



Welcome to Perth Microsoft Data, Analytics, AI and Power Platform

Thanks to our Sponsor



Acknowledgment of Country

We wish to acknowledge the traditional custodians of the land we are meeting on, the Whadjuk (Perth region) people. We wish to acknowledge and respect their continuing culture and the contribution they make to the life of this city and this region.



Building Microsoft Fabric Data Agents for the Next Wave of Enterprise AI



Sergio Zenatti Filho
Chief Cloud Solution
Architect



Microsoft Fabric

The unified data platform for AI transformation



AI-powered
data platform



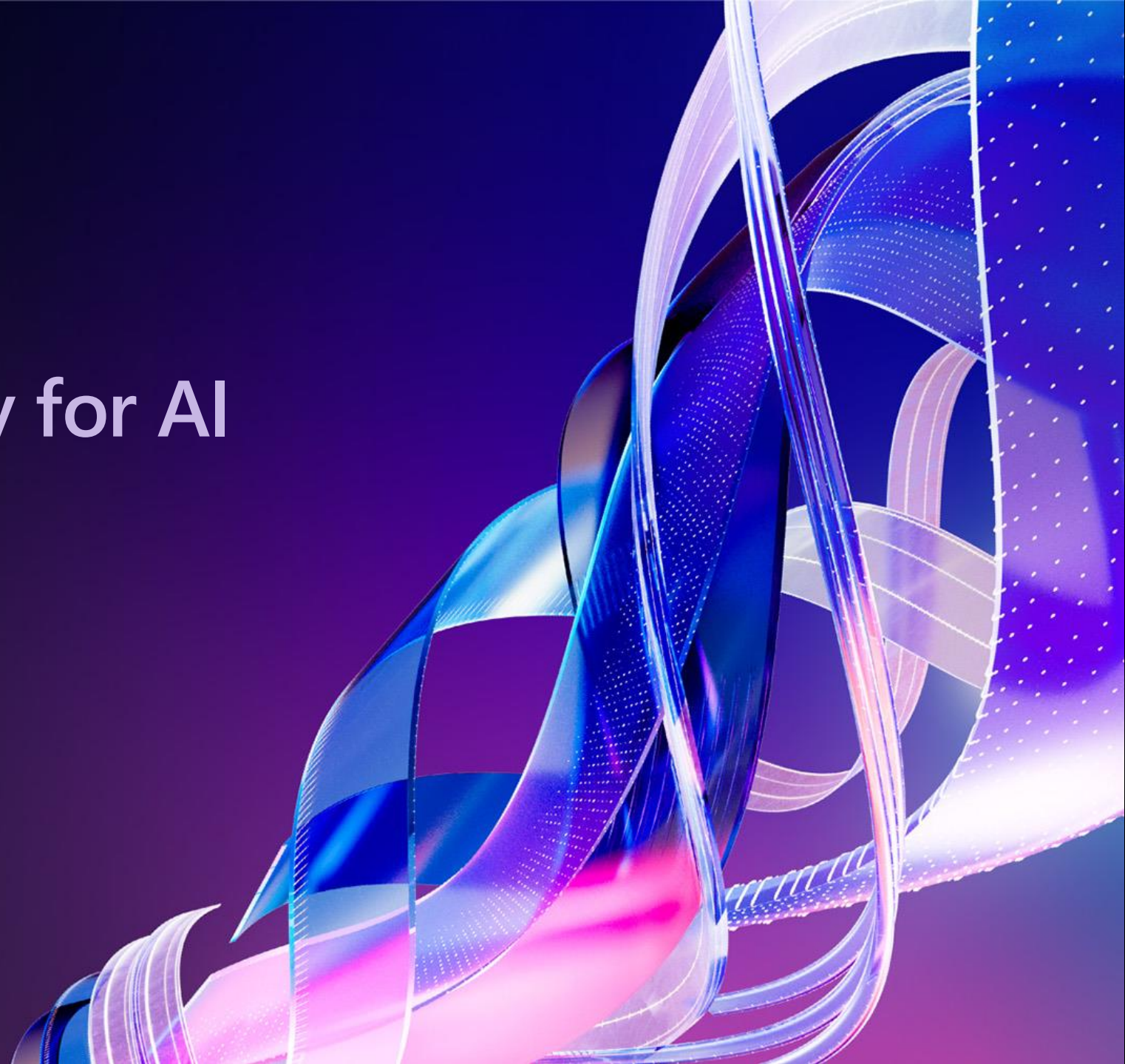
Open and AI-ready
data lake



AI-enabled
business users



Get your data ready for AI with AI Functions



AI Functions – now generally available

Transform your data with AI with just a single line of code

- Analyze sentiment
- Classify data
- Extract information
- Answer custom prompts
- And much more!

