



**Microsoft 365**  
COMMUNITY CONFERENCE

# Enhance Microsoft Copilot and Microsoft Graph with Your Own Data



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# Uhova

The official event app for the  
**M365 Community Conference**



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- ➔ Networking, meet-ups, messages
- ➔ Event documents

**Event Invitation Code:**  
**M365Con2024**

Never Forget...





# Co-Pilot?



**Jarvis is my co-pilot**

It's Copilot !

# Agenda

Methods



Graph Connectors

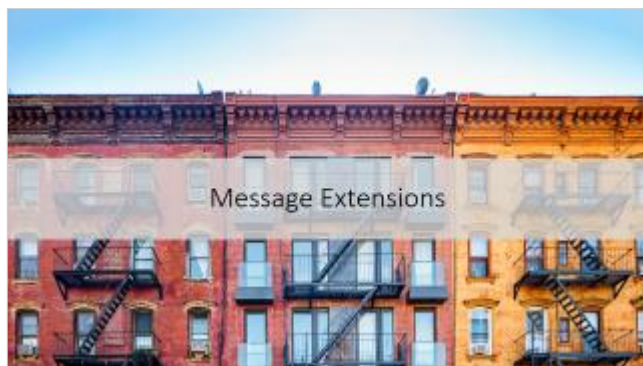


Ingest data demo



<https://learn.microsoft.com/en-us/graph/connecting-external-content-manage-items>

