

Fabric – Tales from the Field

Ian Pike

Microsoft Senior Technical Specialist

- Data & AI : Fabric, Power BI and SQL Server
- 7+ years at Microsoft
- Work with Public Sector Enterprise Customers
- 20+ years in IT across multiple commercial sectors
- Manchester Data Platform User Group Co-Leader (@McrDataPlatform)

Twitter/ Bluesky : @ianpike

LinkedIn : <https://www.linkedin.com/in/ipike/>



Customer Thoughts....

What's going well ?

- A lot of conversations with customer about what it is and isn't
- Copilot experiences
- Cost model allows flexibility to start smaller
- The trial capacity help understand experiences
- Use the Happy Paths

And some challenges ?

- A lot of conversations about Fabric
- How does it work with existing investments
- Roadmap and GA functionality
- Understanding the cost model
- Patterns and best practices



The unified data platform for the era of AI



Data
Factory



Synapse Data
Engineering



Synapse Data
Science



Synapse Data
Warehousing



Synapse Real
Time Analytics



Power BI



Data
Activator



AI



OneLake



Purview

Unified
architecture

Unified
experience

Unified
governance

Unified
business model

OneLake for all domains

A true data mesh across organization domains

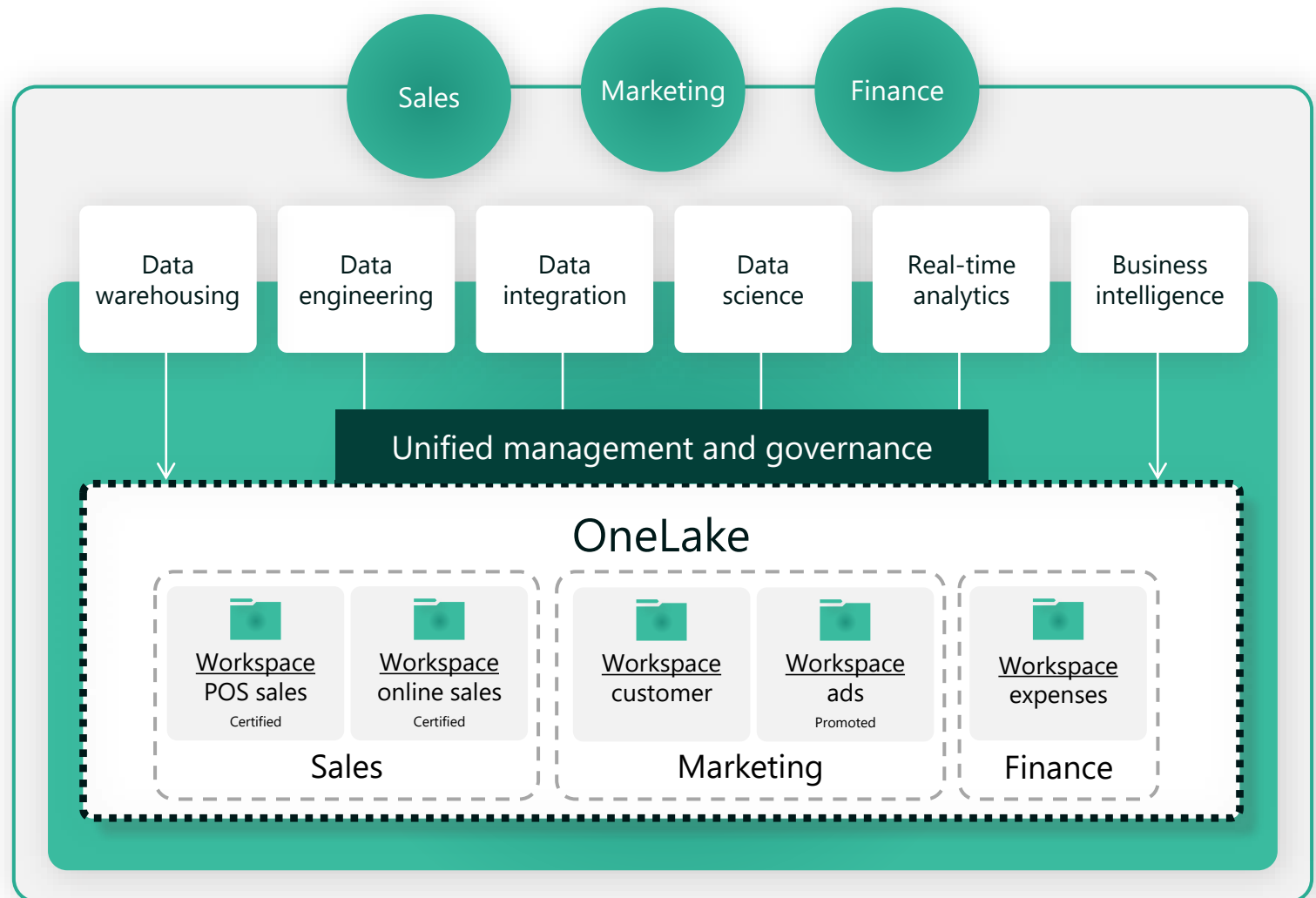
Introducing **domains** as an integral part of Fabric: A domain is a way to logically group **together** all the data in an organization relevant to an area or field, according to business needs

Domains are defined with **domain admins** and **contributors** who can **associate** workspaces and group them together under a relevant domain