Learn more at:

aka.ms/ai-functions

The screenshot displays the Microsoft Fabric Notebook environment. The top navigation bar includes 'Home', 'Edit', 'AI tools', 'Run', and 'View'. The left sidebar shows the 'Explorer' with options like 'Workspaces', 'Copilot', 'OneLake catalog', 'Monitor', 'Real-Time', 'Workloads', and 'My workspace'. The main area shows a PySpark (Python) notebook with the following code and output:

```
27 df = pd.DataFrame(data)
28 display(df)
```

[4] ✓ <1 sec - Command executed in 836 ms by Virginia Roman on 4:52:47 PM, 9/24/25

The output is a table view with 3 columns and 10 rows:

	ABC Date	ABC Name	ABC Review
1	2025-09-01	Alice	La nourriture éta...
2	2025-09-02	Bernard	Le service était l...
3	2025-09-03	Camille	Super ambiance...
4	2025-09-04	Diane	Le restaurant éta...
5	2025-09-05	Étienne	Service client exc...
6	2025-09-06	Fatima	Les plats sont arr...
7	2025-09-07	Georges	J'ai adoré la terr...
8	2025-09-08	Hélène	Le menu est trop...
9	2025-09-09	Ismael	Meilleure experi...
10	2025-09-10	Julie	Nourriture médi...

Below the table, two more code cells are shown:

```
1 df["Translation"] = df["Review"].ai.translate("english")
2 display(df)
```

```
1 df["Sentiment"] = df["Review"].ai.analyze_sentiment()
2 display(df)
```

The bottom status bar indicates 'Session ready', 'AutoSave: On', and 'Copilot completions: On'. The bottom right corner shows 'Selected Cell 7 of 10 cells'.

Multimodal AI Functions (Private Preview)

Apply AI-powered enrichments on unstructured data and multimodal input, such as PDFs, images, and text file formats



