Microsoft Fabric & Power BI Türkiye
User Group

Microsoft Fabric meets MCP – what can we do with it

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With great power comes great responsibility.

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FAVORITE STUFF:

Microsoft Fabric

The unified data platform for AI transformation

Data Factory

Analytics

Databases

Real-Time Intelligence

IQ

Power BI

Fabric Platform

Copilot

OneLake

Governance

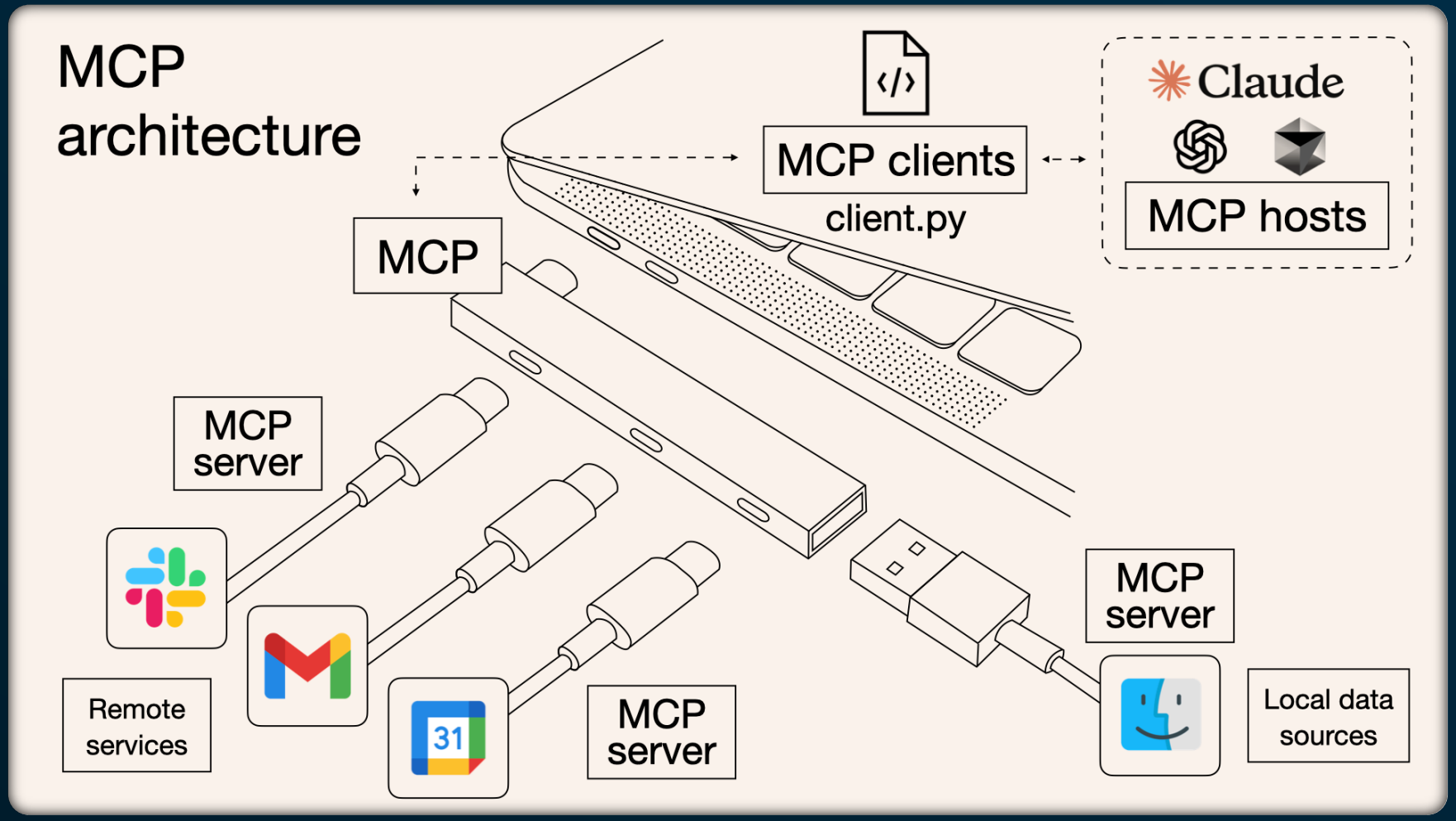
What is MCP?