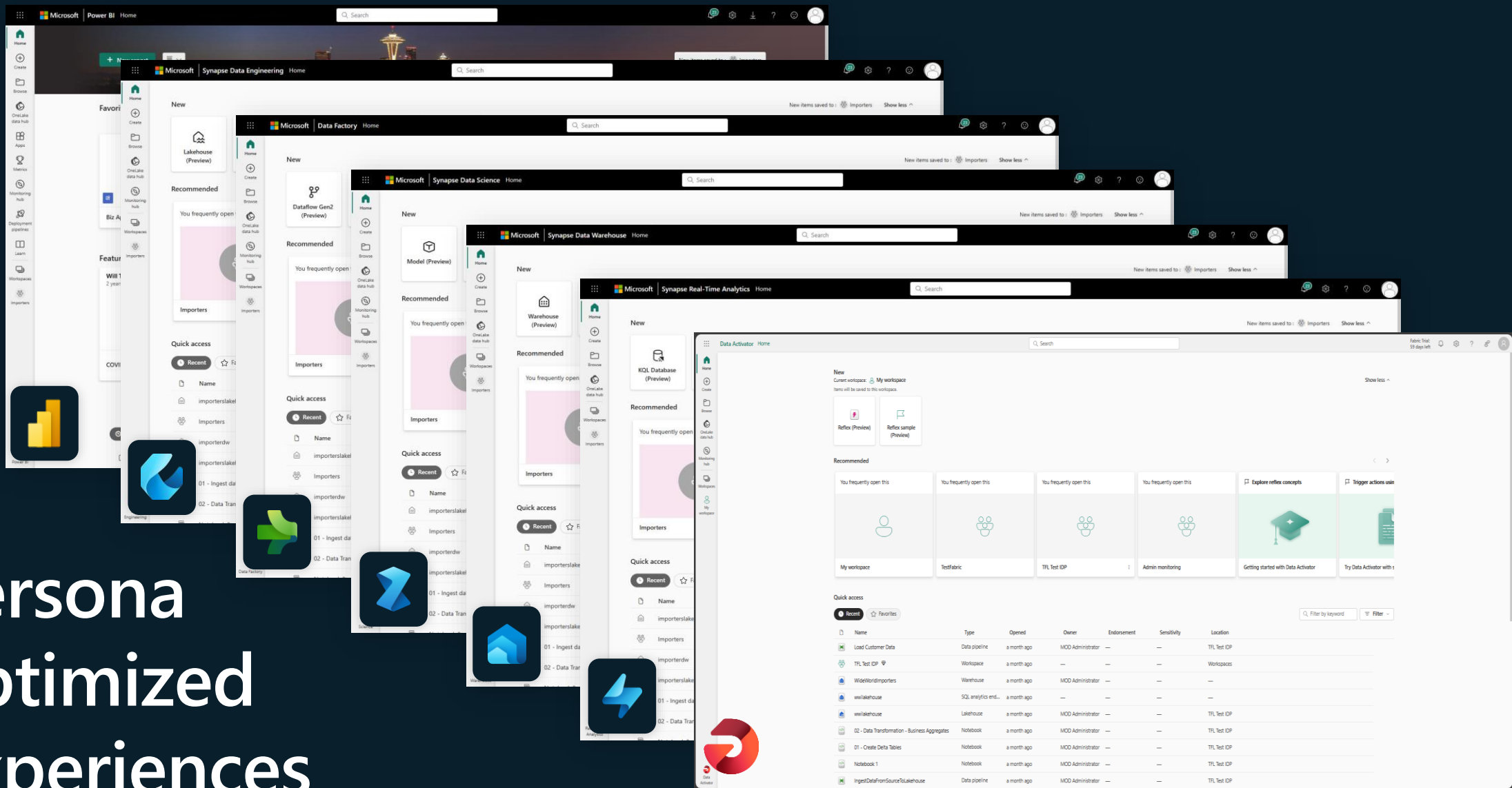
Federated governance can be achieved by delegating settings to domain admins, thus allowing them to achieve more **granular control** over their business area

Domains simplify **discovery** and **consumption** of data across the organization, thus allowing business optimized consumption

Avoid data swamps by endorsing certain data as **certified** or **promoted**, thus encouraging **reuse**.



Persona optimized experiences



Fabric Personas



Data Engineers

- **Execute faster** with the ability to spin up a Spark VM cluster in seconds, or configure with familiar experiences like Git DevOps pipelines for data engineering artifacts
- **Streamline your work** with a single platform to build and operate real-time analytics pipelines, data lakes, lake houses, warehouses, marts, and cubes using your preferred IDE, plug-ins, and tools.
- **Reduce costly data replication** and movement with the ability to produce base datasets that can serve data analysts and data scientists without needing to build pipelines

Serve data via
warehouse or
lakehouse

Supporting experiences:



Data Factory



Data Warehouse



Data Engineering



Real-time analytics



Data Scientists

- **Quickly tune a custom model** by integrating a model built and trained in Azure ML in a Spark notebook
- **Work faster** with the ability to use your preferred data science frameworks, languages, and tools
- **Bypass engineering dependencies** with the ability to use your preferred no-code ML Ops to deploy and operate models in production
- **Tap into proven-at-scale models and services** to accelerate your AI differentiation (AOAI, Cognitive Services, ONNX integration, etc).

Serve
transformed
data

Supporting experiences



Data Science



Azure ML



Data Analysts

- **Avoid slow, progress-stagnating data wrangling** by seamlessly triggering a workflow that can unlock data engineering tools and capabilities quickly.
- **Accelerate your work** with visual and SQL based tools for self-serve data transformations and modeling as well as self-serve tools for reporting, dashboards, and data visualizations
- **Turn data into impact** with industry-leading BI tools and integration with the apps your people use everyday like Microsoft 365

Serve insights
via
embedding

Supporting experiences



Data
Warehouse



Real-time
analytics



Power BI



Business Analyst

- **Make more data-driven decisions** with actionable insights and intelligence in your preferred applications
- **Maintain access to all the data you need**, without being overwhelmed by data ancillary to your role thanks to fine grain data access management controls

Supporting experiences



Power BI



Microsoft 365



Data Stewards

- **Maintain visibility and control of costs** with a unified consumption and cost model that provides evergreen spend optics on your end-to-end data estate
- **Gain full visibility and governance** over your entire analytics estate from data sources and connections to your data lake, to users and their insights

Serve data via warehouse or lakehouse



Fabric Building Blocks

Level settings the basics

Fabric Tenant **Fabric is based on Power BI tenant which is based on O365 tenant**

Fabric **Only one OneLake per Tenant**

Fabric SKUs **Purchase in Azure Portal or enable from PBI Premium Capacity**

C
a
p
a
c
i
t
i
e
s

Office 365

Power BI / Fabric Tenant

One Lake


Domains (optional)

