Microsoft

Microsoft Partner Project Ready

Implement with Impact

Modern Data Platform with Azure Databricks

<Speaker name or subtitle>

<Date>

Day 2 of 3

Technofocus

Course Plan and Learning Objectives

Day 1

Module 1 - Introduction to Azure Databricks
- Azure Databricks: A Data Intelligent Platform
- Why Azure Databricks
- Decision guide: Azure Databricks vs. Microsoft Fabric

Module 2 - Migration to Azure Databricks
- Microsoft Cloud Adoption Framework for Azure
- Migration strategies
- Data landing zones
- Migration scenarios

Interactive Simulated Lab Experience
- End-to-End Streaming Pipeline with Lakeflow Declarative Pipelines in Azure Databricks

Day 2

Module 3 - Integration with Azure
- Seamless integration with Microsoft Azure services
- Connect to Azure Data Lake Storage (ADLS) Gen2 and Blob Storage
- Leverage Azure Databricks for Azure Cosmos DB Operations
- Secret management with Azure Key Vault
- Connect Azure Databricks to Azure Event Hubs

Module 4 - Integration with Microsoft Fabric and Power BI
- Data Intelligence with Azure Databricks and Microsoft Fabric
- Connect Power BI to Azure Databricks
- Integration with Azure Data Factory
- Mirroring Azure Databricks Unity Catalog

Interactive Simulated Lab Experience
- Setup and use Unity Catalog for Data Management in Azure Databricks
- Real-Time Streaming with Azure Databricks and Azure Event Hubs

Day 3

Module 5 - Integration with Azure AI Foundry
- Azure Databricks connector in Azure AI Foundry
- Mosaic AI and machine learning on Azure Databricks
- Query Generative AI model serving endpoints
- Databricks Assistant, AI/BI Genie and AI Functions on Azure Databricks
- Chat with LLMs and prototype GenAI apps using AI Playground
- Build and optimize agents on your data with Agent Bricks

Module 6 - Security and Governance
- Integrate Azure Databricks with Microsoft Purview
- Integration of Azure Databricks Unity Catalog with Microsoft Purview

Module 7 - Well-architected for Azure Databricks
- Lakehouse implementation: Principles and best practices
- Azure Databricks well-architected framework

Interactive Simulated Lab Experience
- Responsible AI with Large Language Models using Azure Databricks and Azure OpenAI
- Connect to and manage Azure Databricks in Microsoft Purview

04
Integration with Microsoft Fabric and Power BI

Data Intelligence with Azure Databricks and Microsoft Fabric

Microsoft Fabric

The unified data platform for AI transformation

Data Factory

Analytics

Databases

Real-Time Intelligence

Power BI

Fabric Platform

AI

OneLake

Governance

Microsoft Fabric

The unified data platform for AI transformation

AI-powered data platform

Complete data platform

Unified, SaaS-ified

Secured and governed

Open and AI-ready data lake

OneLake

Multi-cloud

Open at every tier

AI-enabled business users

For every business user

Built into Microsoft 365

M365 Copilot Integrated

OneLake

A single data lake for the entire organization

Unified data lake for everyone

Connect to any source

Infinite scale

Dash mesh built-in

Open at every level

Open Delta Parquet format

One copy across engines

Easy interoperability & extensibility

Discoverable while secure

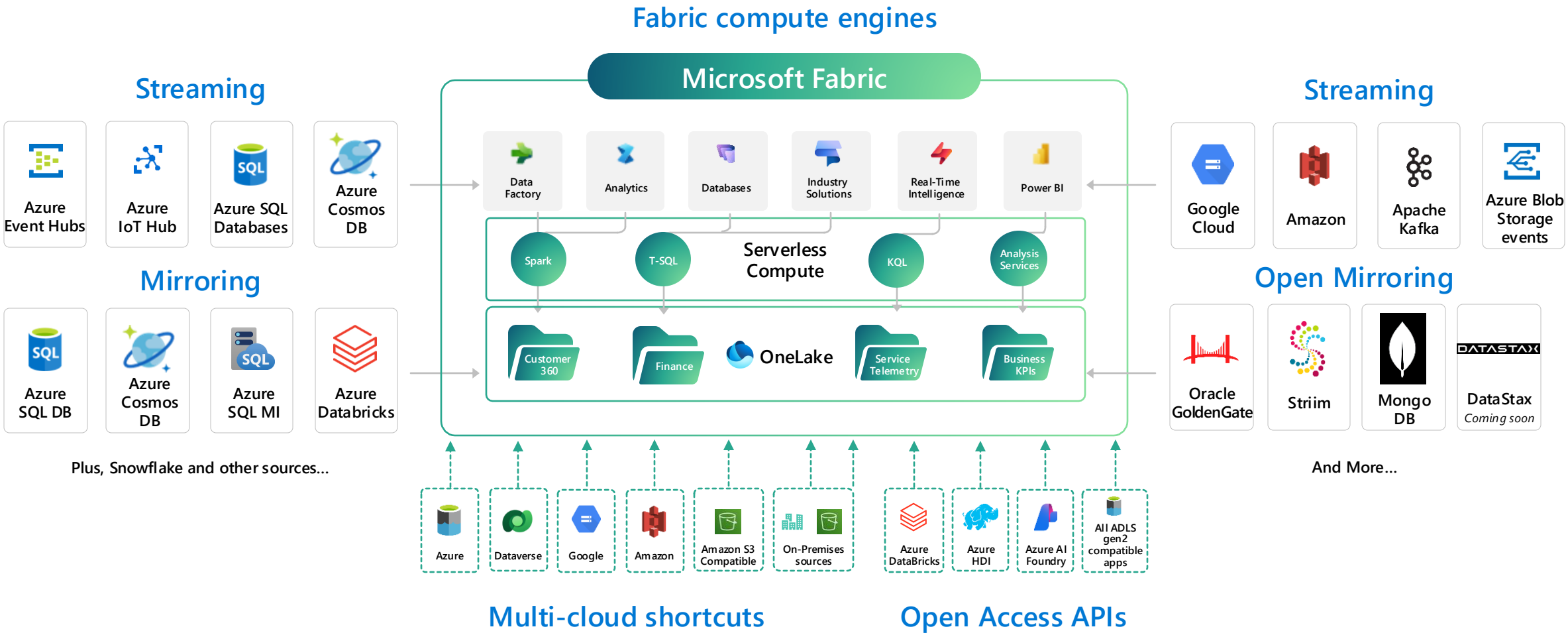
Intuitive data discovery

Industry-leading security

Extensive governance tools

All roads lead to OneLake

Creating Data Gravity in OneLake



Extend the value of Azure Databricks with Microsoft Fabric

Rich data management to simplify your data analytics workloads

Lake centric and open

Easily connect to the clouds and services you need to an open, scalable analytics solution, standardized on the same format as Databricks

Complete analytics platform

Use a single product with a unified SaaS experience and architecture that provides role-specific capabilities for all data professionals

Empower every business user

Equip everyone with access to powerful, self-serve analytics to innovate faster, enabling real-time insights that unlock impact

AI-powered experiences

Seamlessly augment analytics systems with Generative AI to reduce data estate fragmentation

Lake centric and open

Connect the clouds and services you need to an open, scalable analytics solution, all standardized on Apache Parquet format

- Create, integrate, manage, and operate data lakes standardized on Apache Parquet format; the same proprietary data format as Azure Databricks
- Intuitively organize your data in Microsoft Fabric's data lake—–OneLake—–for central data discovery, sharing, governance, and compliance
- Easily share data between users and applications using "Shortcuts" without having to move or duplicate data

Complete analytics platform

Use a single product with a unified experience and architecture that provides role-specific capabilities for all data professionals

- Leverage an integrated data suite and architecture from one vendor
- Enjoy your data experience as a software-as-a-service (SaaS) for automatic integration, optimization, and near real-time insights
- Access seven core workloads targeting a range of data roles, from data engineers and analysts to data warehousing professionals and data scientists

Empower every business user

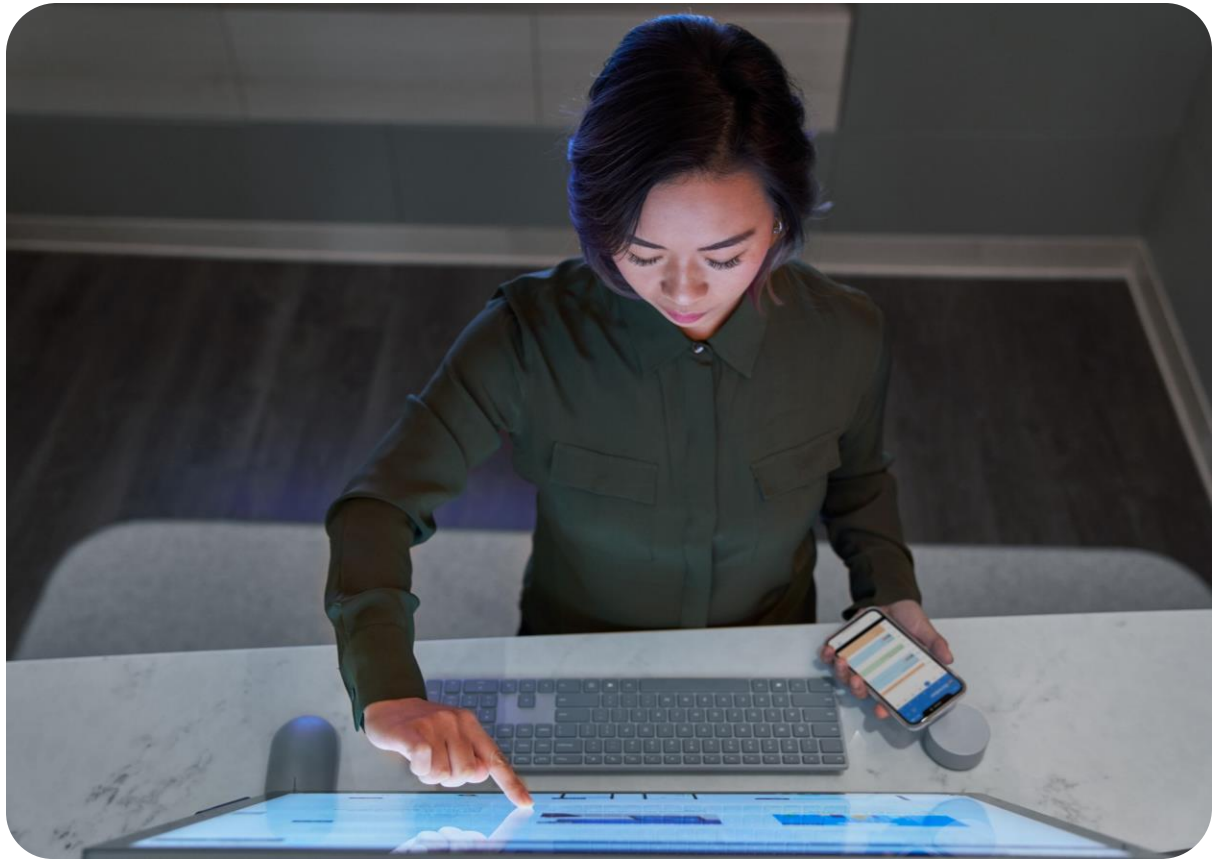
Equip everyone with access to powerful, self-serve analytics to innovate faster, enabling real-time insights that unlock impact