MCP (Model Context Protocol) is an open protocol designed to standardize how applications provide context to Large Language Models (LLMs).

MCP was started as a project by Anthropic to make it easier for AI models - like Claude - to interact with tools and data sources.

Learn more: https://modelcontextprotocol.io

MCP Architecture



Source: Norah Sakal's blog - What is Model Context Protocol (MCP)? How it simplifies AI integrations compared to APIs | AI Agents That Work

MCP Glossary

- **MCP Hosts:** These are applications (like Claude Desktop or AI-driven IDEs) needing access to external data or tools
- **MCP Clients:** They maintain dedicated, one-to-one connections with MCP servers
- **MCP Servers:** Lightweight servers exposing specific functionalities via MCP, connecting to local or remote data sources
- **Local Data Sources:** Files, databases, or services securely accessed by MCP servers
- **Remote Services:** External internet-based APIs or services accessed by MCP servers

Fabric & Power BI MCP Servers by Microsoft

- **Microsoft Fabric MCP Server**
  https://github.com/microsoft/mcp/tree/main/servers/Fabric.Mcp.Server

- **Fabric Admin MCP Server**
  https://github.com/microsoft/fabric-admin-mcp

- **Power BI MCP Modeling Server**
  https://github.com/microsoft/powerbi-modeling-mcp

- **Microsoft Fabric RTI MCP Server**
  https://github.com/microsoft/fabric-rti-mcp

Microsoft Fabric MCP Server

Use Cases

⚙️ Generate or scaffold Fabric resource definitions

📑 Retrieve official OpenAPI specs and JSON schema for validation and code generation

📄 Get example request/response payloads to accelerate integration

✅ Query curated best-practice guidance (pagination, LROs, authentication patterns)

Fabric Admin MCP Server

Use Cases

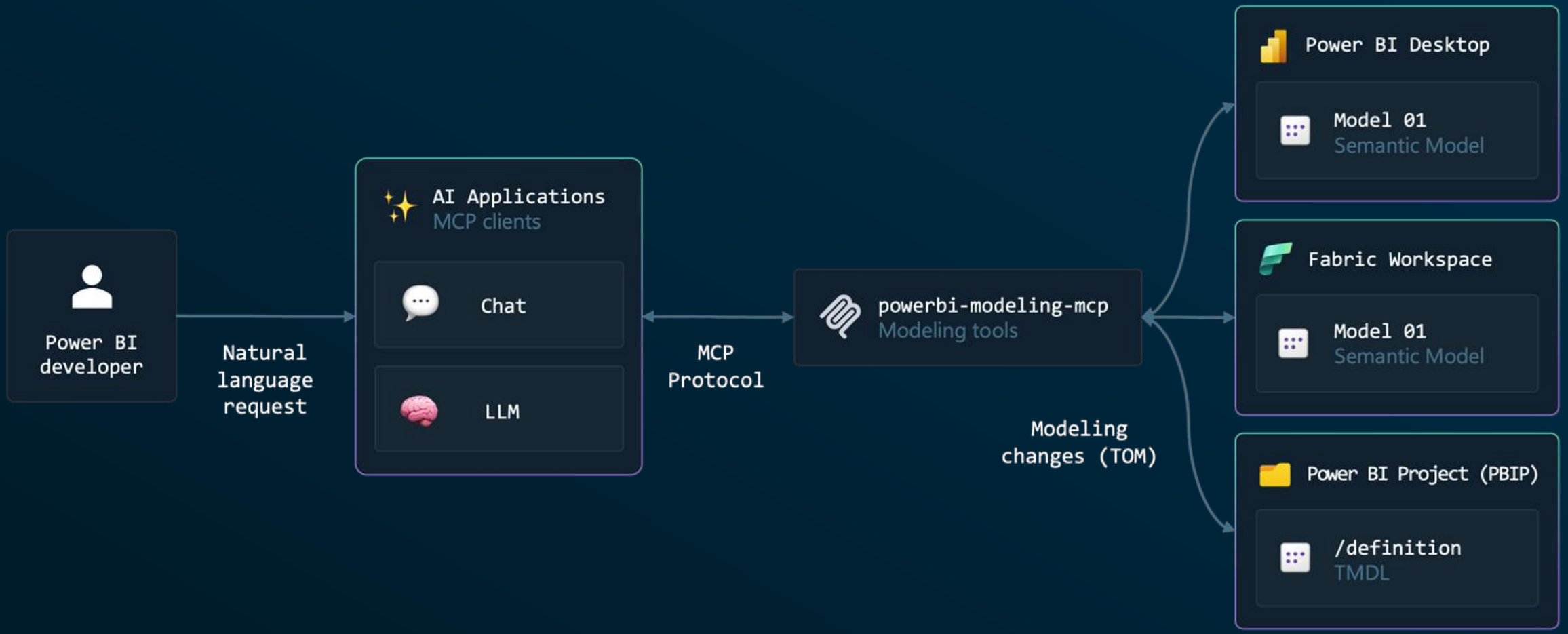
- List Fabric capacities
- Get capacity details
- Pause capacity
- Resume capacity