Private Preview Signup –
Multimodal AI Functions

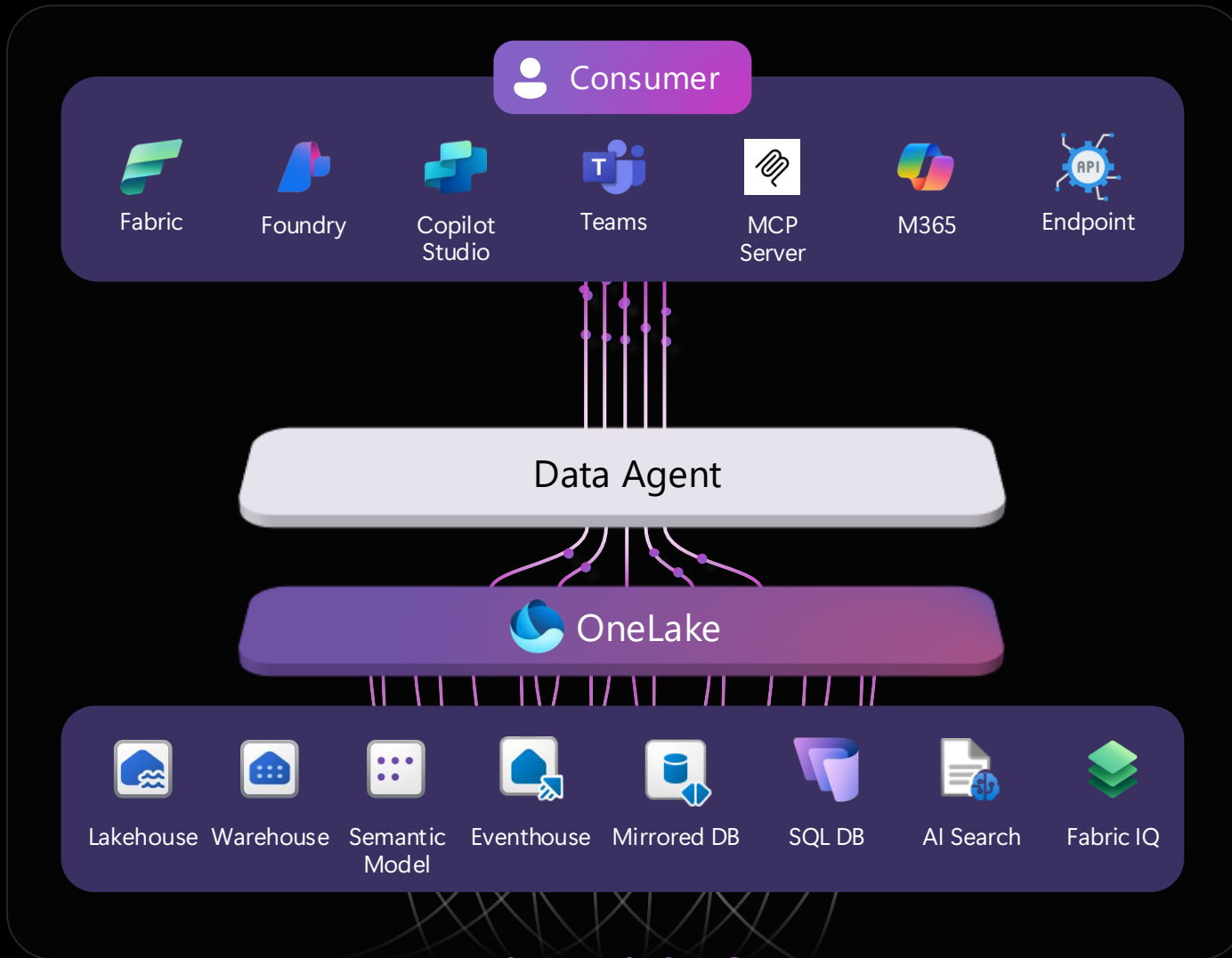




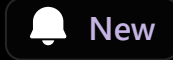
Fabric Data Agents





Fabric data agents



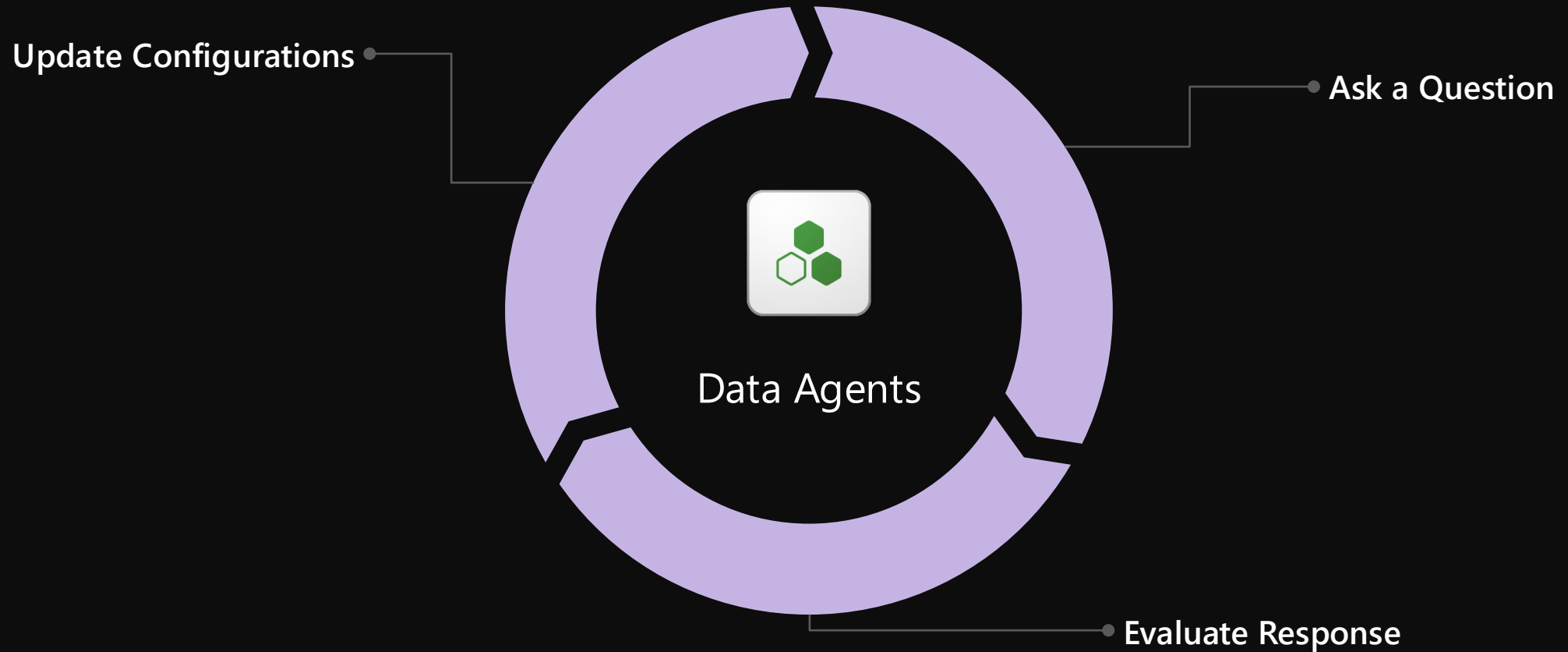
A **virtual analyst** that allows users to interact with and gain insights from enterprise data in OneLake

