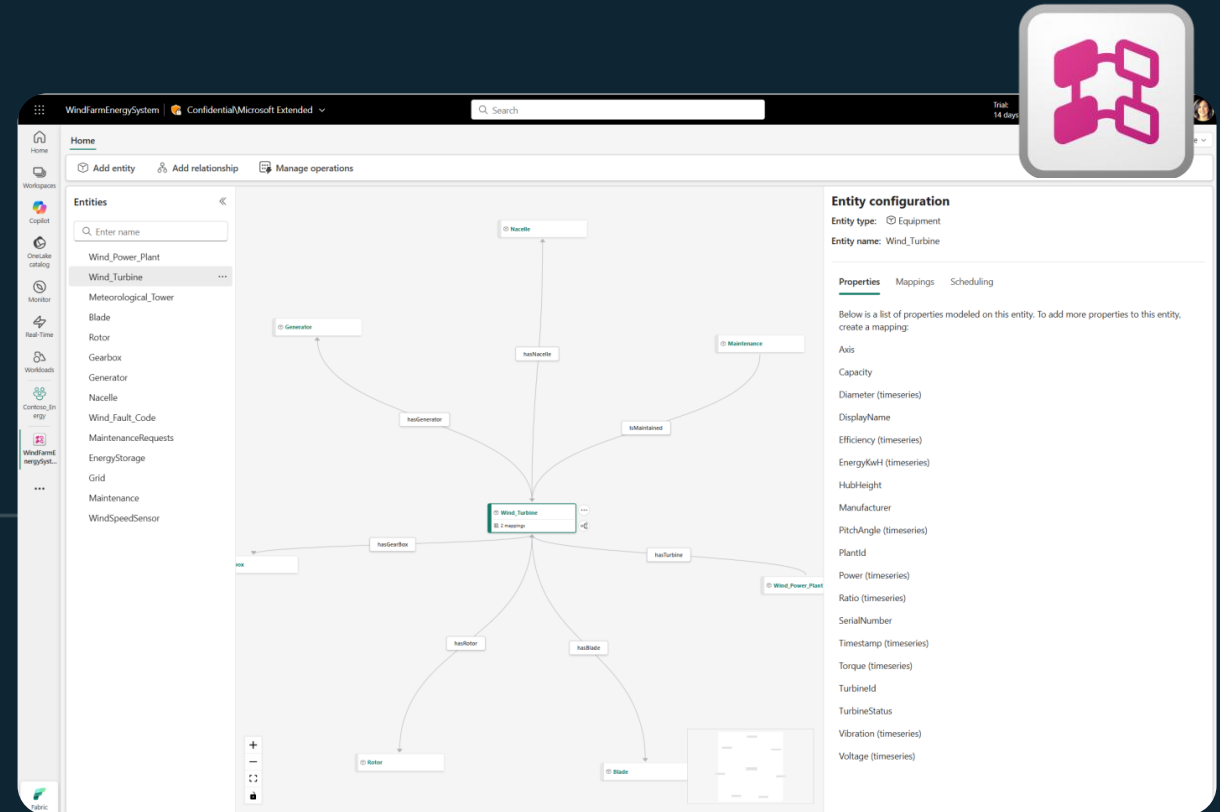
Public Preview

## Digital Twin Builder

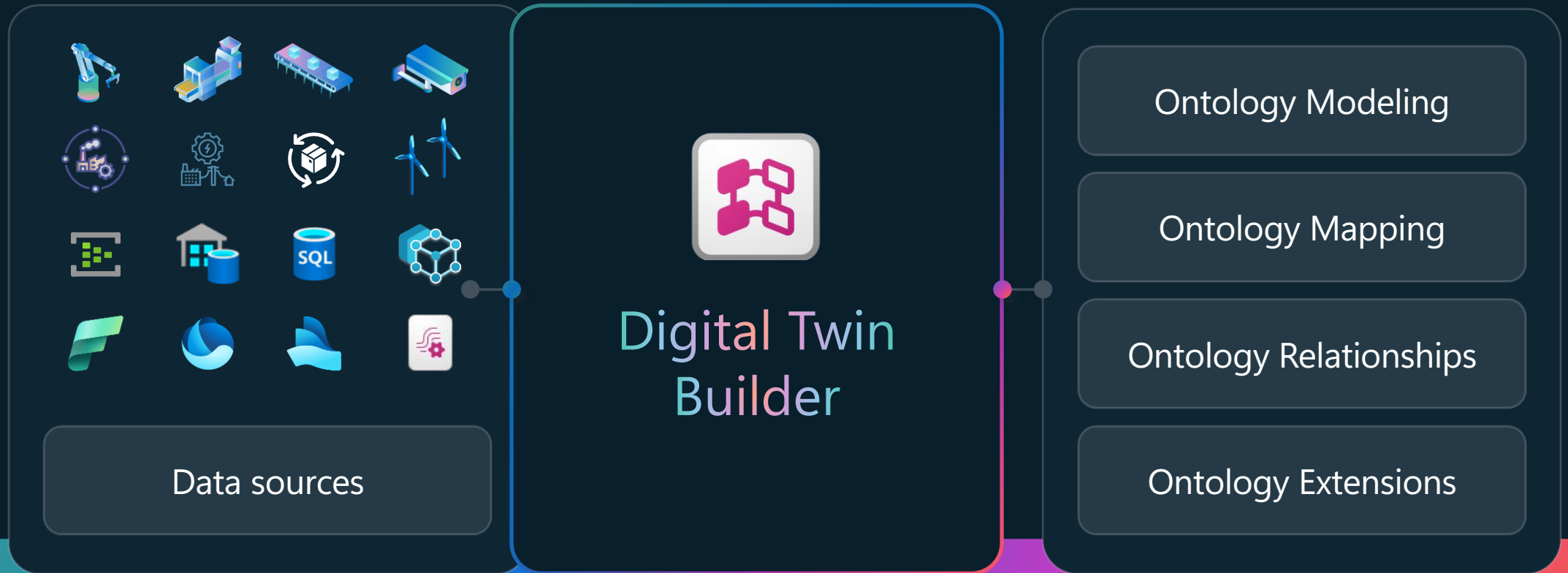
Accelerate and simplify building digital representation of the physical world.

### Digital Twin

A digital twin is an integrated