DEMO

Microsoft Fabric MCP Server

Power BI Modeling MCP Server

Architecture



Power BI Modeling MCP Server

Use Cases

🔄 Build and modify semantic models with natural language

⚡ Bulk operations at scale

✅ Apply modeling best practices

🤖 Agentic development workflows

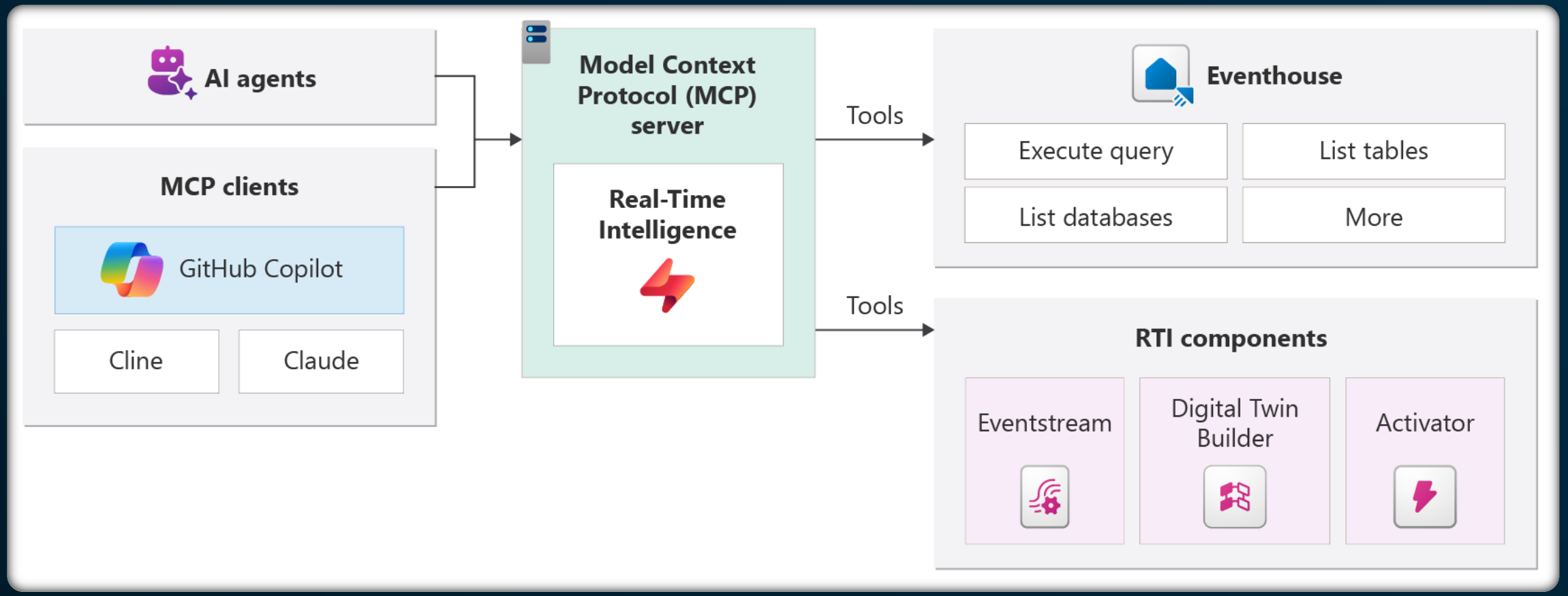
🔍 Query and validate DAX

DEMO

Power BI Modeling MCP Server

Fabric RTI MCP Server

Architecture