- Drive a data culture that equips all data professionals and enables democratization for better decision-making
- Bring together data experiences like Data Integration, Data Engineering, Data Science, Data Warehouse, and Real-Time Analytics in a single, unified solution
- Choose the analytics capabilities that work best for you and your data scenario without reshaping data

AI-powered experiences

Seamlessly augment analytics systems with Generative AI to reduce data estate fragmentation

- Unlock the full potential of your data with Copilot and use conversational language to create data pipelines, generate code, build models, or visualize results
- Create conversational language experiences that combine Azure OpenAI Service models and their data and publish them as plug-ins
- Safeguard your data with best-in-class security, compliance, and privacy policies that build upon Microsoft's existing commitments



Microsoft Fabric and Azure Databricks

DREAM demo architecture and integration

Microsoft Fabric with Azure Databricks DREAM Demo

- Click-by-click demo here
- Detailed demo video here
- All demo resources here

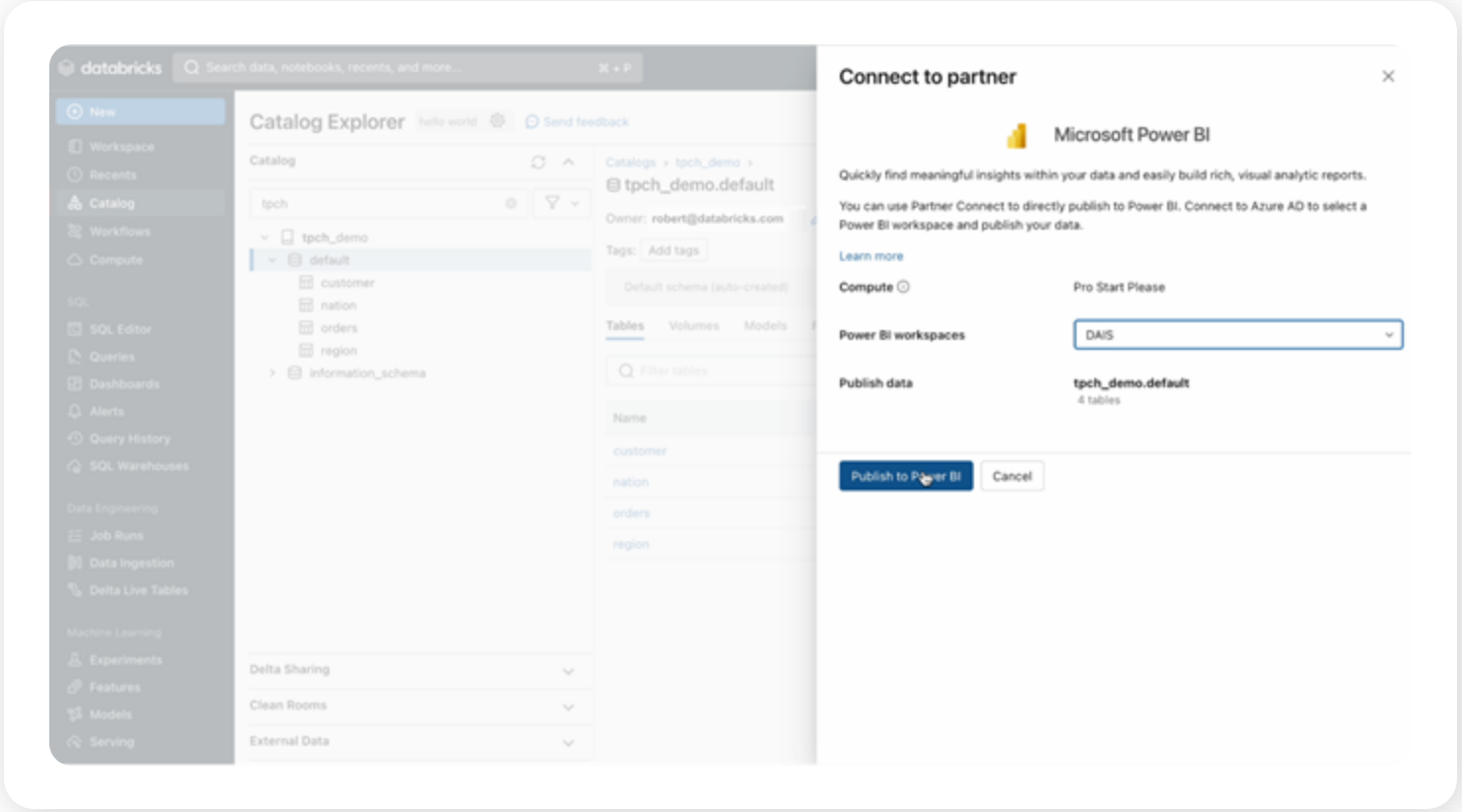
Modern Analytics with Azure Databricks DREAM demo

- Detailed demo video here
- Click-by-click demo here

Connect Power BI to Azure Databricks

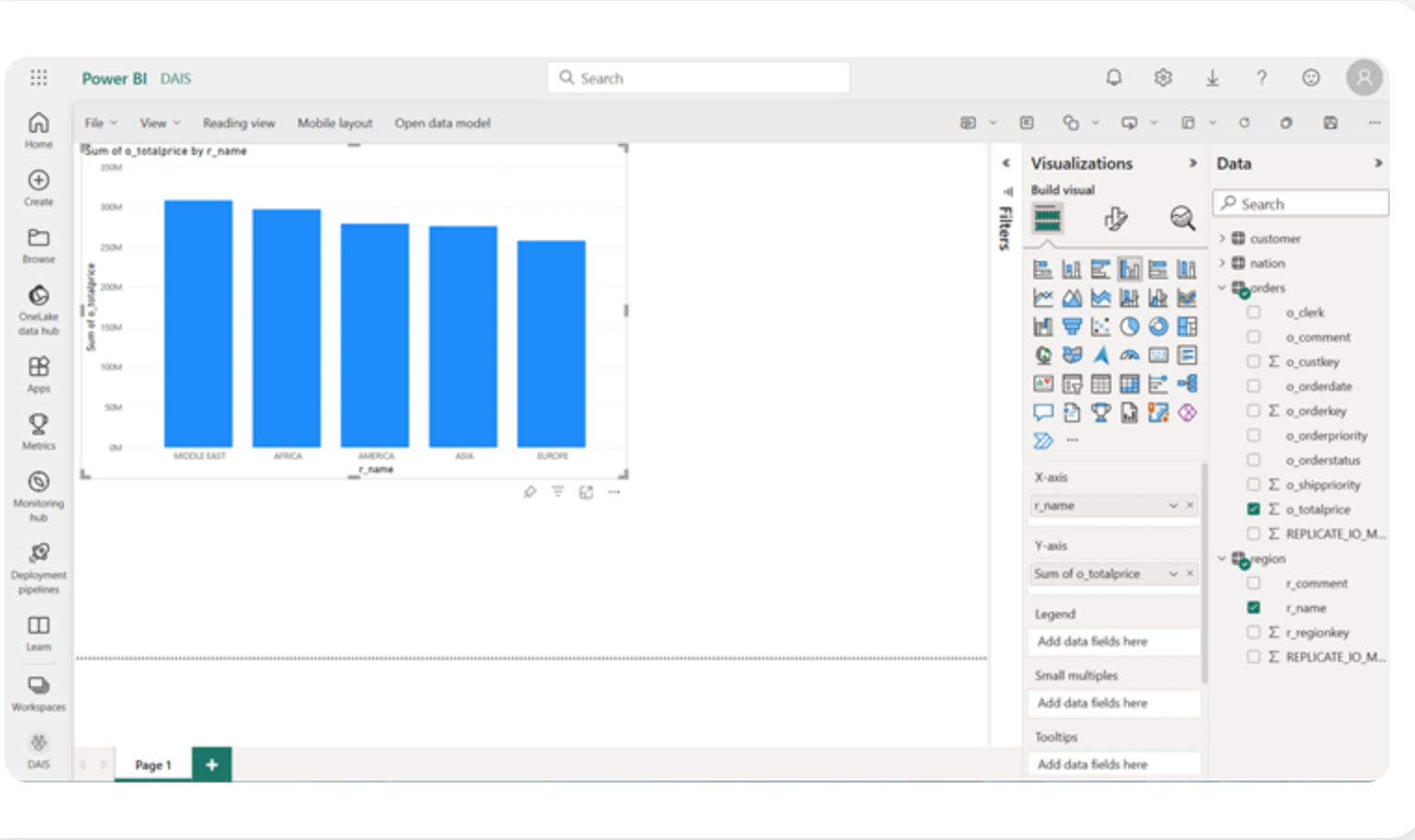
Easily serve Azure Databricks data to Power BI in Fabric

- Gain mature, proven connectivity between Power BI and Databricks SQL Warehouse
- Support DirectQuery, Import, Composite modes
- Support Power BI copilot capabilities
- Support all Unity Catalog governance capabilities
- Access all Databricks optimizations (e.g. Liquid Clustering, Auto Optimizations, Materialized Views, etc.)