data-driven virtual representation of real-world entities and processes, with synchronized interaction at a specified frequency and fidelity.



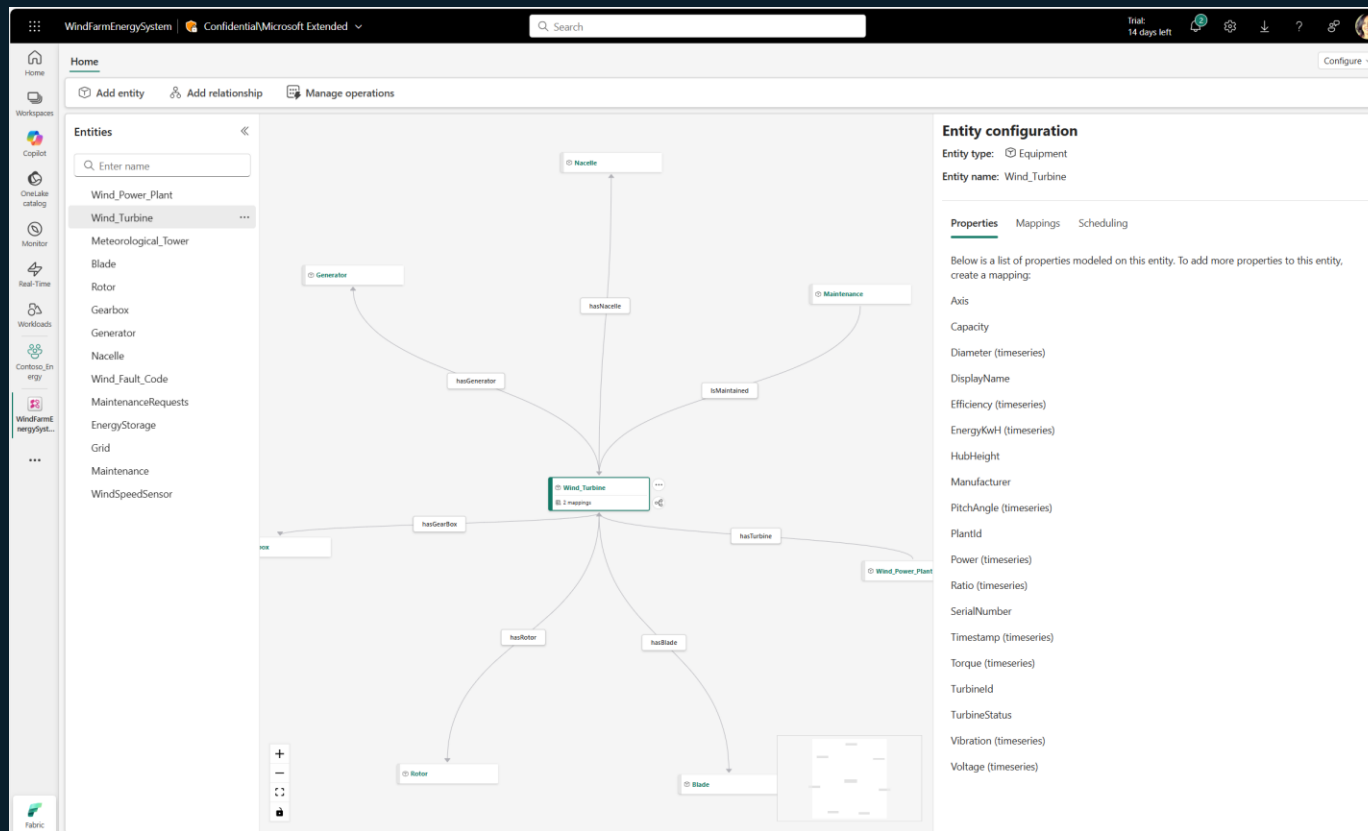
# Build the data foundation for digital twins and AI solutions