Fabric RTI MCP Server

Use Cases

Eventhouse: Execute KQL queries against Fabric Eventhouse and ADX

Eventstreams: Manage Eventstreams for real-time data processing

- List Eventstreams in workspaces
- Get Eventstream details and definitions
- Create new Eventstreams
- Update existing Eventstreams
- Delete Eventstreams

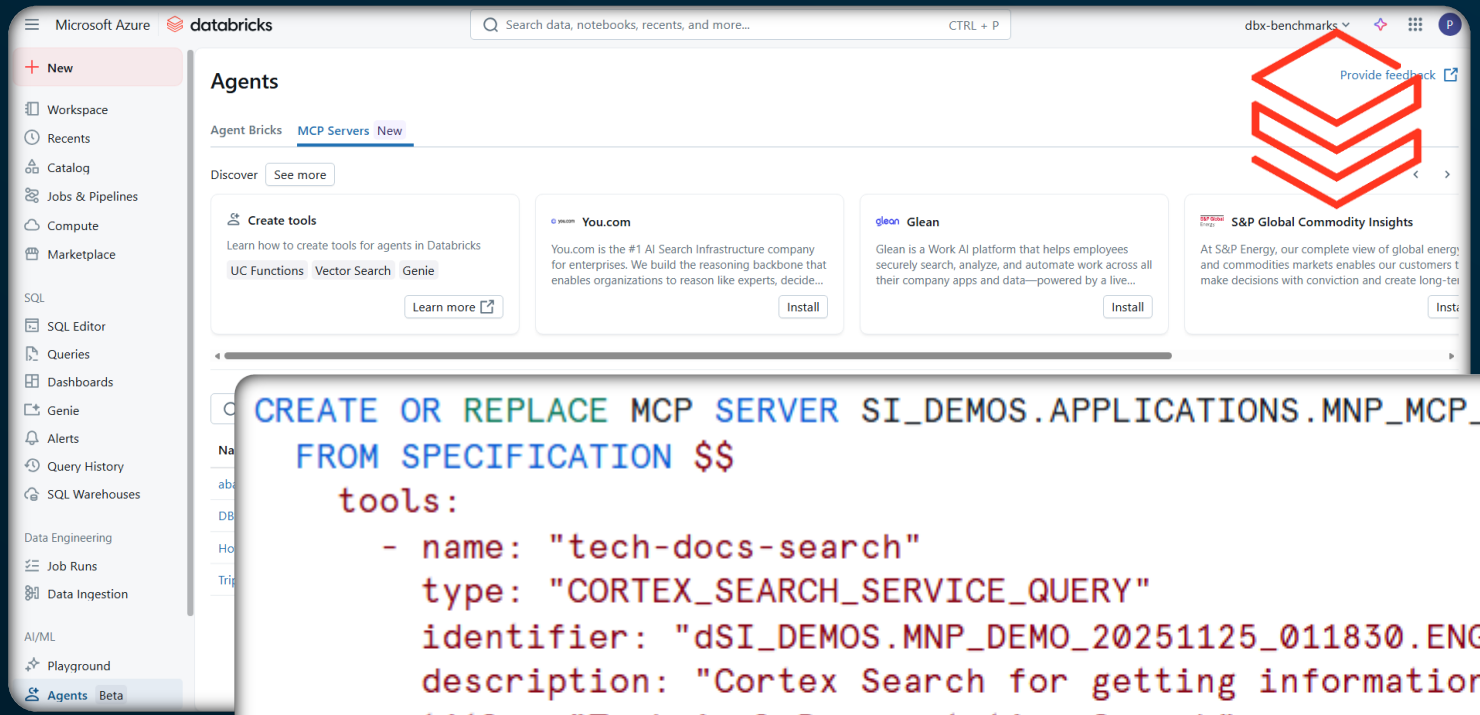
Activator: Create and manage Activator triggers for real-time alerting