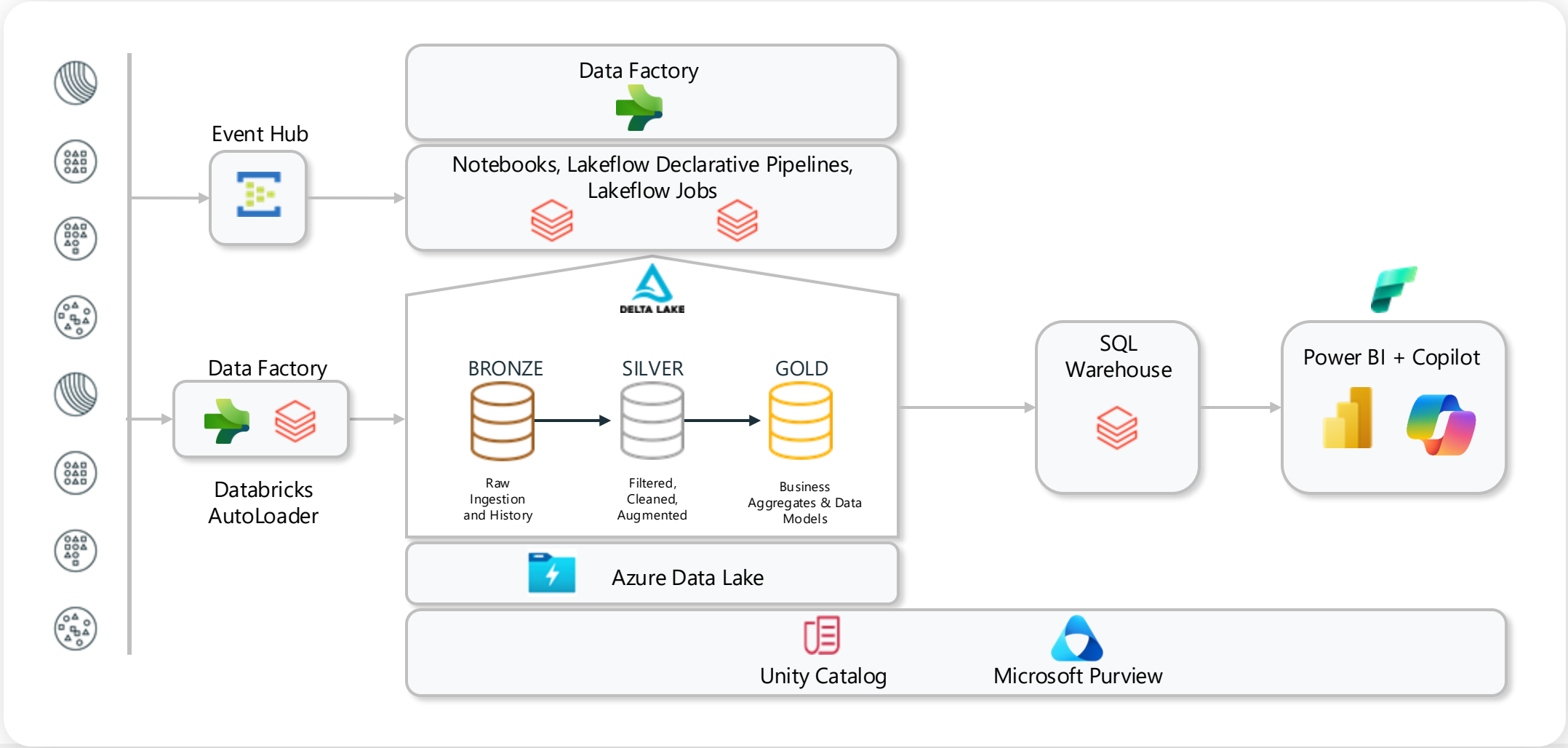


Achieve out-of-the-box performance and seamless catalog integration

- Directly publish datasets to Power BI in Fabric, publishing from Databricks UI
- Support Azure AAD and Direct Query on AWS Databricks
- Gain long running query support when using Azure AD
- Improve performance with better query pushdowns
- Use Delta format instead of any other file formats



Serve data to Power BI in Fabric



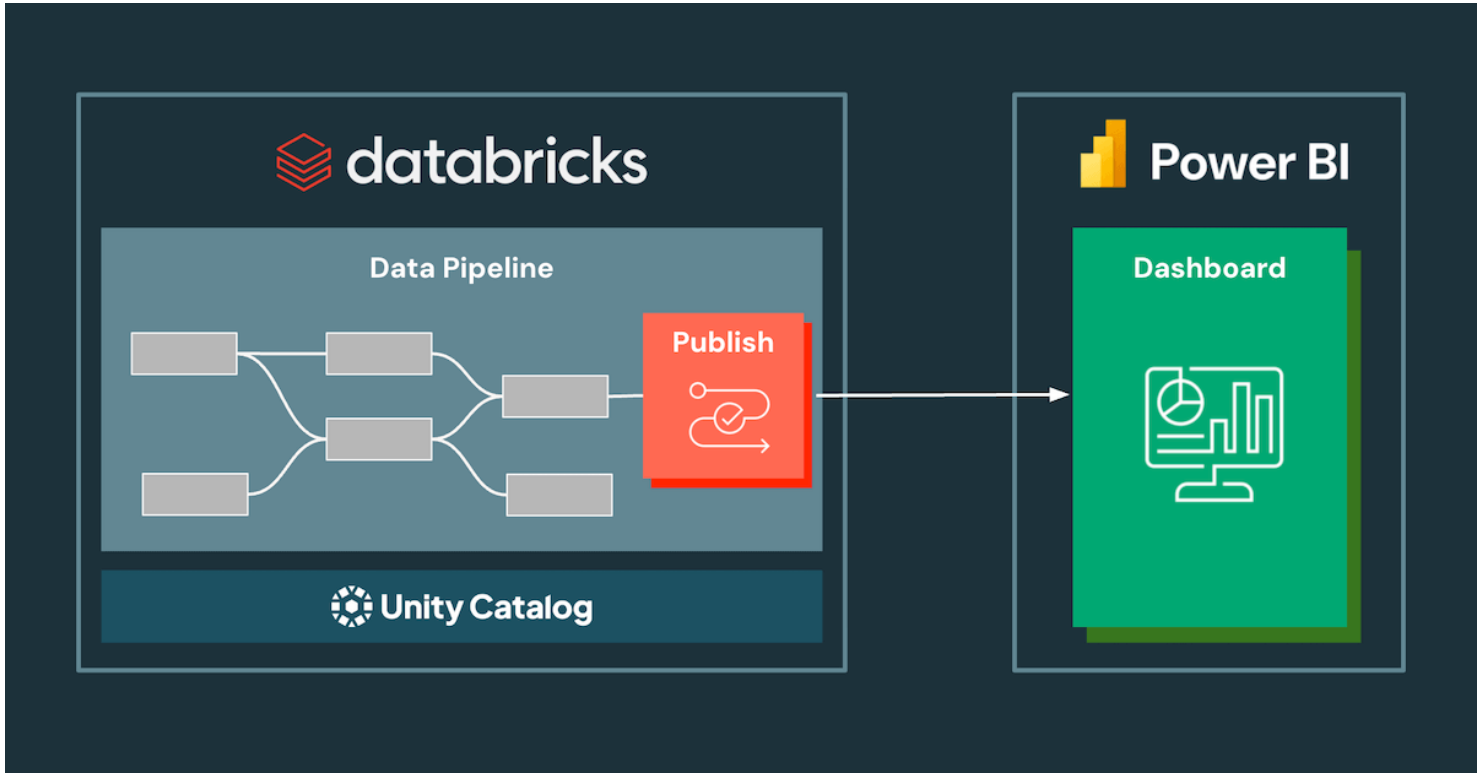
*Note: refer to seller guidance and present this section to Databricks users

Demo

Connect Power BI to Azure Databricks

Publish to Power BI from Databases

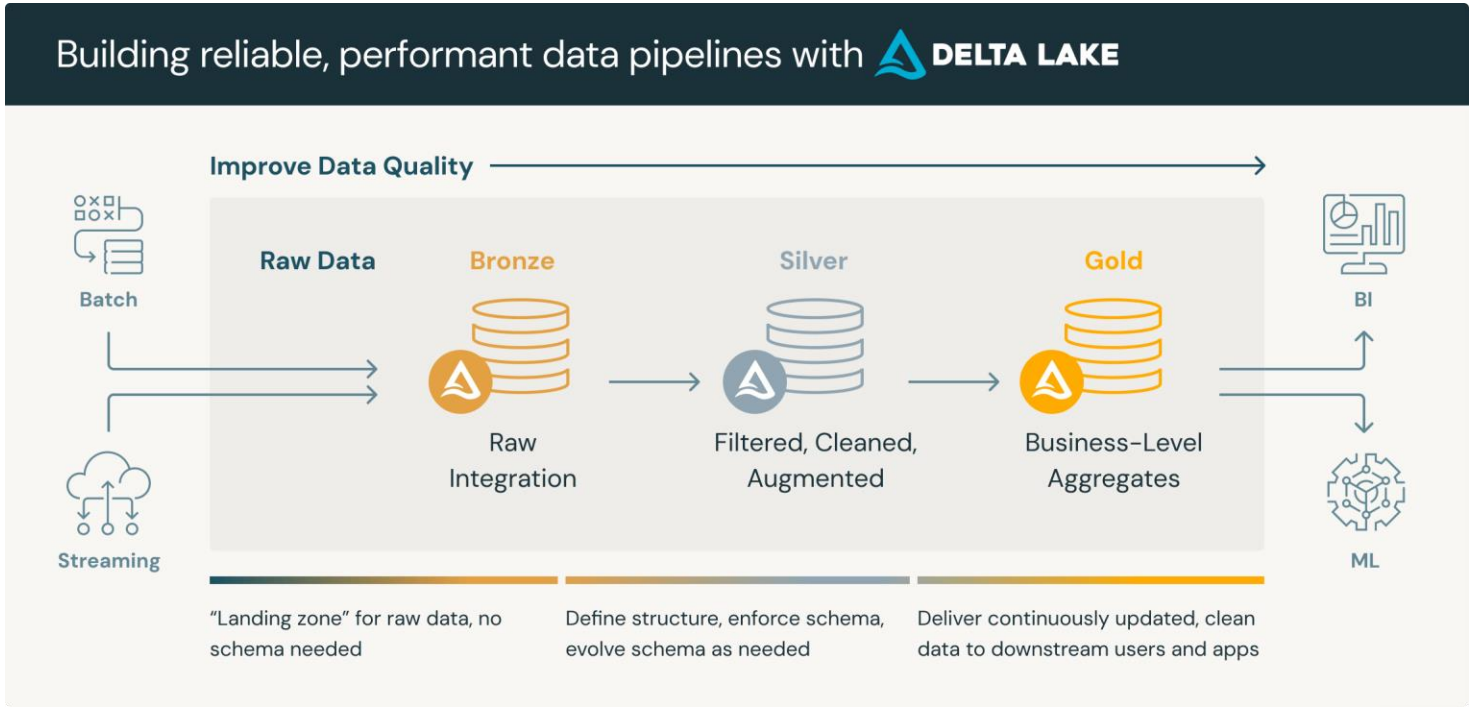
- Power BI tasks support publishing, updating, and refreshing semantic models in Import, Direct Query, and Dual Storage modes, providing you with full flexibility to balance performance and security