AI-powered ontology layer

# Digital twin builder

Public Preview



Simpler, faster way to build and manage digital twins with a **low-code/no-code** approach

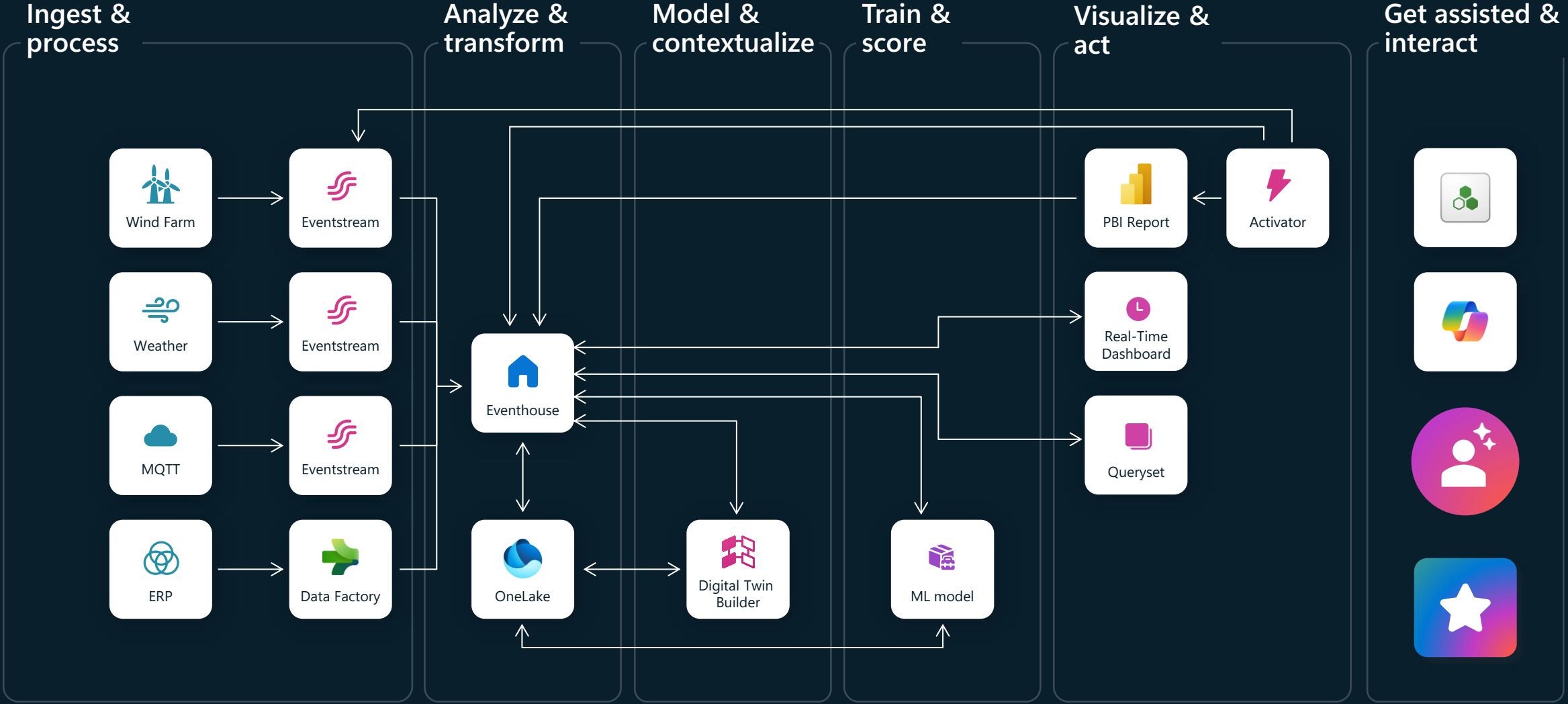
Easily **contextualize and map** data to model assets, processes and systems and create a digital twin