Workspaces
(1 to many)



Licensing evolution

Microsoft Fabric Public Preview >> Microsoft Fabric Generally Available



Power BI

PBI Pro

- Per user
- Part of M365 E5


PBI Premium

- Per user

PBI Embedded

- Per capacity, pay-as-you go

No change



Microsoft Fabric

PBI Premium per capacity

- Per capacity

Fabric capacity


- Pay-as-you-go



Fabric capacity

- Pay-as-you-go, 1-year Reservation

Both purchase options get access to full Microsoft Fabric experience



Azure

Azure Synapse Analytics

- Pay-as-you-go
- Reservation, pre-purchase plan

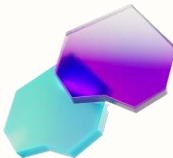
Azure Data Factory

- Pay-as-you-go
- Reservation

Azure Data Explorer

- Pay-as-you-go
- Reservation

No change





Fabric Costs

Two types of costs

Two Costs **Monetary and Compute costs to consider**

Monetary **There is the cost of the capacity (PAYGO Vs RI) and then also OneLake storage**

Compute **The cost of the Fabric Artifacts against the Compute Capacity in CUs?**

Capacity Cost £££

- Are buying via Power BI or Azure SKU
- Will need a Azure Subscription for OneLake Costs

Capacity Cost CUs

- Each Fabric Artifact costs in CUs e.g. Data Factory pipeline or Power BI Report
- Use the Capacity Metrics app to "cost" them

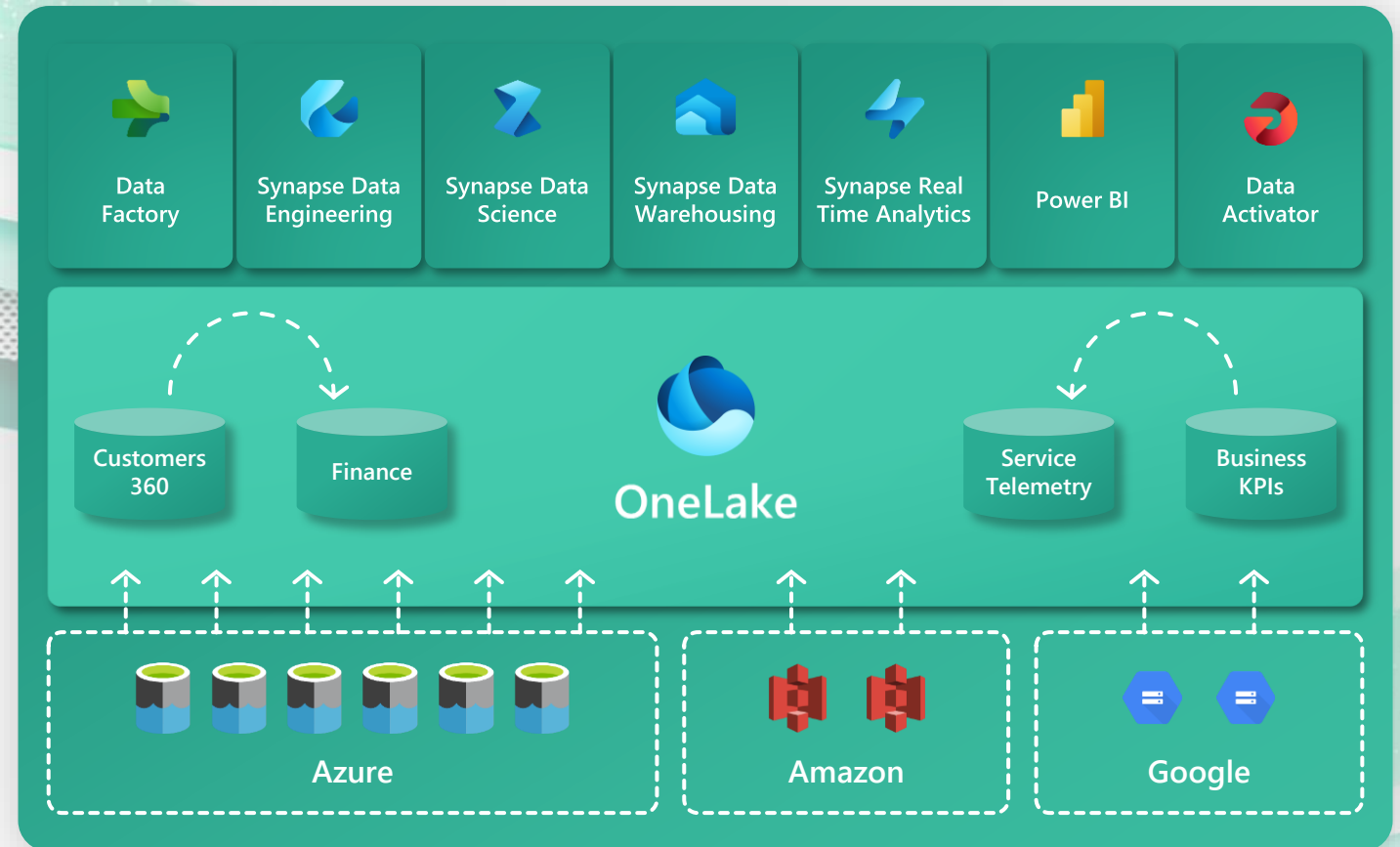
Shortcuts

Shortcuts unify data without copying or moving existing data

This means that data can be used multiple times without data duplication.