 **New** Consume your data agents in M365 Copilot and as **remote MCP Server** in VS Code

 **New** Data agents now support unstructured data through **Azure AI Search**

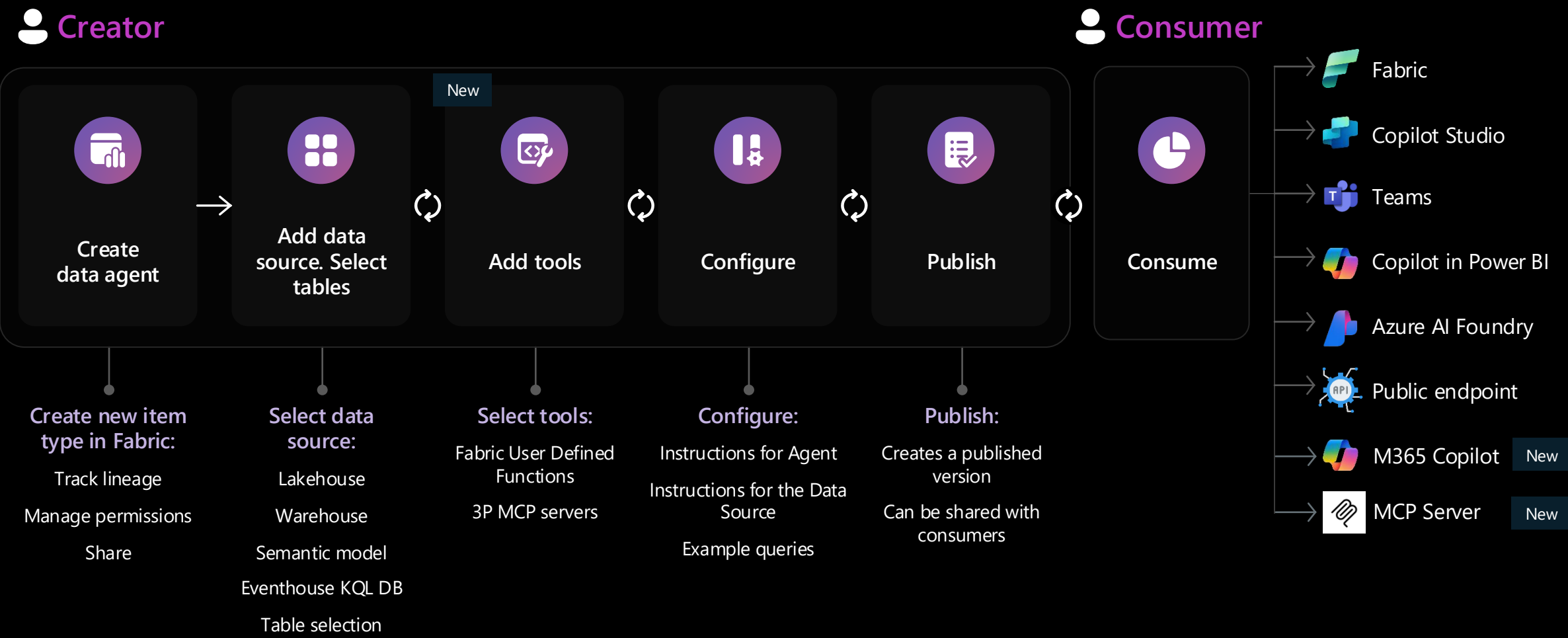
 **New** Data agents now support **Fabric IQ Workload** through **Ontology**