Power BI on Azure Databricks | Best Practices

Data preparation

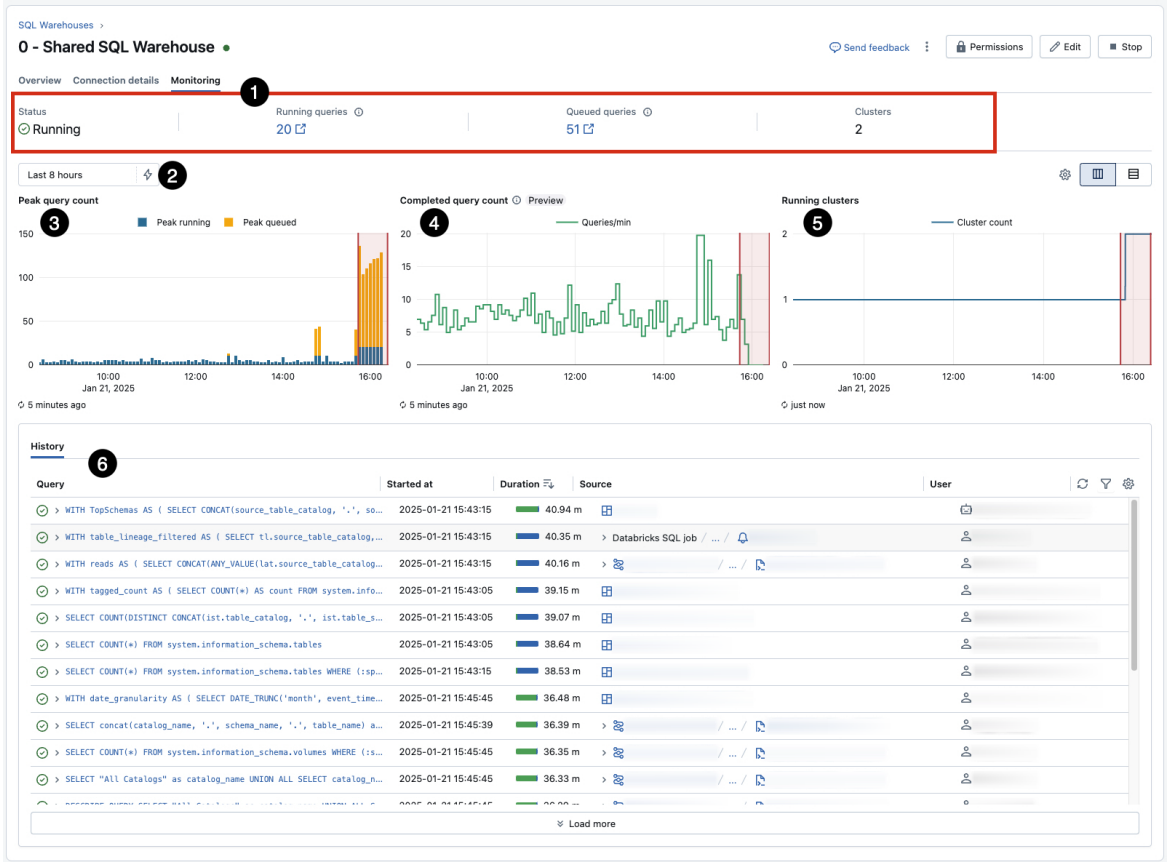
- Adopt medallion architecture on Delta Lake and serve the Gold layer only
- Opt for a star schema for better performance of Power BI
- Leverage SQL views and persisted tables with the required granularity
- Use auto-generated columns
- Use Liquid Clustering
- Periodically compute statistics or use automatic statistics



Power BI on Azure Databricks | Best Practices

SQL serving

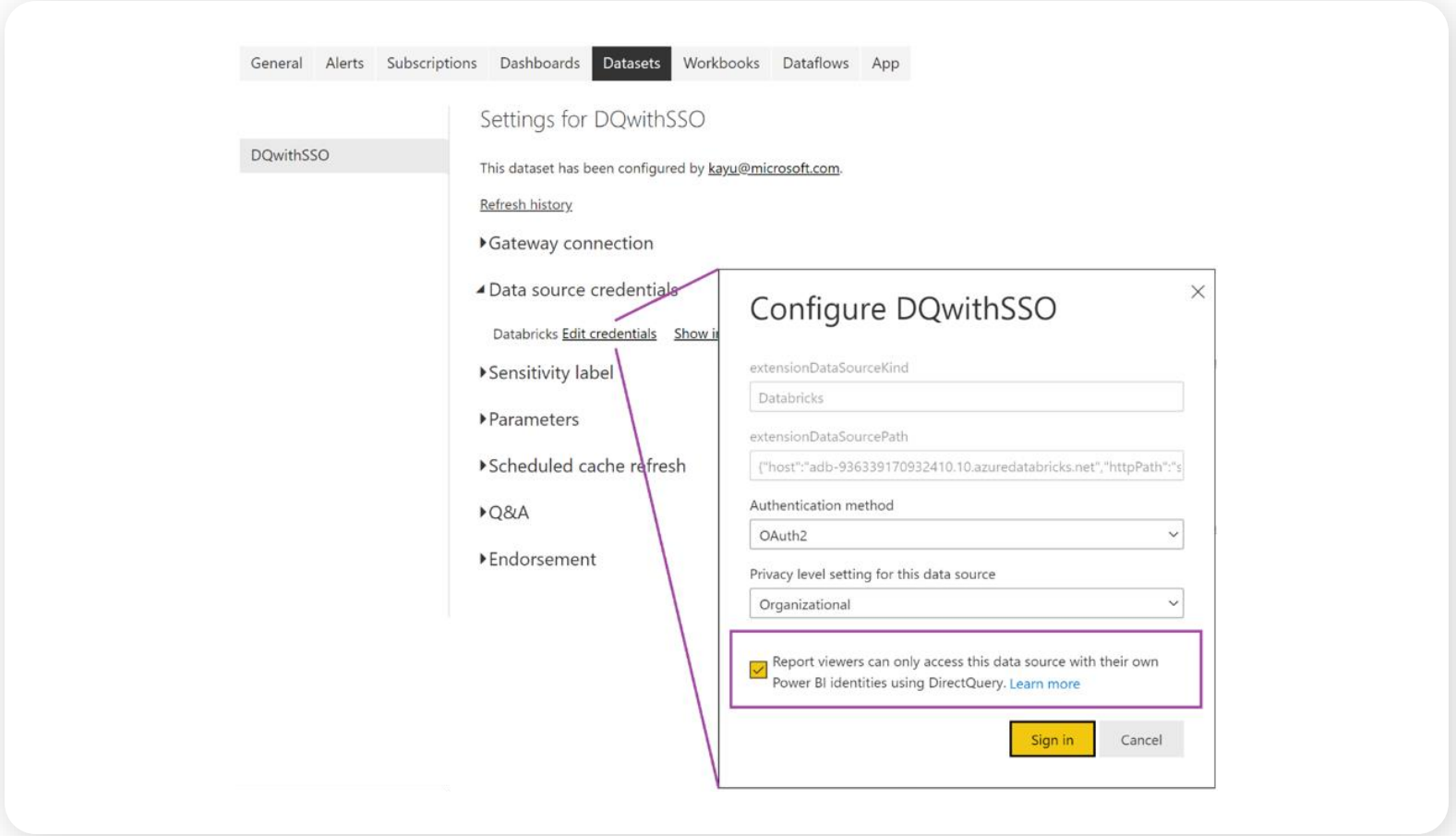
- Use SQL Serverless warehouse
- Enable SQL warehouse Auto stop (scale-to-zero) only if the SLA permits
- Use higher cluster size for larger datasets
- Use the same SQL Warehouse whenever the same dataset is queried
- Use separate SQL warehouses for different workloads and/or business units
- Monitor query response time and scaling



Power BI on Azure Databricks | Best Practices

Power BI integration

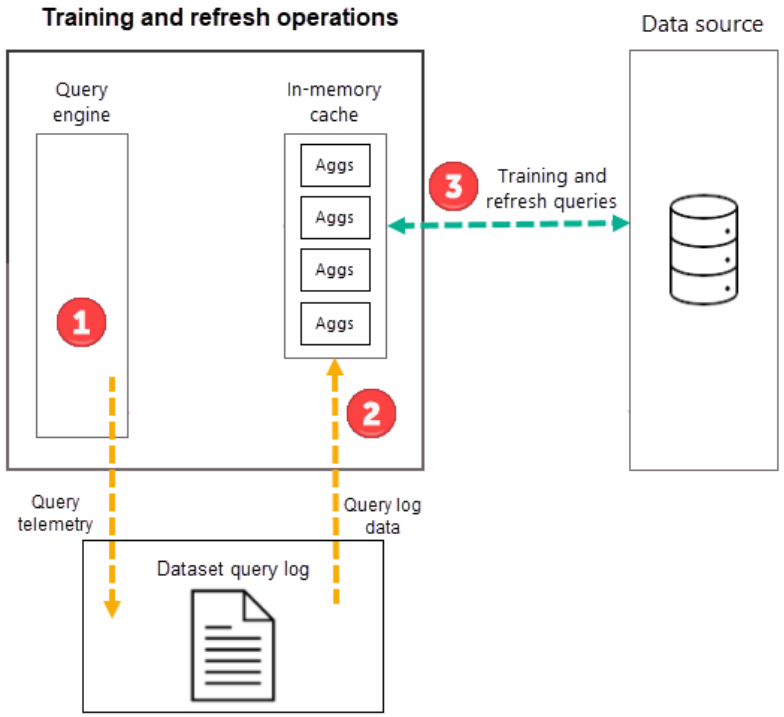
- Ensure that Power BI and Databricks are hosted as closely as possible, ideally in the same region
- Use hybrid tables whenever you need aggregated historical data augmented with detailed real-time data for the same table
- Connect Power BI to Databricks using single sign-on (SSO)
- Use gateway clusters to connect to IP ACL or private link-secured