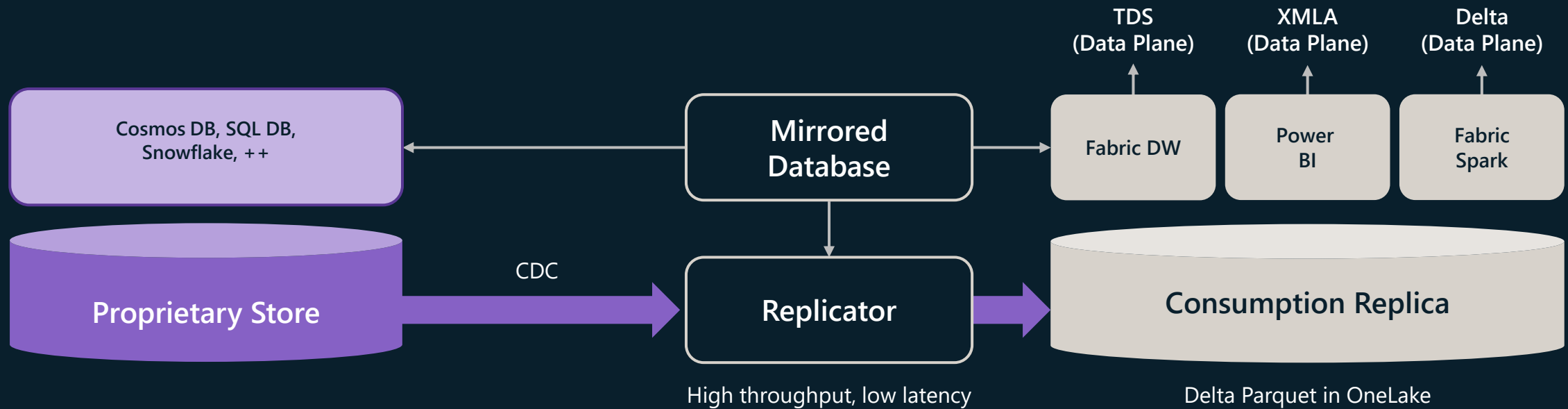
Key Capabilities:

- Create shortcuts within Microsoft Fabric to consolidate data across artifacts or workspaces, without changing ownership of the data
- With shortcuts, data throughout OneLake can be composed together without any data movement
- Shortcuts also allow instant linking of data already existing in Azure and in other clouds, without any data duplication and movement, making OneLake the first multi-cloud data lake
- With support for industry standard APIs, OneLake data can be directly accessed by any application or service



Mirroring in Fabric

Near real-time replication of proprietary database stores with zero-ETL



Better together through OneLake

Open and Governed Lakehouse



Microsoft Fabric



Azure Databricks

All Fabric engines have been redesigned and optimized for delta/parquet as their storage format for tabular data

Azure Databricks can directly read/write data from any Fabric data item stored in OneLake through external link.

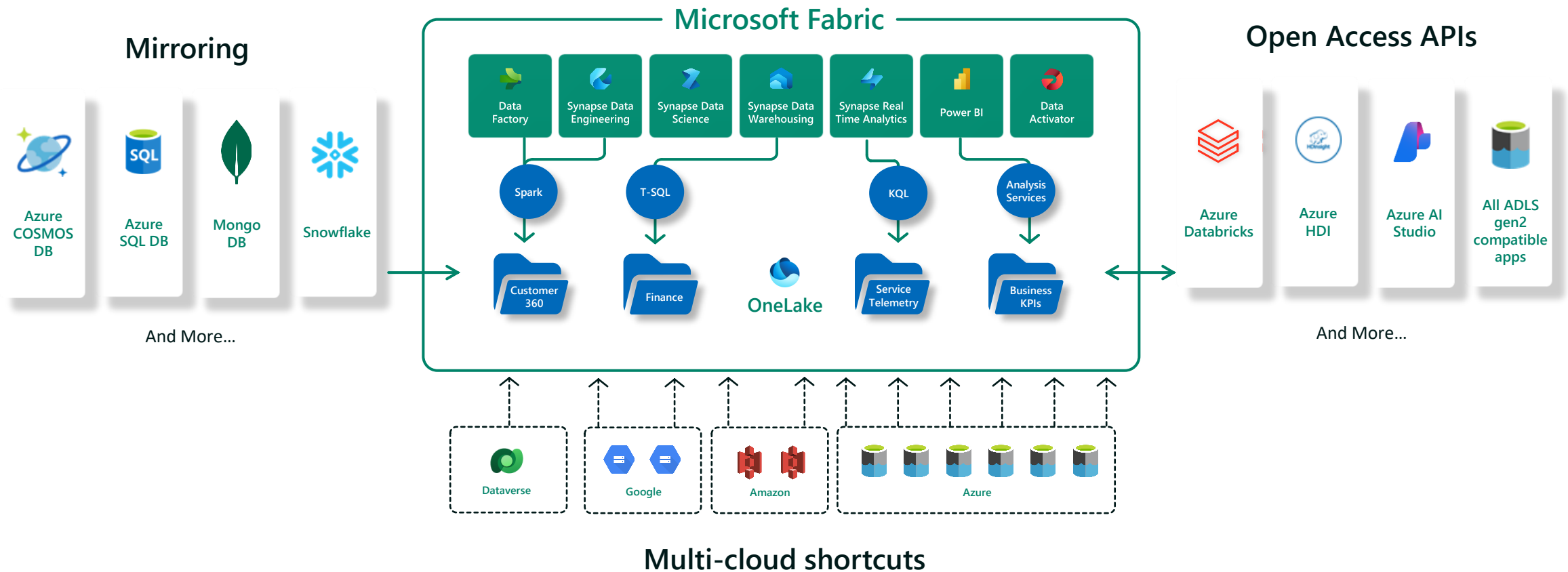
Existing non-Unity Catalog managed data in ADLS gen2 storage can be a shortcut into OneLake.

Any Fabric engine including Power BI with direct lake in OneLake or with shortcut.

Coming soon: Unity Catalog and Fabric integration, Unity Catalog data will be available through Azure Databricks data item enhanced shortcuts experience.