- Create new triggers with KQL source monitoring
- Set up email and Teams notifications when a condition occurs
- List Activator artifacts in workspaces

DEMO

Fabric RTI MCP Server

How Fabric Compares in MCP vs Competitors?




```
CREATE OR REPLACE MCP SERVER SI_DEMOS.APPLICATIONS.MNP_MCP_SERVER
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      - name: "tech-docs-search"
        type: "CORTEX_SEARCH_SERVICE_QUERY"
        identifier: "dSI_DEMOS.MNP_DEMO_20251125_011830.ENGINE_TECHNICAL_DOCS_CHUNKS_SEARCH_SERVICE"
        description: "Cortex Search for getting information from technical documentation."
        title: "Technical Documentation Search"

      - name: "ticket-analytics-view"
        type: "CORTEX_ANALYST_MESSAGE"
        identifier: "SI_DEMOS.MNP_DEMO_20251125_011830.NEW_SEMANTIC_VIEW_SEMANTIC_MODEL"
        description: "Semantic view for JIRA ticket and SAP order data."
        title: "Semantic view for tickets and orders"
  $$
```

MCP Server Watchout List

⚠️ **Make sure you trust the LLM (MCP host)**
Are you OK with the LLM reading your data and/or metadata?

⚠️ **Don’t fully rely on AI**
It’s still LLM that does the job and it can hallucinate or misinterpret your prompts!

⚠️ **Understand available tools**
Your MCP server will be as good as the set of tools it provides.

⚠️ **Set up security beforehand**
Make sure you control data access and allowed commands before letting MCP tools in.

⚠️ **Never trust a 3rd party MCP**
MCP servers can contain harmful tools. Make sure you get them from trusted sources.

⚠️ **Watch out for costs and resource consumption**
Your interactions with MCP servers will consume tokens, Fabric CUs and other resources.

MCP and MCP for Fabric

Useful resources

- **MCP for beginners**
  https://github.com/microsoft/mcp-for-beginners
- **Microsoft MCP servers**
  https://github.com/microsoft/mcp
- **Microsoft Fabric MCP Server**
  https://github.com/microsoft/mcp/tree/main/servers/Fabric.Mcp.Server
- **MCP GraphQL Server**
  https://github.com/microsoft/fabric-samples/tree/main/docs-samples/data-engineering/GraphQL/MCP
- **Power BI Modeling MCP server**
  https://marketplace.visualstudio.com/items?itemName=analysis-services.powerbi-modeling-mcp
  https://github.com/microsoft/powerbi-modeling-mcp
- **Fabric RTI MCP Server**
  https://github.com/microsoft/fabric-rti-mcp/

MCP and MCP for Fabric

Useful resources from Fabric community

- **Kurt Buhler: Control Power BI and Fabric by using AI tools (with MCP servers)**
  https://www.youtube.com/watch?v=03WjmMKooFM
- **Kurt Buhler: Leanr MCP Servers & AI for Data and Analytics (playlist)**
  https://www.youtube.com/playlist?list=PLXa38gbQxdE1WM3RuU02v_4timu7dnIXr
- **Guy in a Cube: Chat with your Eventhouse using Fabric's MCP Server**
  https://www.youtube.com/watch?v=vMyh4S8zrZY
- **Injae Park: Official Power BI MCP - Quick Start Guide [Nov 2025]**
  https://www.youtube.com/watch?v=0ZRDTZm1iaI
- **Kurt Buhler: Agentic orchestration of Fabric by using the Fabric CLI (not MCP but super useful)**
  https://tabulareditor.com/blog/agentic-orchestration-of-fabric-by-using-the-fabric-cli

⬇️ Download this presentation from **GitHub.com/pawelpo/presentations**