**Drill down** to explore relationships and derive contextualized high value insights

**Unlock insights** with digital twin data in Power BI Copilot and Real-Time Dashboards



# Energy Management



Private Preview

# Anomaly Detection

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Real-Time Intelligence

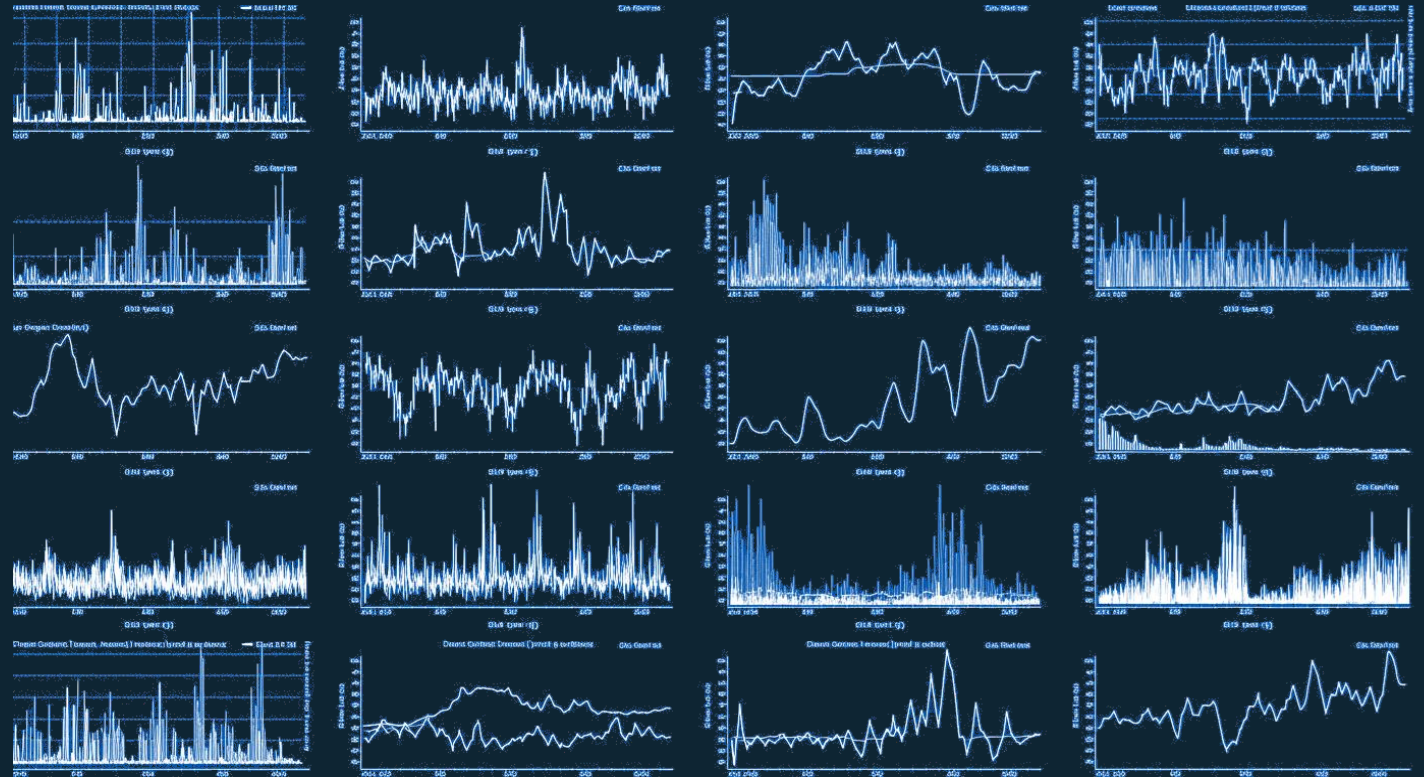
# Finding high-value needles in a haystack