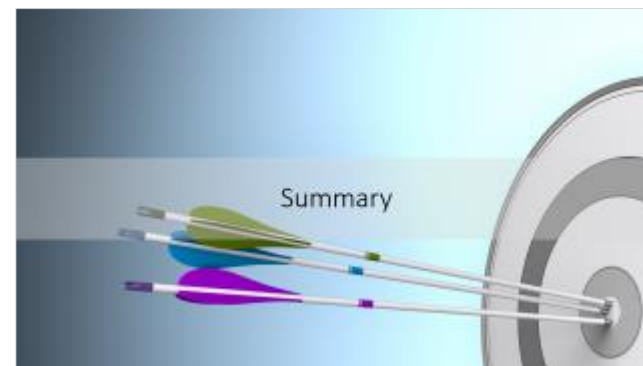
Message Extensions



Azure OpenAI

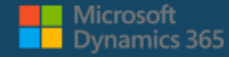


Summary



# Azure AI

## Applications



Partner Solutions

## Application Platform

AI Builder



Power BI



Power Apps



Power Automate



Power Virtual Agents

## Scenario-Based Services

Applied AI Services



Bot Service



Cognitive Search



Form Recognizer



Video Indexer



Metrics Advisor



Immersive Reader

## Customizable AI Models

Cognitive Services



Vision



Speech



Language



Decision

Azure  
OpenAI Service

## ML Platform



Azure Machine Learning



Business  
Users



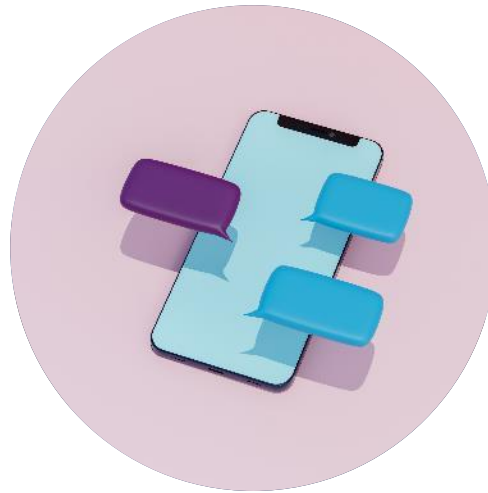
Developers &  
Data Scientists



# Integrate your custom data



Graph Connectors



Message Extensions



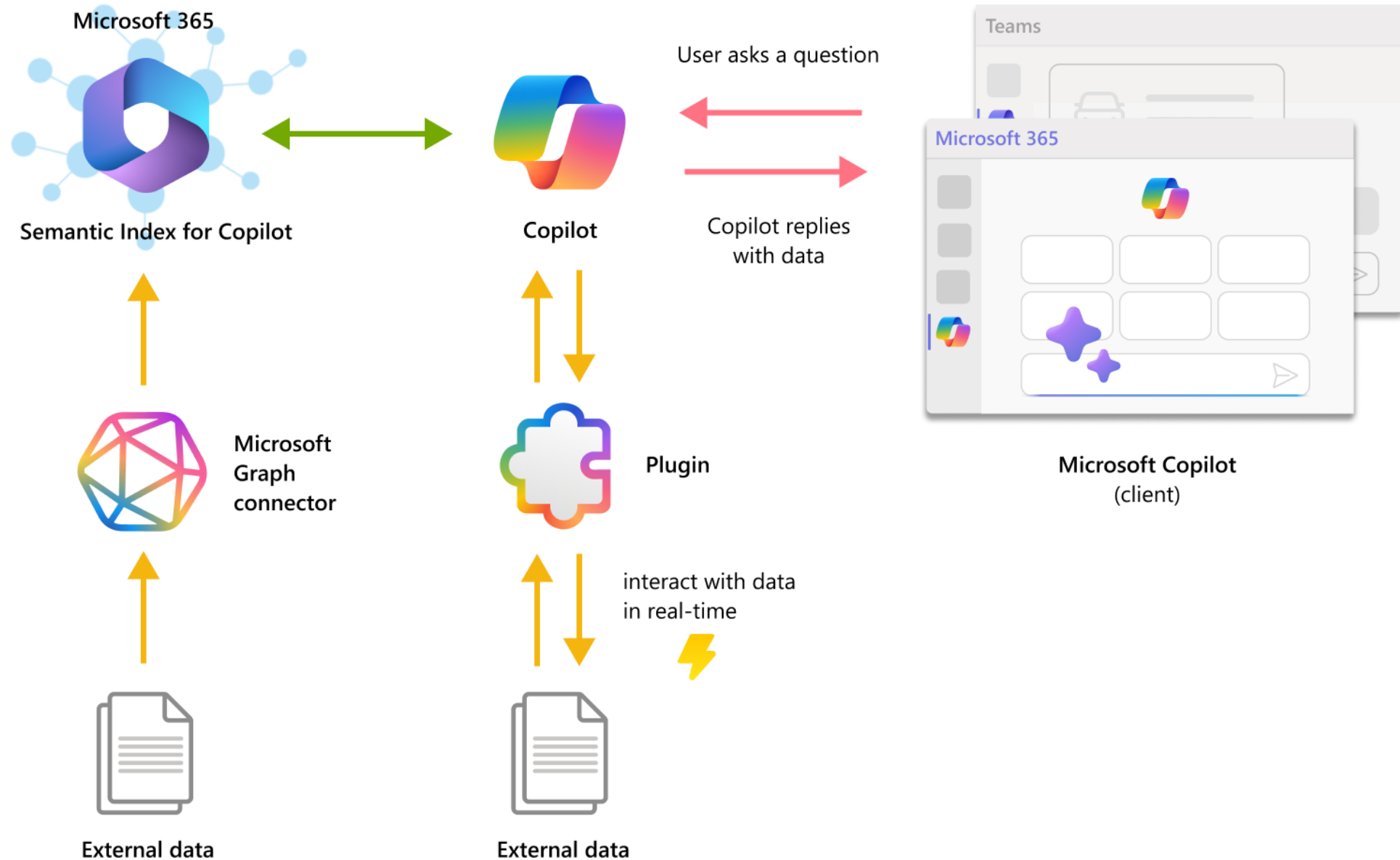
Bot + Azure Cognitive  
Search



# Methods



# [aka.ms/ExtendCopilotM365](https://aka.ms/ExtendCopilotM365)



# What to use when

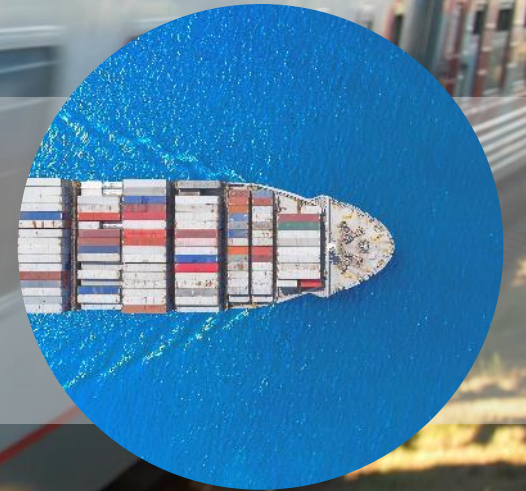
## Graph Connector

- Ingest data into Microsoft Graph
- Unstructured / flattened data
- Up to 5M items per connection
- Up to 20 requests per second
- Read-only
- Data inside M365
- SharePoint, Viva Topics, Bing work, etc.

## Plugin

- Bot development
- Real-time data access
- Structured data
- Suitable for high volume data (over 5M)
- Suitable for high activity (over 20 req./sec.)
- Read and write
- Teams and Outlook

# Graph Connectors





# Developing a custom Graph connector

- Do you want to ingest content once or continuously?
- Will you run the connector manually, or will it run continuously in the cloud?
- How much content do you need to ingest?  
What's the necessary infrastructure to support it?
- Do you need to handle content updates and deletions automatically?

# Steps for using Graph Connectors

Use the Microsoft Graph connectors REST API or SDK.

As Admin, open Microsoft 365 admin center / Settings / Search & intelligence.

Register your schema, applying semantic labels, and property attributes.