Open and Unified Data Platform

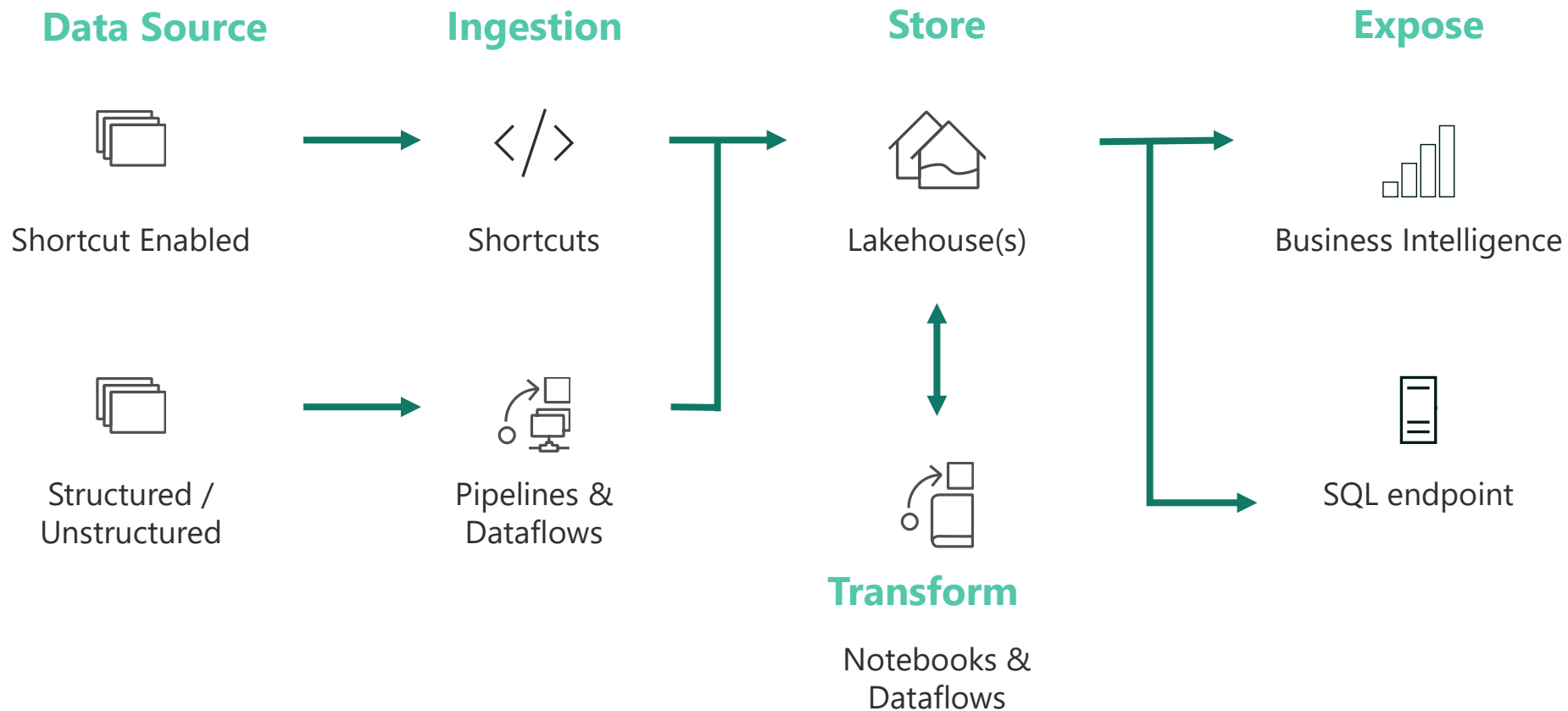
Fabric compute engines



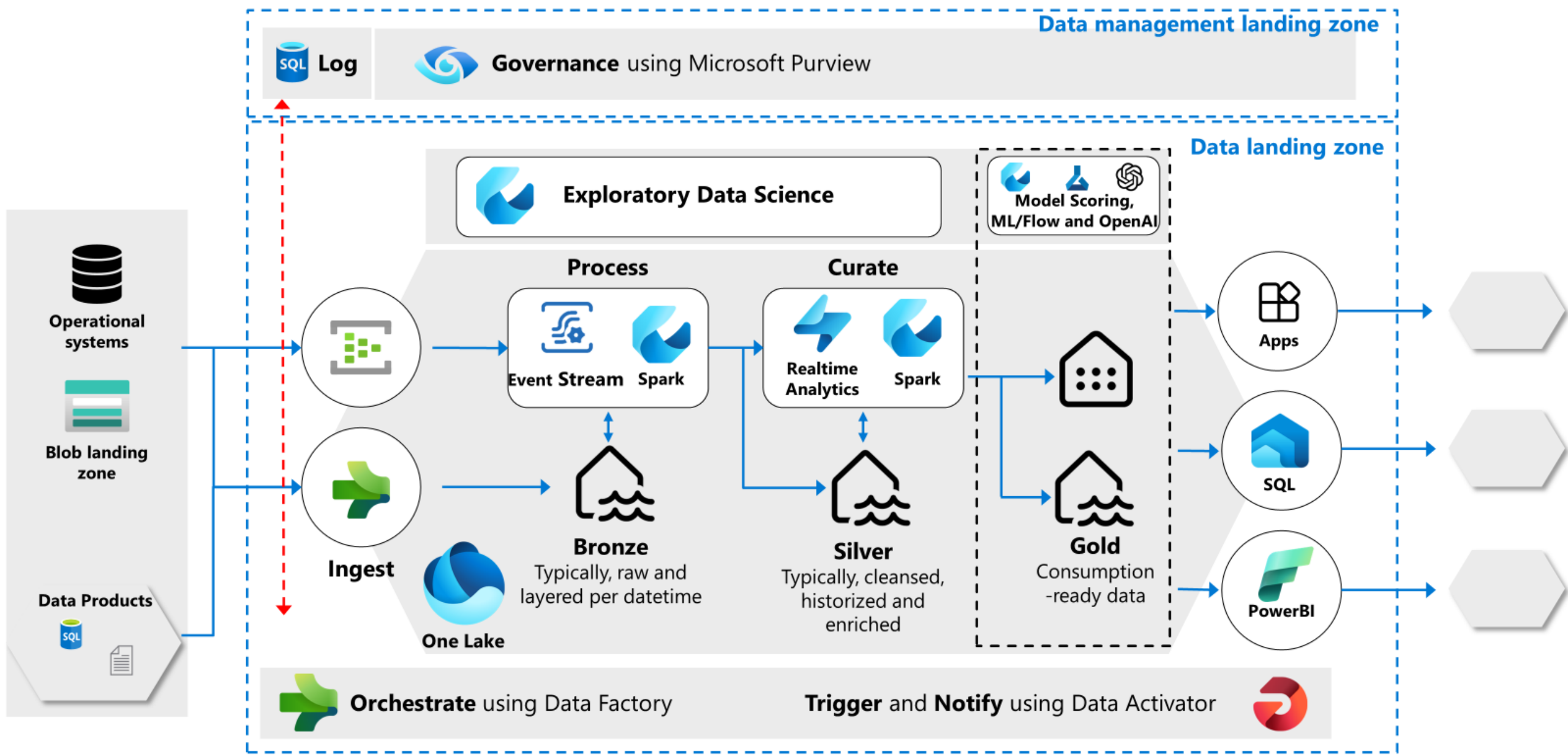


Lakehouse scenario

End-to-end analytics scenario



End to End Analytics with Microsoft Fabric



Fundamental Notes

Fabric Trial

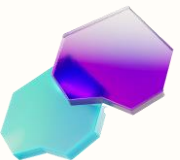
- Trial capacities have started to “count” down from 60 days
- Still available to start within your tenant

How do I enable Fabric