Power BI on Azure Databricks | Best Practices

Power BI Report design

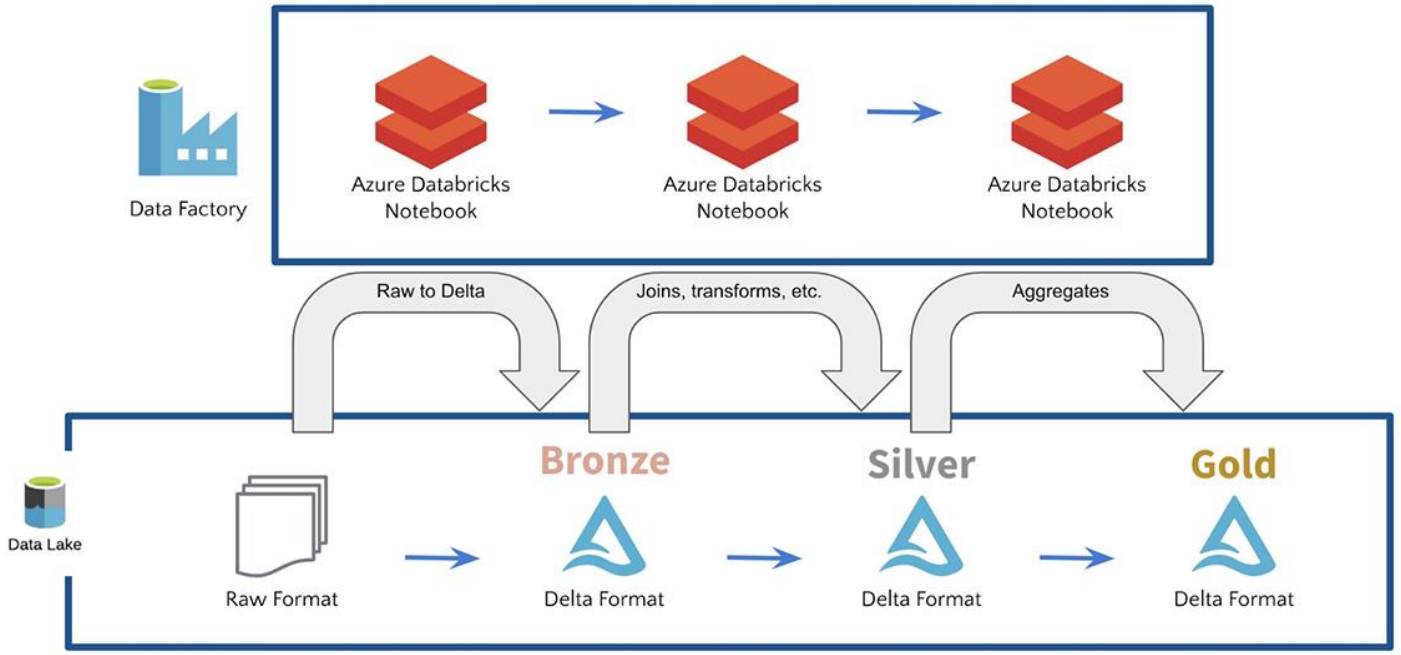
- Limit the number of visuals on each report page
- Use automatic aggregations
- Avoid “many-to-many” relationships where possible
- Avoid using DAX calculated columns and calculated tables in semantic models



Integration with Azure Data Factory

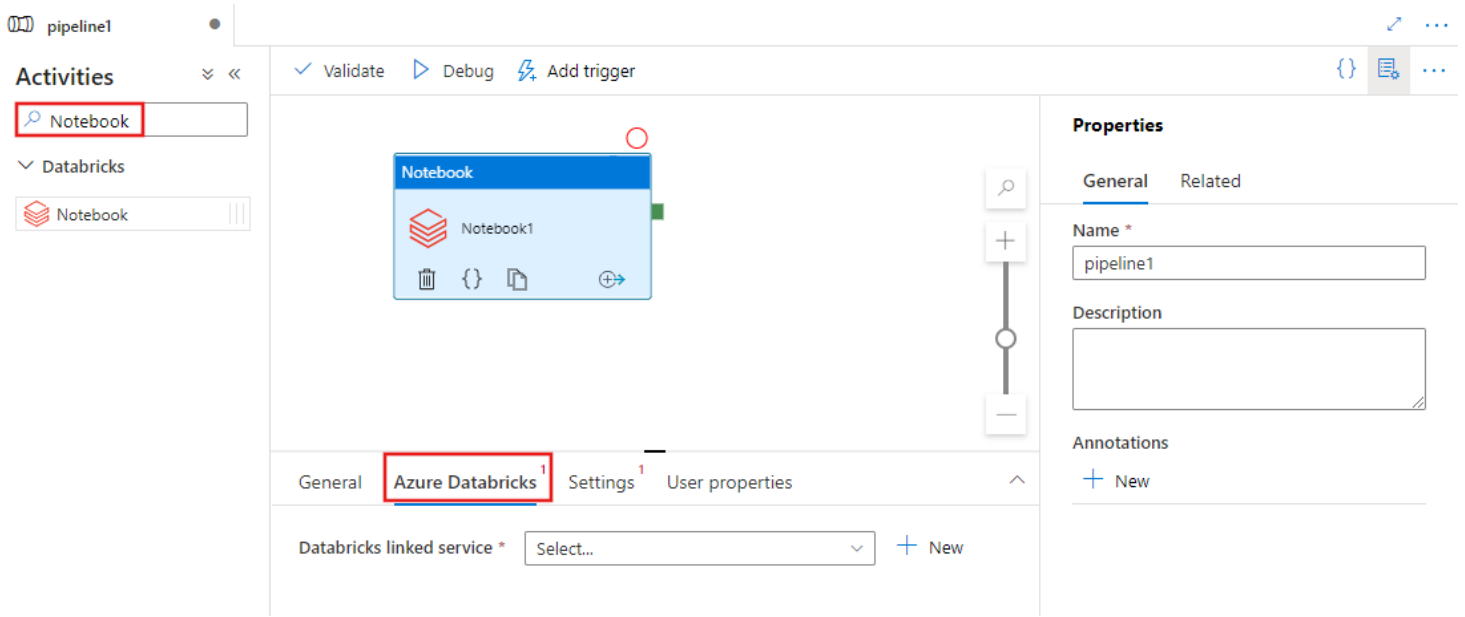
Integrate Azure Databricks with Azure Data Factory

- Provides the capability to natively ingest data to the Azure cloud from over 100 different data sources
- Executes Notebooks, Java Archive file format (JARs), and Python code activities



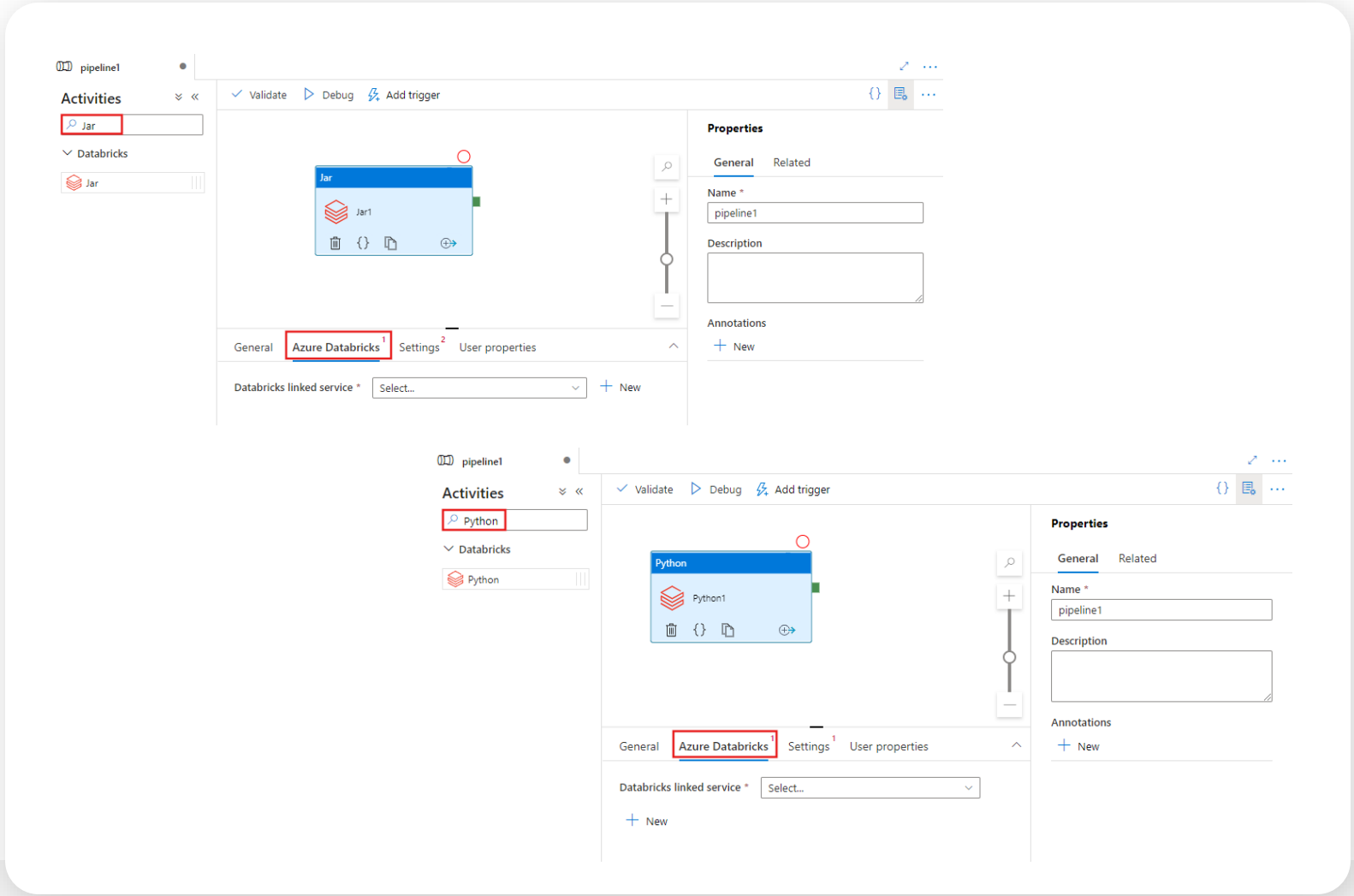
Transform data by running a Notebook activity in Azure Databricks