Building a data agent is an iterative process



Data Agent End-to-End Flow

How to create and consume a Fabric data agent





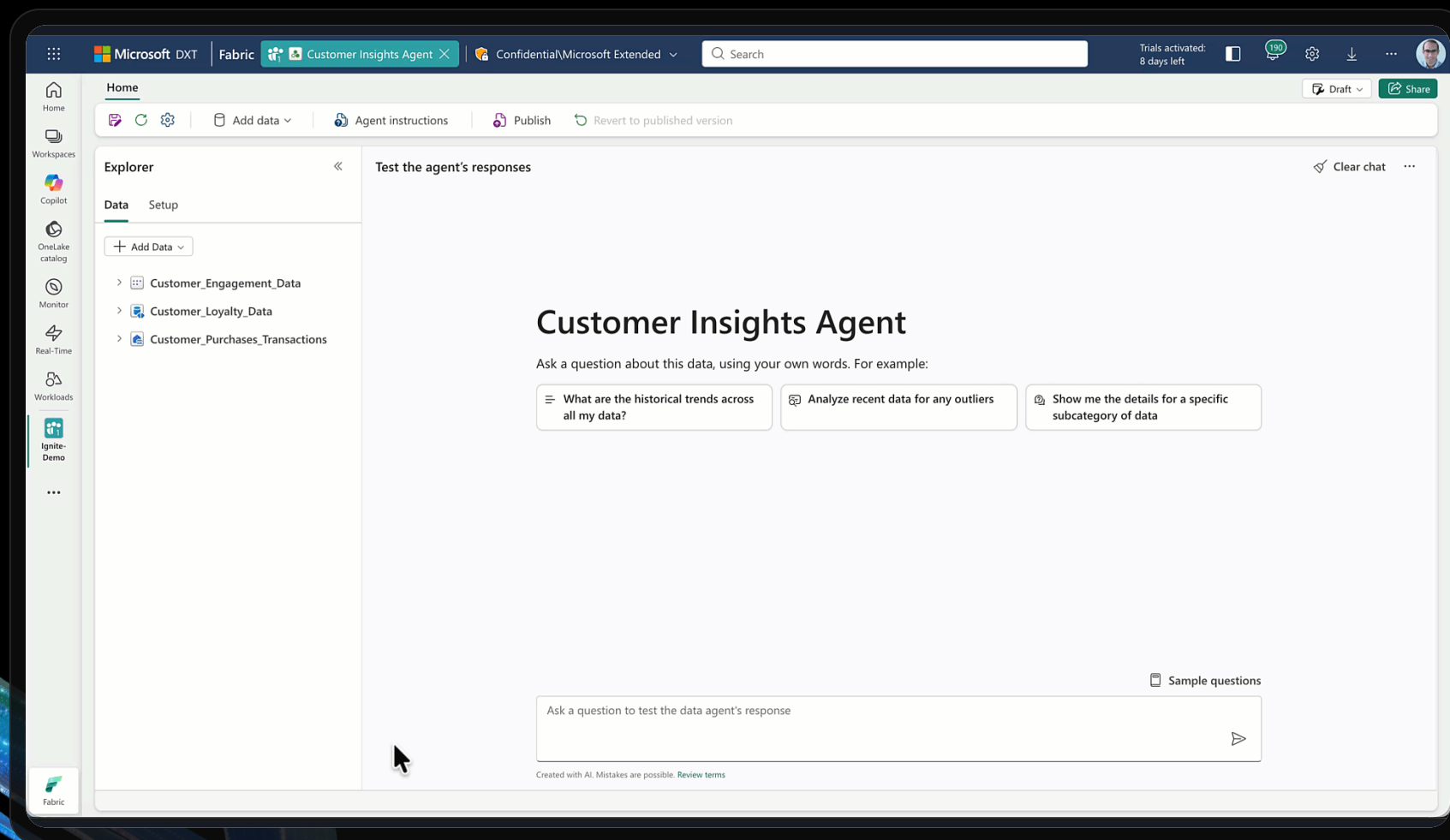
Fabric Data Agents

Demo



Fabric data agent integration with M365

Enrich Microsoft 365 agents with Fabric data intelligence

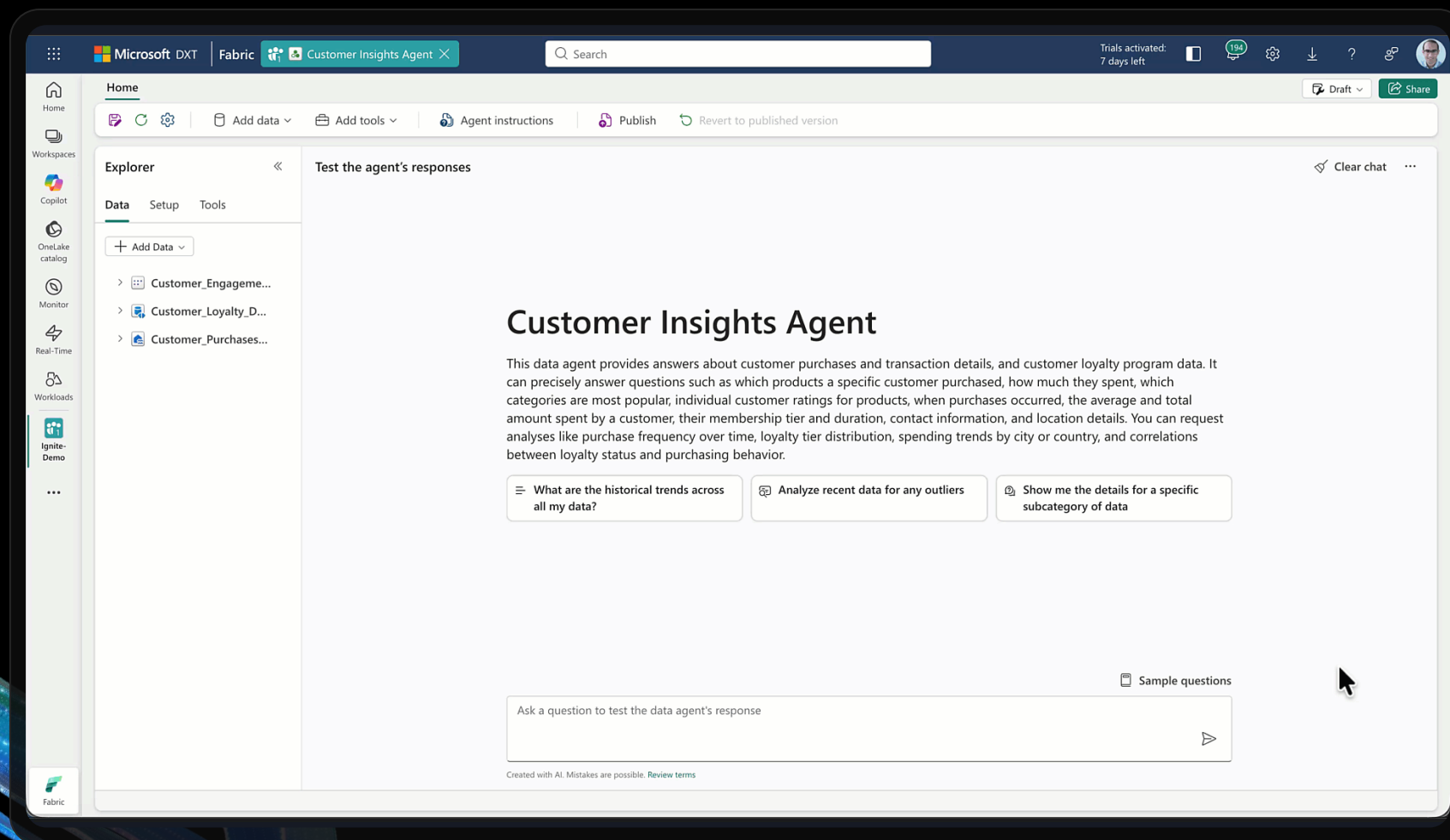


Fabric data agents can reason over and synthesize data in OneLake for insights

AI creators can enrich M365 Copilot with Fabric data agents' data domain expertise

Security permissions, including RLS and CLS, are always respected

Data Agent MCP Server



A managed MCP Server for first class access to enterprise knowledge

Enables users to consume Fabric data agent from other AI systems using MCP

Gain on-demand insights on top of enterprise data in Fabric, ensuring secure, and auditable data access

Data Agent MCP Client

Microsoft DXT | Fabric | Customer Insights Agent | Email_Service | Pricing_Promotions | Search | Trials activated: 26 days left | 139 | Draft | Share

Home | Add data | Add tools | Agent instructions | Publish | Revert to published version

Explorer | Data | Setup | Tools

+ Add Data

- Customer_Engagement_Data
- Customer_Loyalty_Data
- Customer_Purchases_Transactions

Test the agent's responses

1 step completed | Response time: 8 sec

What is the average purchase amount per customer in each loyalty tier?

Here is the average purchase amount per customer by loyalty tier (full results are saved in 'result_1.json'):

- Platinum: \$1,169.19 per customer
- Gold: \$1,230.36 per customer
- Silver: \$1,223.64 per customer

Let me know if you want further breakdowns or details!

Table 1 | Showing 4 of 4 rows | Search data...

	LoyaltyTier	AveragePurchaseAmountPerCustomer
1	Platinum	1169.189903846155
2	Gold	1230.362059620596
3	Silver	1223.6386206896555
4	Bronze	1233.6936050955405

Expand response

1 step completed | Response time: 4 sec

Sample questions

Ask a question to test the data agent's response

Created with AI. Mistakes are possible. Review terms

Fabric data agents can connect to other internal/external AI tools to enhance the quality and accuracy of answers

Fabric data agents connect to your Fabric User Data Functions (UDF)

Leverage custom business logic through the data agent and its Tools

Sign up here:

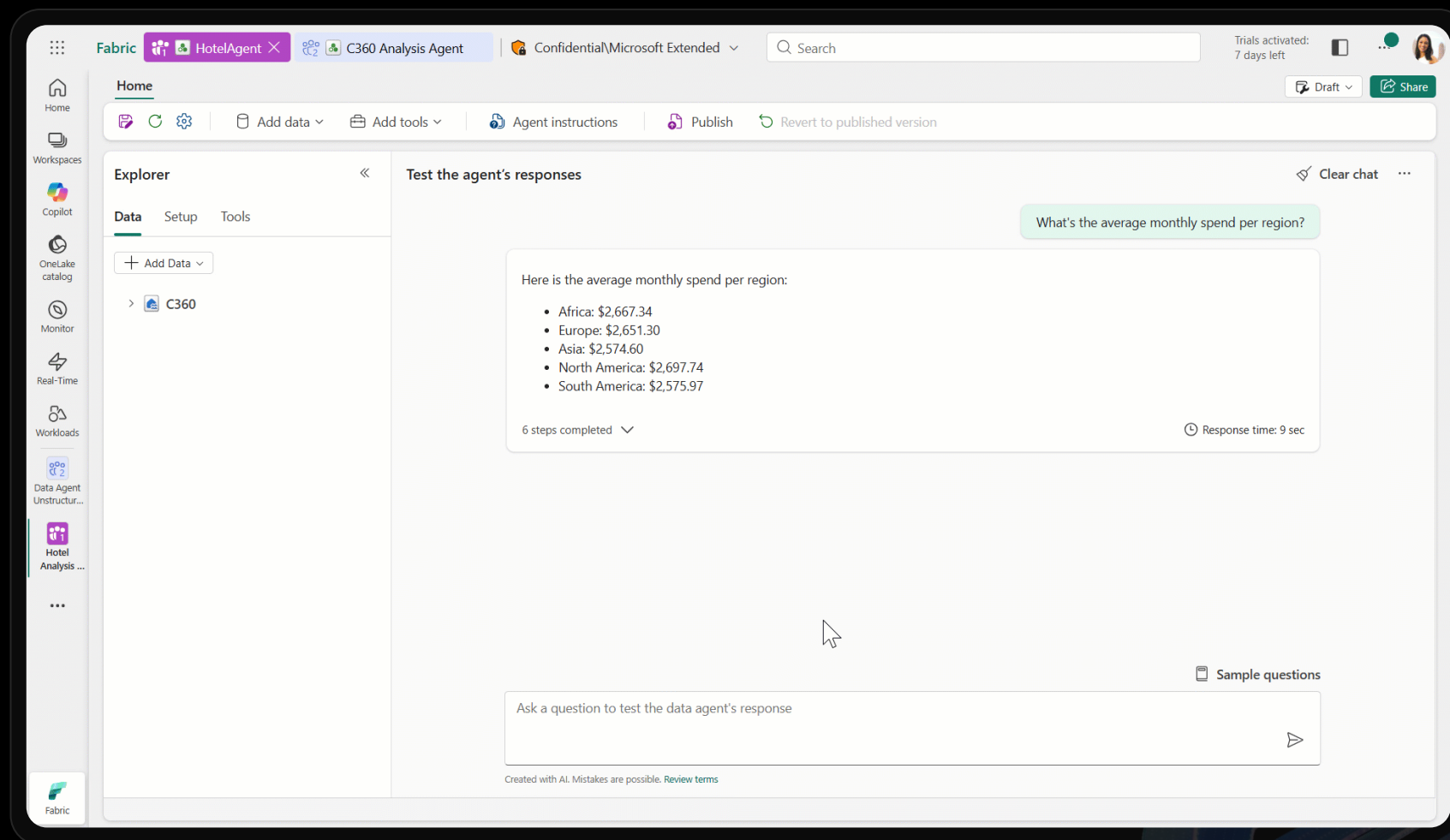
aka.ms/Fabric/DA-Tools-UDF-PrPr

Bring your own AI Search index

Bring your own AI search index to a Fabric data agents

Use the built-in AI Search tool for custom indexes

Ask natural language questions over your unstructured data and join with other data sources for deeper insights



CI/CD and ALM for Data Agents

The screenshot displays the Microsoft Fabric interface for a pipeline named "DA-Production-Pipeline". The pipeline consists of three stages: Development, Test, and Production. The Test stage is highlighted with a green border. Below the pipeline diagram, there is a table showing the deployment history for the Test stage.

Selected stage item	Type	Compared to source	Source stage item
—	Lakehouse (Preview)	Only in source	LHFoundry
—	Data agent (Preview)	Only in source	NRE-Test
—	Data agent (Preview)	Only in source	Test
—	Data agent (Preview)	Only in source	test_savedas
—	Notebook	Only in source	Notebook 1