- Find your Power BI Admins (Fabric Admins)

Fabric Co Pilot Public Preview

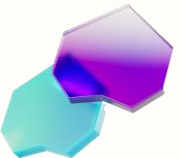
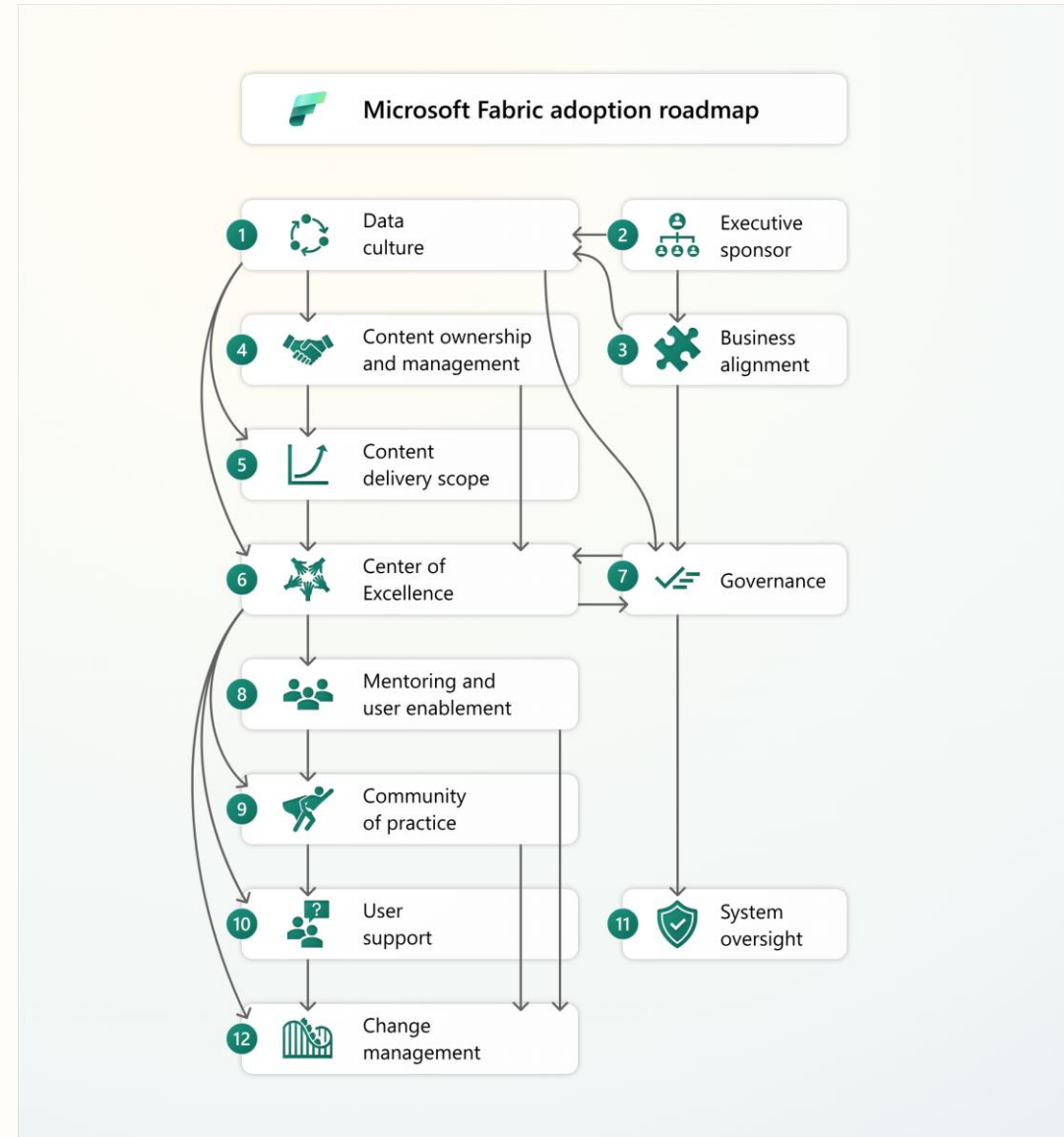
- Globally available now
- Must have P1 or F64 Paid for Capacity to use
- There are multiple experiences in Fabric



Considerations: Governance & Adoption

Adoption Roadmap



- Originally built for Power BI, now Fabric
- 10 areas
- Maturity levels 100-400
- Continuous cycle of review