- Azure Data Factory seamlessly runs Azure Databricks Notebooks to connect and ingest all your data sources into a single data lake
- It also provides capabilities to help you create reliable data pipelines



Transform data by running a Jar and a Python activity in Azure Databricks

- The Azure Databricks Jar activity in a pipeline runs a Spark Jar in your Azure Databricks cluster
- The Azure Databricks Python activity in a pipeline runs a Python file in your Azure Databricks cluster



Demo

Run a Databricks notebook with the Databricks Notebook Activity in Azure Data Factory

Mirroring Azure Databricks Unity Catalog

Database Mirroring in Fabric

Generally available

- Azure SQL DB
- Azure Data Lake store
- Microsoft OneLake
- Google Cloud Storage
- Snowflake
- Amazon S3
- Microsoft Dataverse
- S3 Compatible (cloud/On-prem)

Public preview

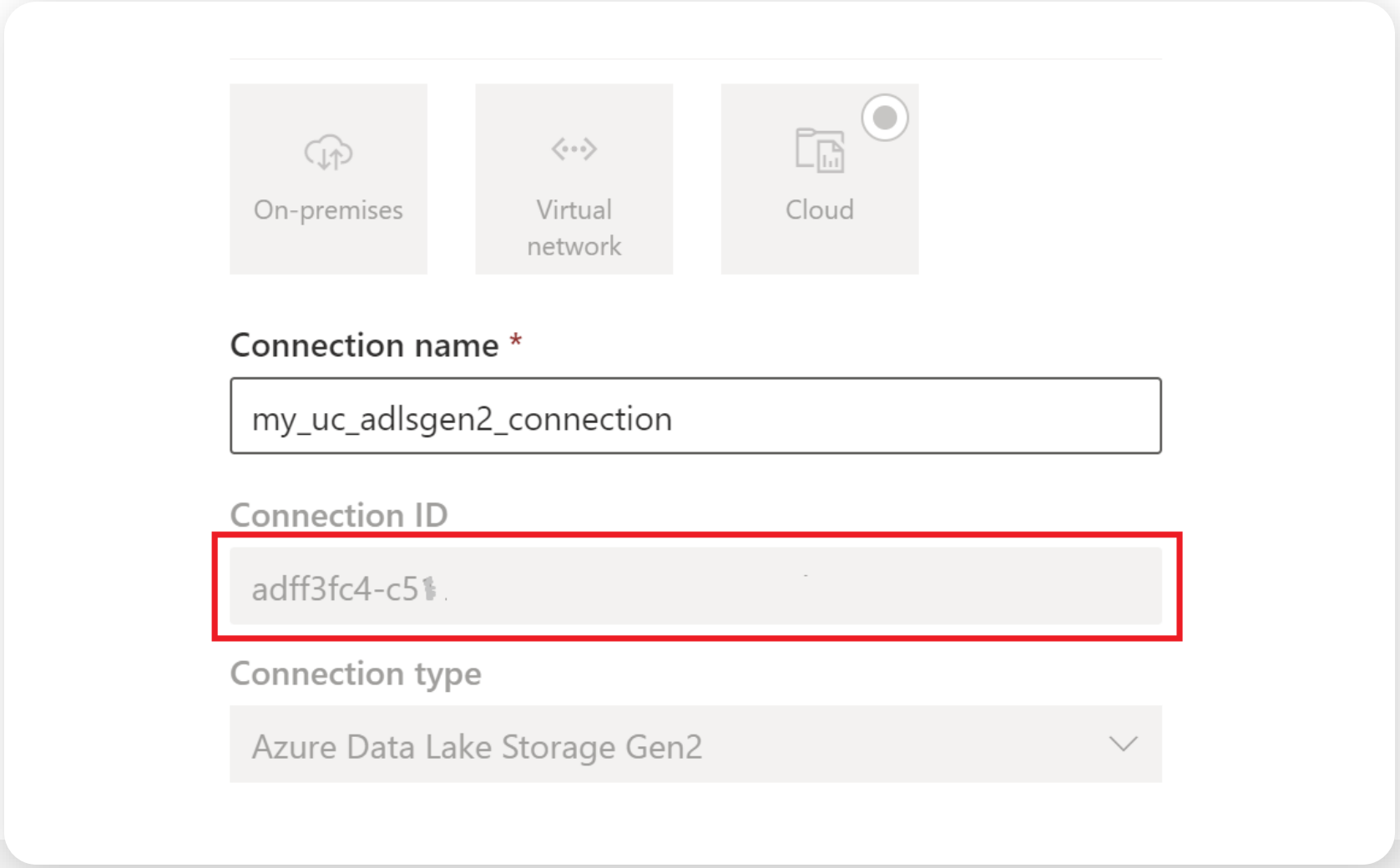
- Azure Cosmos DB
- Azure SQL MI
- Azure PostgreSQL
- Databricks Catalog
- NEW! SQL Server 2025
- NEW! Azure Blob storage

Coming soon

- Oracle DB
- Google BigQuery

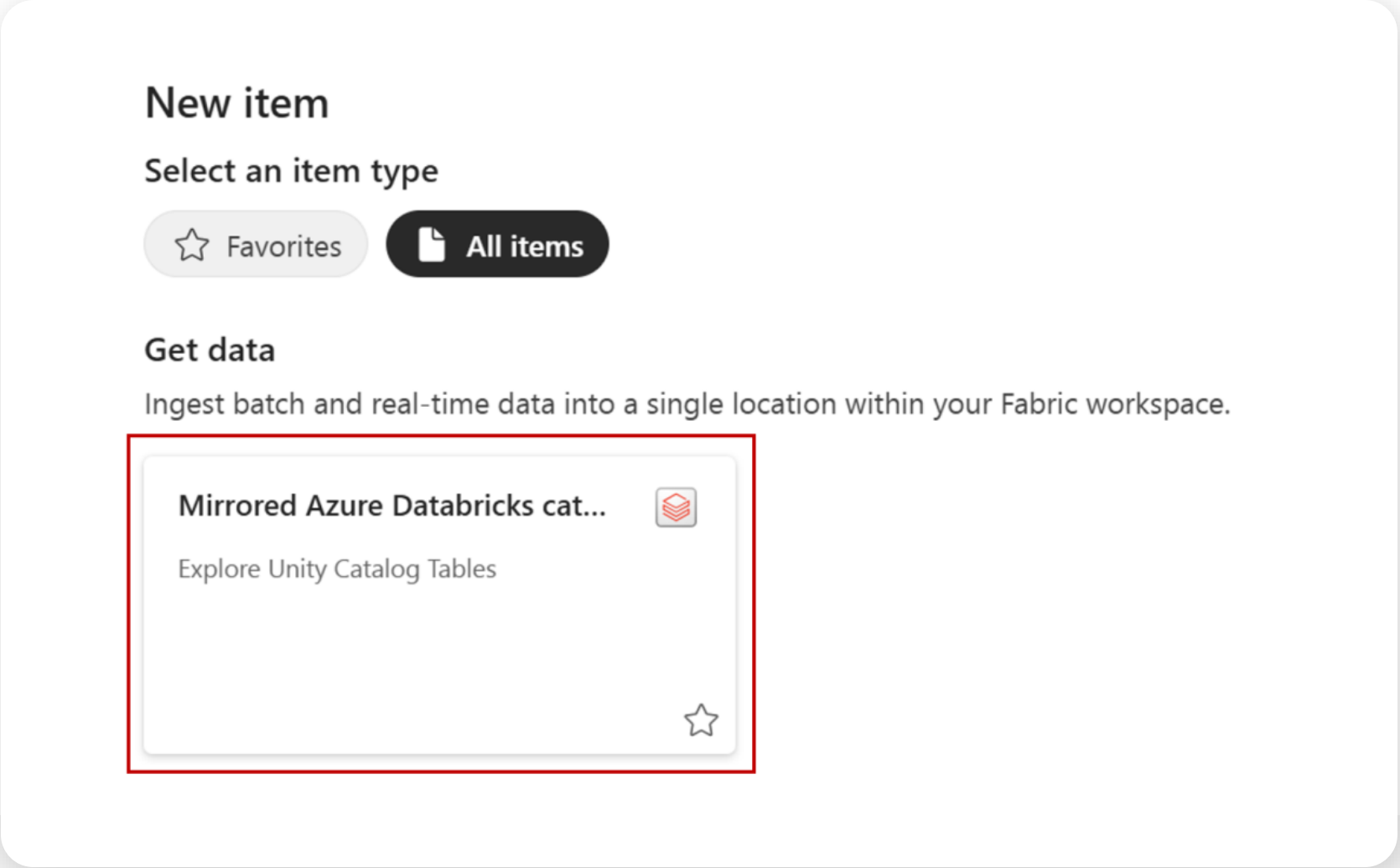
Integrate Azure Databricks Unity Catalog with OneLake

- Enables customer to read data managed by Unity Catalog from Microsoft Fabric workloads
- Integrates Unity Catalog external Delta tables to OneLake using shortcuts



Mirror Azure Databricks Unity Catalog

- Establish a mirrored database from Azure Databricks
- It creates a read-only, continuously replicated copy of your Azure Databricks data in OneLake



Home >

fabcondemo (contososales/fabcondemo)

SQL database

Search

Overview
Activity log
Tags
Diagnose and solve problems
Query editor (preview)

Settings
Compute + storage
Connection strings
Maintenance
Properties
Locks

Data management
Replicas
Sync to other databases

Integrations
Azure Synapse Link
Stream analytics (preview)
Add Azure AI Search

Copy | Restore | Export | Set server firewall | Delete | Connect with... | Feedback

Essentials

JSON View

Resource group (move) : [redacted]
Status : Online
Location : East US
Subscription (move) : Fabric CAT Subscription
Subscription ID [redacted]

Server name : contososales.database.windows.net
Connection strings : Show database connection strings
Pricing tier : General Purpose - Serverless: Gen5, 1 vCore
Auto-pause delay : 1 hour
Earliest restore point : 2024-03-12 20:51 UTC

Tags (edit) : Add tags

Getting started | Monitoring | Properties | Features | Notifications (0) | Integrations | Tutorials

Start working with your database

Connect to your database and start working with data with a few simple steps. Learn more

Configure access

Configure network access to your SQL server. Learn more

Configure

Connect to application

Use connection strings to connect to your SQL database from your applications and favorite tools.