## Anomaly detection

Monitor thousands, or even millions, of data points 24/7, well beyond human capacity

Tailor monitoring for each instance and uncover hidden trends

Detect and act on high-value anomalies in time to make a difference



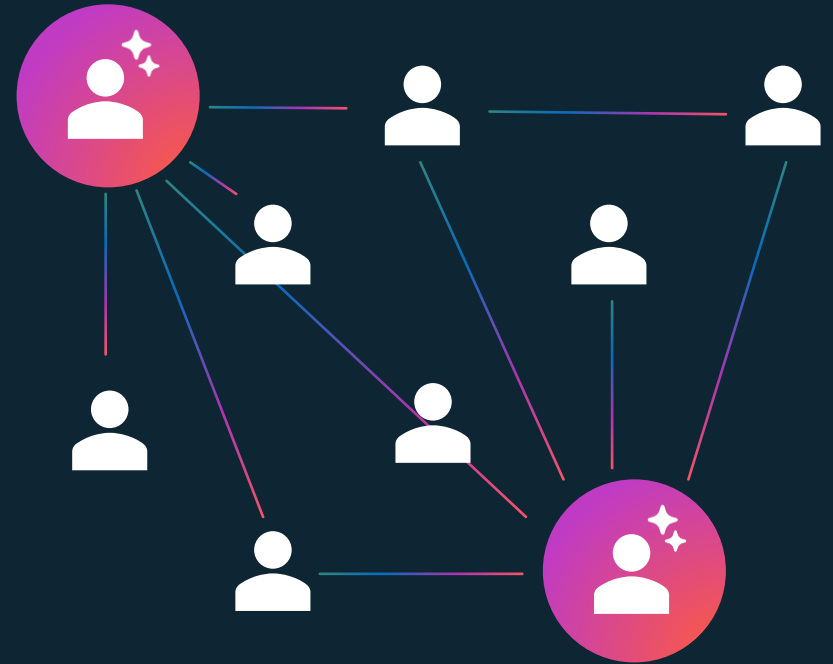
# Elevating your operations to a whole new level

Sneak Peak

## Operational agents

Teach AI-powered agents to observe, decide, notify, and act on your operations 24/7

Augment your operations team with AI agents, freeing them up from repetitive, reactive tasks to drive strategy and innovation



# Building agents using retrieval-augmented generation

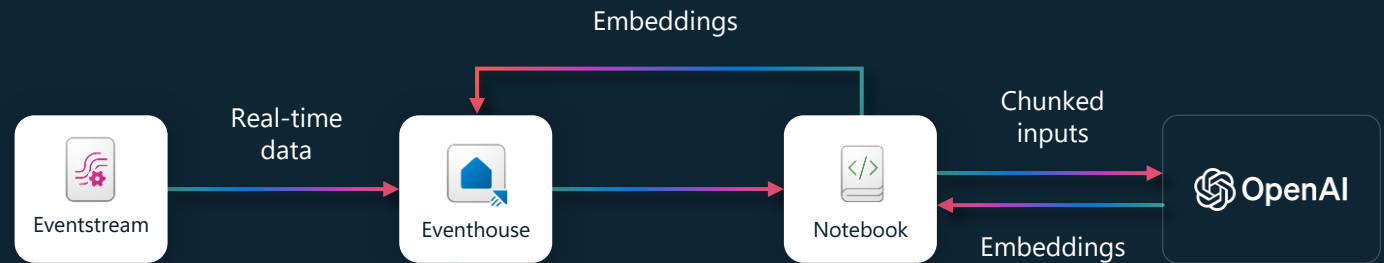
## Real-Time RAG

Develop agents that use fresh, relevant knowledge on the business

Connect real-time data directly into RAG loop using Real-Time Intelligence

Combine the Eventhouse and its vector search with other capabilities in Fabric

### 1. Indexing the embeddings on real-time data



### 2. Serving answers