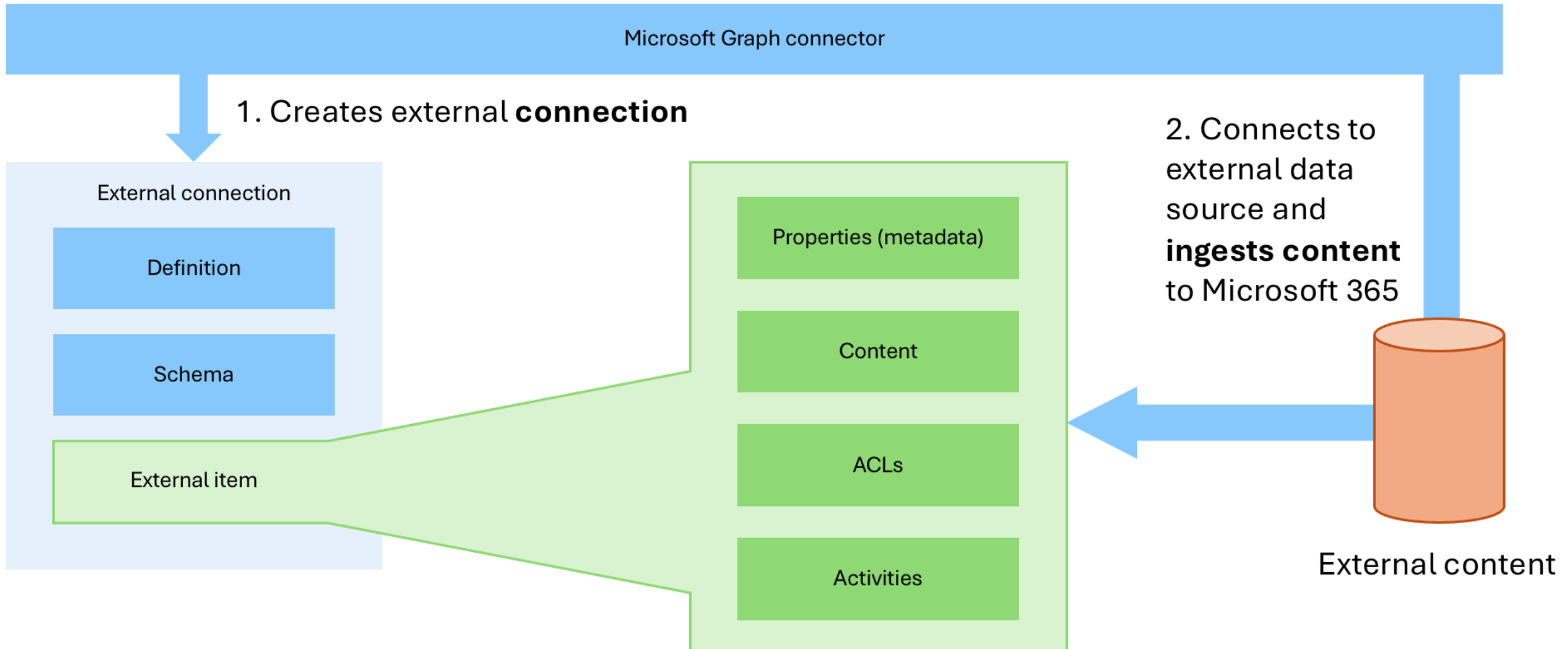
Ingest and manage external items.

# Ingest data demo



<https://learn.microsoft.com/en-us/graph/connecting-external-content-manage-items>

# Ingesting data with the Graph Connector





# Add an external item to Graph

Item Id
ACL
Properties
Content

HTTP

```
PUT /external/connections/contosohelpdesk/items/SR00145
Content-Type: application/json
```

```
"properties": {
  "title": "WiFi outage in Conference Room A",
  "priority": 1,
  "assignee": "meganb@contoso.com"
}
```

# Access control list

Item Id
ACL
Properties
Content

```
{  
  "@odata.type": "microsoft.graph.externalItem",  
  "acl": [{  
    "type": "User",  
    "value": "c3a8d94d-f807-4785-b1c0-f0f4dbc9f54",  
    "accessType": "deny",  
    "identitySource": "azureActiveDirectory"  
  }, {  
    "type": "Group",  
    "value": "contosoEscalations",  
    "accessType": "grant",  
    "identitySource": "External"  
  }, {  
    "type": "Everyone",  
    "value": "07ea6043-dab2-4448-9d7f-70dba909a9c",  
    "accessType": "grant",  
    "identitySource": "azureActiveDirectory"  
  }],  
}
```