See connection strings

Start developing

Work in your database by using tools to add, modify and query data. Compare tools

Open Azure Data Studio

Open in Visual Studio

Interactive Simulated Lab Experience

Interactive Simulated Lab Experience - Advantages

Realistic, interactive simulations eliminate dependencies on trial subscriptions and Azure Passes

Consistent learning experience unaffected by real-time cloud portal updates

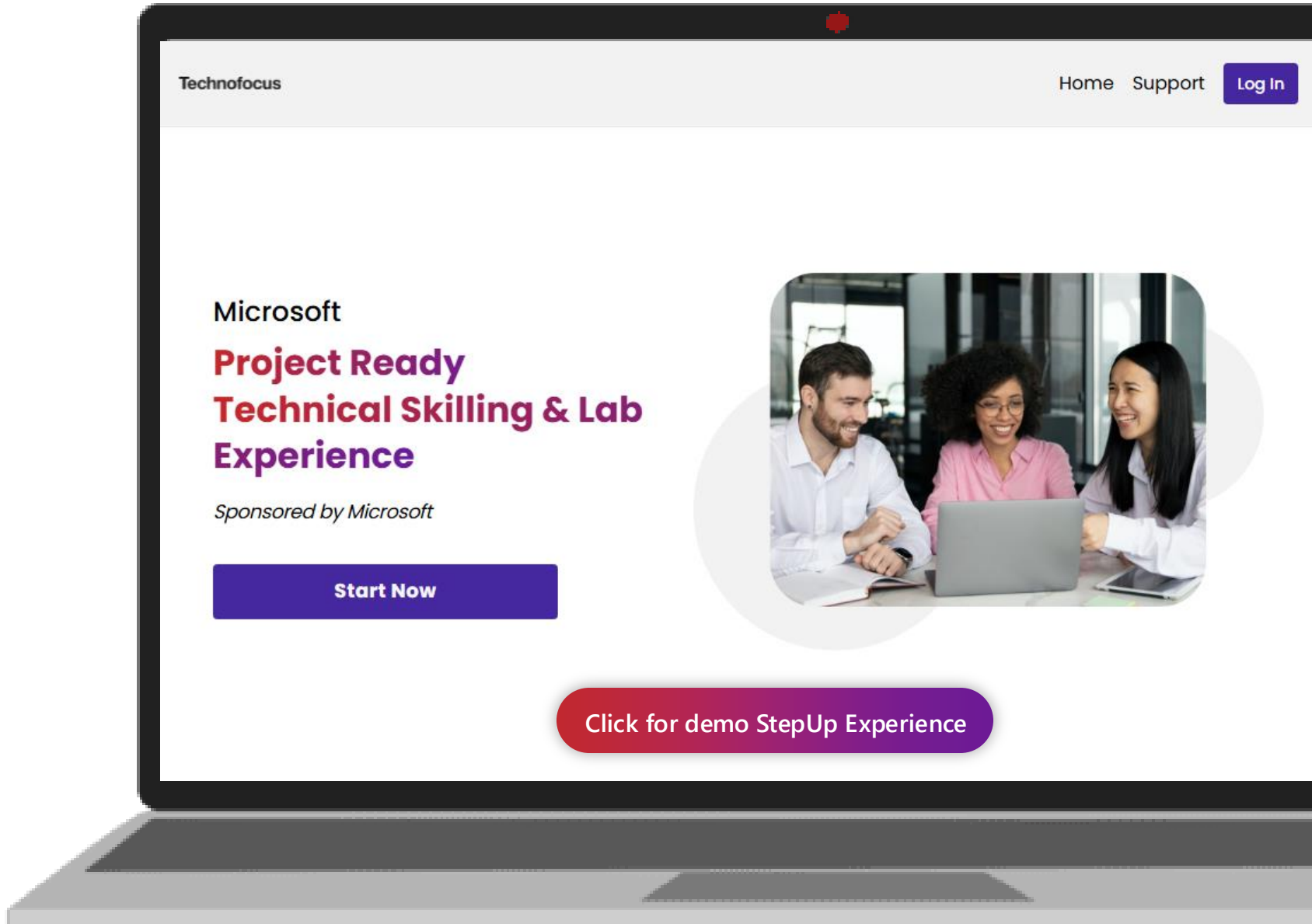
No firewall or security restrictions – available in any standard web browser

Course Availability - FAQs

Do I need to install any software or check system requirements?
Now, the simulated labs are accessible directly from a web browser with no need for software installation or technical setup on the learner's PC.

How is the simulated lab experience integrated into the learning process?
The simulated lab experience is seamlessly accessible from ON24, allowing learners to access simulated labs simultaneously during a live class.

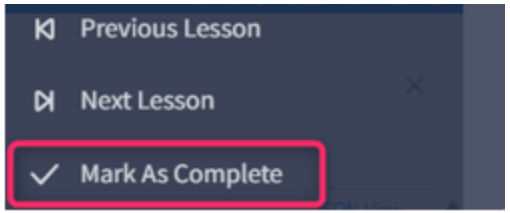
Can I revisit the course and simulated labs after the live session?
Yes, simulated lab access remains available for 30 days from the class start date, ensuring flexibility for learners to revisit and reinforce concepts.



Best Practices- Interactive Simulated Labs

1. Execute the simulated labs in **full-screen mode.**

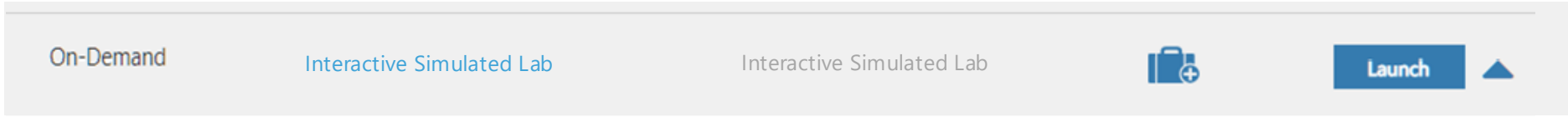
2. After completing the lab, click on the **vertical ellipsis (⋮)** on the title bar, select **Mark as Complete**, then click **CLOSE** to exit.



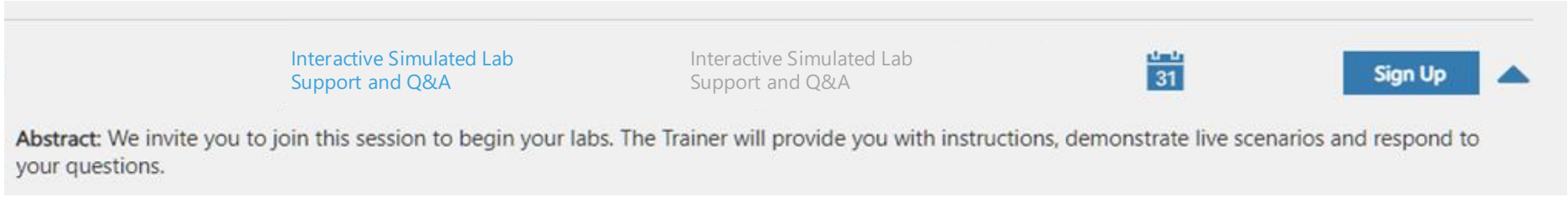
Interactive Simulated Labs

Please note that the interactive simulated labs are only open to a limited number of Microsoft partner participants and are offered on a **first-come-first-served basis**.

Step 1 : Click on **Launch** in the event curriculum to launch your interactive simulated labs



Step 2 : Join the **Live session for Interactive Simulated Lab Support and Q&A Session**

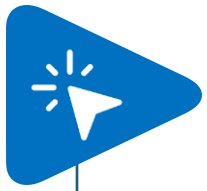


Interactive Simulated Lab Experience

Lab 2 - Setup and use Unity Catalog for Data Management in Azure Databricks

Lab 3 - Real-Time Streaming with Azure Databricks and Azure Event Hubs

Troubleshooting Simulated Labs connectivity



Launch test lab:
https://stepup.technofocus.ai/learn/testintcours1

Optimized for resolution:
1440 x 900

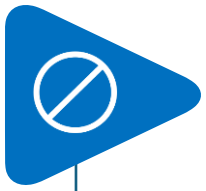
Use a supported operating system:

- Windows 10 or later
- macOS 10.12 or later

- Also supported on Tablets and Mobile devices with large screen.

Use a supported browser

- Chrome (**preferred**)
- Microsoft Edge



Ensure connection is not blocked by your company VPN/Firewall rules

URLs to be whitelisted:
*.navattic.com
labs.technofocus.ai

LevelUp: Accelerating Partner Success with On-Demand Skilling

On-Demand Partner Enablement

Access comprehensive training resources anytime to accelerate partner onboarding and skill development.

Be Project-Ready

Equip teams with the knowledge and tools needed to confidently deliver on real-world projects from day one.