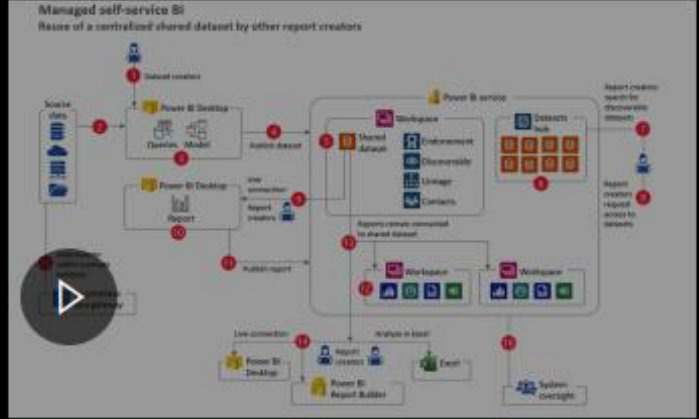
Considerations: Governance & Adoption

Implementation Planning

- Some great docs even if you have implemented Power BI
- Covers BI Strategy for Workspaces
- [Link](#)

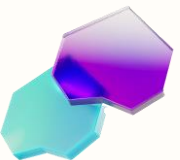


Matthew Roche
Power BI Customer Advisory Team



Power BI
Introduction to Power BI Implementation Planning

Microsoft Power BI
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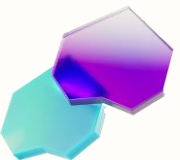
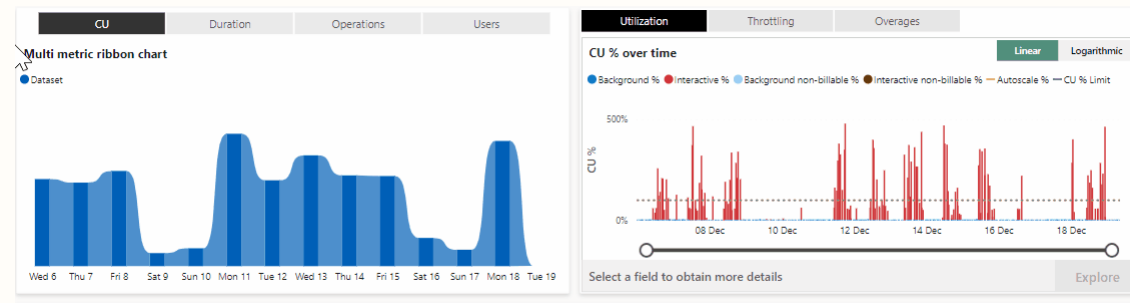
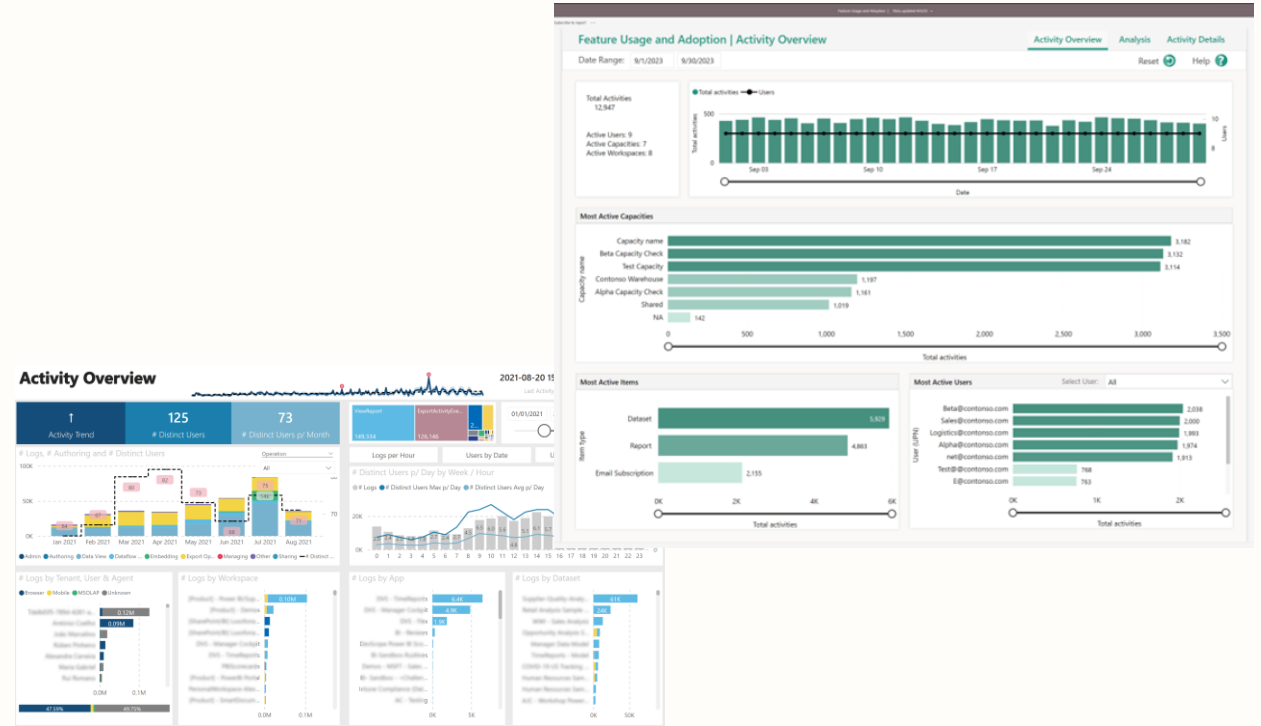
Considerations: Governance & Adoption

Audit Logs and Capacity Metrics App

[Admin Monitoring for Tenant Admins](#)

[Rui Romano GitHub](#)

[Use the Capacity Metrics app to understand CU usage of artifacts in Fabric](#)



Considerations: Deployment & Scale

Do I use Workspace or Capacity for SDLC and Isolation

- Azure DevOps/ CI/CD / Git integration (PBI (multiple), DW, LH, DF, RTA, DE/S)

How do you provision for Capacities

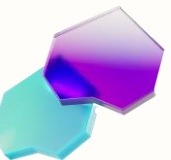
- Prod Vs other (Test / Dev)
- SSAS Platform not like On Prem (PAAS/IAAS)

Deployment of Artifacts

- Pro Developer for Power BI Vs Data Engineer story

Power BI Admin Portal settings

Semantic Link – Business logic available to a wider audience





Microsoft Fabric

Rapid Evolution

Detailed Roadmap available in [Link](#)