Support for data agents in Git and deployment pipelines

Configuration changes tracked for development and published versions

Lineage is preserved during pipeline deployments in Git-connected workspaces

Enables Agent-Ops for more streamlined AI development

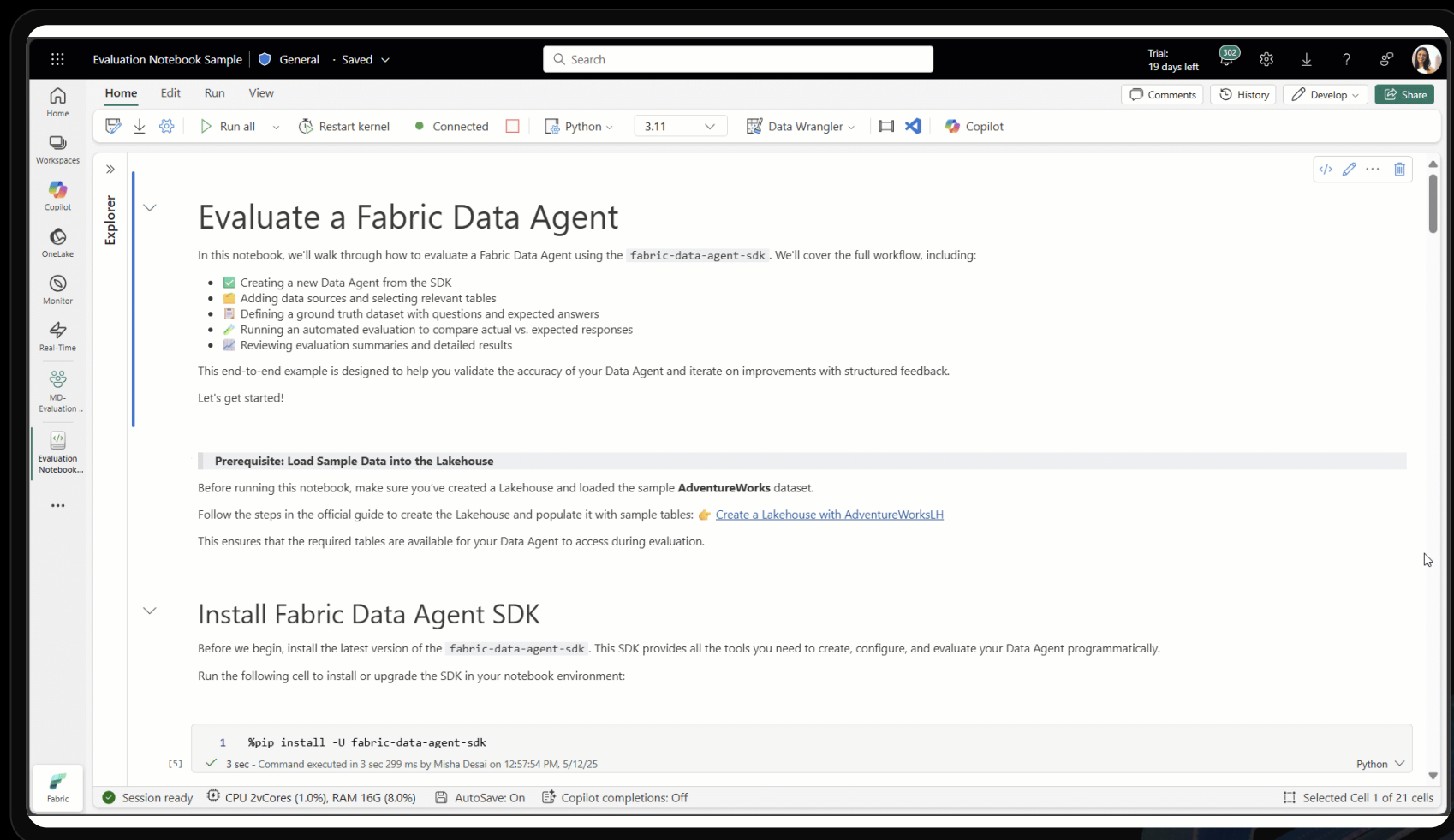
Evaluate data agents

Native support for data agent evaluation through the Fabric data agent SDK

Run structured evaluations using Python from notebooks.

Validate accuracy, tune prompts, and improve benchmarks to validate your agent's production readiness

Built-in utility to refine example queries



Roadmap

Features



Data agents

- General Availability (GA)
- Table/Column descriptions
- Visualizations
- MCP tools
- Creator/Consumer feedback loop
- Service Principal Authentication
- Outbound Access Protection

Check out our updated
roadmap



aka.ms/Fabric-DS-roadmap

Learn more



Data agent documentation

- aka.ms/AI-Blog-Ignite25
- aka.ms/Fabric/create-data-agent
- aka.ms/Fabric/data-agent/sdk/docs
- aka.ms/data-agent-evaluation-sample



Call data agent endpoints

- aka.ms/Fabric/data-agent-python-client-sdk



Feature request?

ideas.fabric.microsoft.com

Q&A

Thank you!