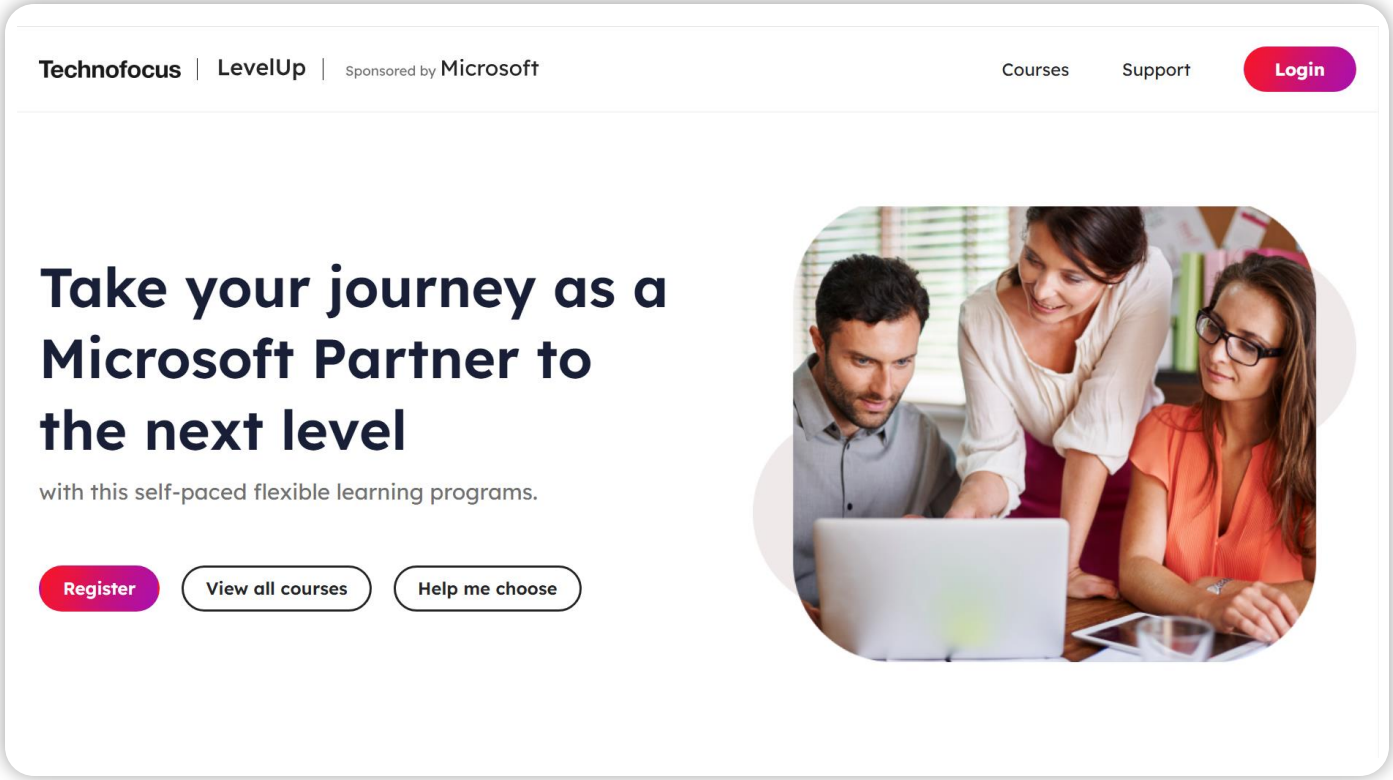
Integrated Hands-On Labs

Reinforce learning through immersive, practical lab environments that simulate real business scenarios.

End-to-End Enablement,Sales, Presales & Technical

Deliver role-specific training that empowers sales, presales,and technical teams with the skills to drive results.

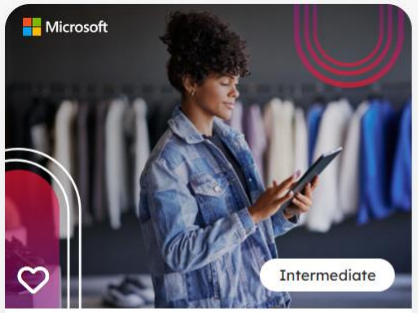
Sign Up today
skillupwithlevelup.com



18K+	55+	84	10+
Enrollments	AI courses	Courses with Labs	Years of successful training

Azure courses on Microsoft LevelUp

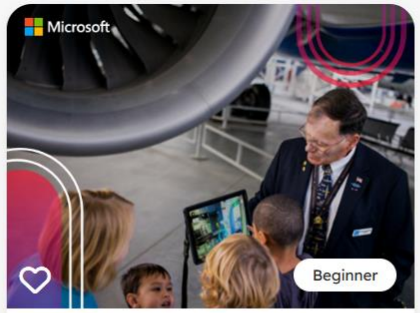
ENROLL TODAY



Duration - 16 Hours

Migrate to Innovate Workshop

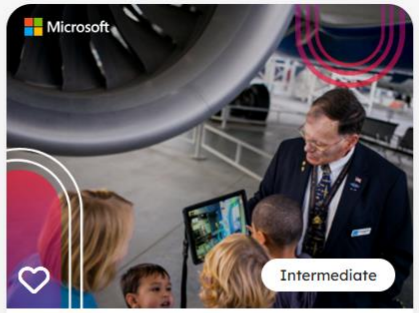
Azure - Infrastructure, Migrate and Secure Windows Server SQL and Linux Estate



Duration - 1.5 Hours

Sales - Migrate and secure Windows Server, SQL and Linux workloads to Azure

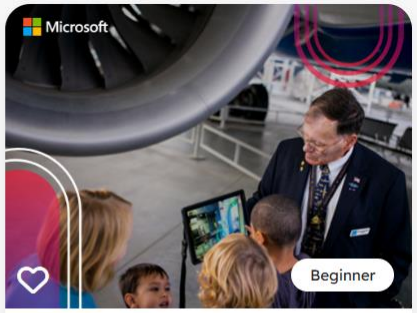
Azure - Infrastructure, Migrate and Secure Windows Server SQL and Linux Estate



Duration - 16 Hours

Build and modernize AI Apps on Azure

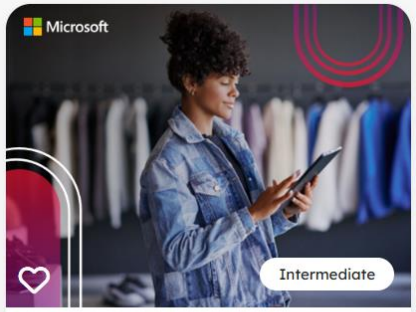
Azure - Data and AI, Build and modernize AI Apps



Duration - 2 Hours

Sales - Perfect your conversation on Build and modernize AI apps on Azure

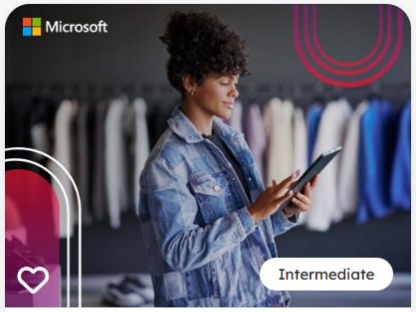
Azure - Data and AI, Build and modernize AI Apps



Duration - 4.5 Hours

Pre-Sales - Migrate and secure Windows, SQL Server and Linux workloads to Azure

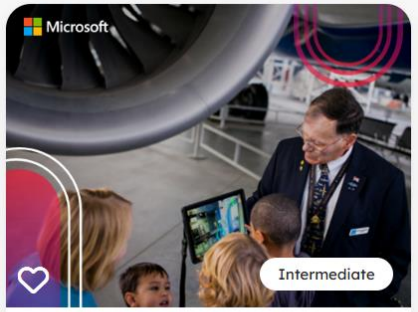
Azure - Infrastructure, Migrate and Secure Windows Server SQL and Linux Estate



Duration - 4.5 Hours

Pre-Sales - Build your response on Build and modernize AI apps on Azure

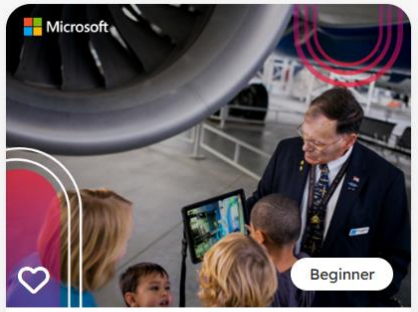
Azure - Data and AI, Build and modernize AI Apps



Duration - 4.5 Hours

Pre-Sales - Build your response on Accelerating Developer Productivity

Azure - Digital and App Innovation, Accelerate Developer Productivity



Duration - 1.5 Hours

Sales - Perfect your conversation on Accelerate Developer Productivity

Azure - Digital and App Innovation, Accelerate Developer Productivity

Coming up tomorrow...

Day 1

Module 1 - Introduction to Azure Databricks
- Azure Databricks: A Data Intelligent Platform
- Why Azure Databricks
- Decision guide: Azure Databricks vs. Microsoft Fabric

Module 2 - Migration to Azure Databricks
- Microsoft Cloud Adoption Framework for Azure
- Migration strategies
- Data landing zones
- Migration scenarios

Interactive Simulated Lab Experience
- End-to-End Streaming Pipeline with Lakeflow Declarative Pipelines in Azure Databricks

Day 2

Module 3 - Integration with Azure
- Seamless integration with Microsoft Azure services
- Connect to Azure Data Lake Storage (ADLS) Gen2 and Blob Storage
- Leverage Azure Databricks for Azure Cosmos DB Operations
- Secret management with Azure Key Vault
- Connect Azure Databricks to Azure Event Hubs

Module 4 - Integration with Microsoft Fabric and Power BI
- Data Intelligence with Azure Databricks and Microsoft Fabric
- Connect Power BI to Azure Databricks
- Integration with Azure Data Factory
- Mirroring Azure Databricks Unity Catalog

Interactive Simulated Lab Experience
- Setup and use Unity Catalog for Data Management in Azure Databricks
- Real-Time Streaming with Azure Databricks and Azure Event Hubs

Day 3

Module 5 - Integration with Azure AI Foundry
- Azure Databricks connector in Azure AI Foundry
- Mosaic AI and machine learning on Azure Databricks
- Query Generative AI model serving endpoints
- Databricks Assistant, AI/BI Genie and AI Functions on Azure Databricks
- Chat with LLMs and prototype GenAI apps using AI Playground
- Build and optimize agents on your data with Agent Bricks

Module 6 - Security and Governance
- Integrate Azure Databricks with Microsoft Purview
- Integration of Azure Databricks Unity Catalog with Microsoft Purview

Module 7 - Well-architected for Azure Databricks
- Lakehouse implementation: Principles and best practices
- Azure Databricks well-architected framework

Interactive Simulated Lab Experience
- Responsible AI with Large Language Models using Azure Databricks and Azure OpenAI
- Connect to and manage Azure Databricks in Microsoft Purview

Microsoft

Technofocus

Thank You!