Generally Available

OneLake

Data Factory

Synapse Data Engineering

Synapse Data Science

Synapse Data Warehousing

Synapse Real Time analytics

Data Activator

OneLake Shortcut: ADLS2; AWS-S3; DV

Fabric SKU 1Y RI (F-SKU)

Power BI

Purview Security and Compliance

Public Preview

Copilot in Microsoft Fabric

Fabric with Purview Data Catalog

Private Preview

Snowflake Mirroring

Azure SQL Mirroring

Azure CosmosDB Mirroring

MongoDB Mirroring

Coming Soon FY24 H2

Private endpoint tenant level

Spark Row/ Column level security

Onelake Shortcut Google Cloud storage

Coming Later

Synapse Migration Tooling

Oracle DB Mirroring

Databricks Unity Catalog
Integration

End-to-end tutorials – “Happy Paths”

Lakehouse tutorial

<https://learn.microsoft.com/en-us/fabric/data-engineering/tutorial-lakehouse-introduction>

Data Science tutorial

<https://learn.microsoft.com/en-us/fabric/data-science/tutorial-data-science-introduction>

Real-Time Analytics tutorial

<https://learn.microsoft.com/en-us/fabric/real-time-analytics/tutorial-introduction>

Data warehouse tutorial

<https://learn.microsoft.com/en-us/fabric/data-warehouse/tutorial-introduction>

Power BI tutorial

<https://learn.microsoft.com/en-us/power-bi/fundamentals/fabric-get-started>

Data Factory tutorial

<https://learn.microsoft.com/en-us/fabric/data-factory/tutorial-end-to-end-introduction>

Weekly Fabric Releases

Rapid pace of innovation

Microsoft | Fabric Blog Community Support


Microsoft Fabric Blog

Aug 2023


Blog > June 2023 > Microsoft Fabric August 2023 update

Microsoft Fabric August 2023 update

Announcements Apache Spark Core Data Activator Data Factory Data Science Data Warehouse Monthly Update Real-time Analytics Synapse

 September 5, 2023 by Ryan Majidimehr [in](#) [Share](#) [Tweet](#) [Like](#)

Welcome to the August 2023 update. We have lots of features this month including the new layout switcher for Power BI, SSD caching in Synapse Data Warehouse, in-line Python support for KQL in Synapse Real-time Analytics, lookup activity for Data Factory Dataflows, and much more. Continue reading for more details on our new features!



FABRIC MONTHLY UPDATE

Microsoft | Fabric Blog Community Support


Microsoft Fabric Blog

Sept 2023

Blog > All > Microsoft Fabric September 2023 update

Microsoft Fabric September 2023 update

Announcements Apache Spark Community Core Data Factory Data Science Data Warehouse Monthly Update OneLake Real-time Analytics Synapse

 September 29, 2023 by Ryan Majidimehr [in](#) [Share](#) [Tweet](#) [Like](#)

Welcome to the September 2023 update.

We have lots of features this month including updates to the monitoring hub, Fabric Metrics app, VS code integration for Data Engineering, Real-time data sharing and many more. Continue reading for more details on our new features!

Contents

- Core
 - [Monitoring hub - column options](#)
- OneLake
 - [OneLake file explorer \(v.1.0.10\) - Menu Option to View Workspaces and Items Online](#)
- Power BI
 - General
 - [Upgrade Power BI Desktop .NET Framework to 4.7.2 or newer](#)
- Reporting

Microsoft | Fabric Updates Community Support


Microsoft Fabric Updates Blog

Oct 2023

Updates > All > Microsoft Fabric October 2023 update

Microsoft Fabric October 2023 update

Announcements Apache Spark Core Data Activator Data Factory Data Science Data Warehouse Monthly Update Real-time Analytics Synapse

 October 27, 2023 by Ryan Majidimehr [in](#) [Share](#) [Tweet](#) [Like](#)

Microsoft Fabric October 2023 update

We have a lot of features this month including updates to the Item type icons, Keyword-Based Filtering of Tenant Settings, On-object Interaction updates, Eventstream Kafka Endpoints and many more. Continue reading for more details on our new and updated features!

[Core](#)

- [Item type icons](#)

[Admin](#)

- [Keyword-Based Filtering of Tenant Settings](#)

[Power BI](#)

- [Reporting](#)
 - [Power BI Desktop OneDrive and SharePoint integration](#)

Learning Fabric Notes:

New Fabric certification and Fabric Career Hub

- [Blog Post](#)

Certification for Fabric ?

- DP 600 Exam – In Beta
- [Register for Exam](#)

Cloud Skills Challenge - Fabric Analytics Engineer

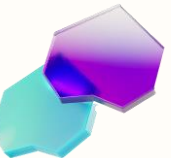
- [Register here](#)
- 30 Days to complete, 50% off DP600 exam

SQL Bits Training Day :

- From Beginner to Certified: A Fabric Analytics Engineer Workshop
- [Details for 1 day workshop](#) (There are Discount codes)

Other

- Guy In A Cube , Synapse Espresso
- Many YouTube Channels/Recordings (for example Endjin, Advancing Analytics, Simpsons)



Expand governance and security beyond Fabric with Microsoft Purview



**Microsoft
Fabric**

Reshape how you access, manage, and act on data and insights by connecting every data source and analytics service together in Fabric



**Microsoft
Purview**

Keep your data safe and governed with unified data governance, information protection, and security and compliance solutions

Data ownership

Unified governance

**Unmatched security
& compliance**

Gain full visibility and control with Fabric and Purview

Purview-powered features included in Fabric



Admin portal and monitoring



Capacity metrics



Domains and workspaces



One security



Endorsements



Data lineage and impact analysis



Metadata scanning



Purview Hub in Fabric



Purview Information Protection policies¹



Purview Data Loss Prevention policies¹



Purview Audit¹



Free Purview Data Map and Catalog



Microsoft Purview services ideal for Fabric



Purview Data Map²



Purview Data Catalog²



Purview Data Estate Insights²



Purview Data Sharing²



Purview Data Policy²



¹Microsoft 365 E5 Compliance license required



²Microsoft Purview data governance capacity required



Govern and secure your data estate