# Properties

Item Id
ACL
Properties
Content

```
"properties": {  
  "ticketID": "1158",  
  "title": "Filter design",  
  "createdBy": "Carole Poland",  
  "assignedTo": "Aaron Bjork",  
  "lastEditedDate": "2020-08-25T03:32:08.42641",  
  "lastEditedBy": "Aaron Bjork",  
  "workItemType": "Feature",  
  "priority": "1",  
  "resolved": "false",  
  "tags@odata.type": "Collection(String)",  
  "tags": ["eng", "design"],  
  "status": "Todo",  
  "url": "https://ticketstracker.com/apps/flightbooker"  
},
```

# Content (Relevance, Text and HTML)







All

Files

Sites

People

News

Videos

Images

Conference

Feedback



## How Microsoft Does IT: Governance and Administration in ...

David Johnson, Claire Sisson

30 Apr 2024 03:15 PM

Room: MS 7

Audience: IT Professionals

Description: How does Microsoft empower its own employees with guardrails and governance to set ourselves up for success with Copilot for Microsoft 365? How are we dealing with oversharing and sprawl, what can you do today and where are we going?

Id: 639526

Type: Microsoft

Format: 60-Minute Session

Level: 300 - Configuration, Administration, Technical Details

Products: Azure, Microsoft 365 Copilot, Microsoft Groups, Microsoft Purview, SharePoint

URL: <https://m365conf.com/#!/session/How%20Microsoft%20Does%20IT%3A%20Governanc...>



## Governance for Microsoft 365, the Power Platform and You...

Martina Grom, Toni Pohl

29 Apr 2024 09:00 AM

Room: D: SH II

Audience: IT Professionals, Business/End Users, Developers

Description: With Microsoft 365, Microsoft Viva, the Power Platform, and the new Microsoft 365 Copilot as examples of services that are always updated, having a current governance model is very important. The modern workplace driven by AI, especially with the addition of



Copilot

What sessions does Martina Gro...



New chat



What sessions does Martina Grom have at M365 conference 2024?

Martina Grom is scheduled to present the following sessions at the M365 conference 2024:

- **"Enhance Microsoft Copilot and Microsoft Graph with your own data"** on 2 May 2024 at 09:15 AM in room D: SH I. This is a 60-minute session aimed at IT Professionals and Developers, focusing on Azure, Azure Functions, Microsoft 365 Copilot, Microsoft Entra, Microsoft Graph, and PVA/Copilot Studio. <sup>1</sup>
- **"Governance for Microsoft 365, the Power Platform and Your Copilots"** on 29 Apr 2024 at 09:00 AM in room D: SH II. This full-day workshop is designed for IT Professionals, Business/End Users, and Developers, covering governance models for Microsoft 365, Microsoft Viva, the Power Platform, and Microsoft 365 Copilot. <sup>2</sup>

These sessions are part of the Microsoft 365 Community Conference that takes place in Orlando, USA, from April 28th to May 3rd, 2024. For more details, you can refer to the M365 conference website.

References

1



2



Copy



1 of 30 responses

AI-generated content may be incorrect



# Graph Connectors

- All of the connectors by Microsoft are free.
- Have sufficient index quota.
- Any valid Microsoft 365 Copilot, Microsoft 365 or Office 365 license allows you to view data from connectors in your search results.
- For each licensed user, you get entitlement for 500 items of index quota.
- By default, Microsoft Graph connectors support up to 50 million items of total index quota.
- The per connection item limit is 5 million items by default. (Open support case for more), and 30 connectors per tenant.
- Pricing: 0-100K objects extracted – Free  
100K+ objects extracted - \$0.75 per 1K objects extracted  
<https://learn.microsoft.com/en-us/microsoftsearch/licensing>



A photograph of a row of three multi-story brick buildings. The building on the left is red brick with ornate window frames and black metal fire escapes. The middle building is also red brick but features modern glass balconies and black metal fire escapes. The building on the right is a lighter, yellowish-brown brick with traditional windows and black metal fire escapes. A semi-transparent white banner is overlaid across the middle of the image.

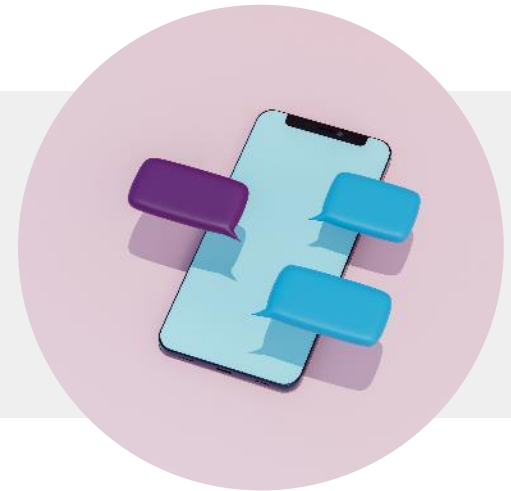
# Message Extensions



# Use cases


- Direct interaction with data
- Extended functionality
- Not “only” search
- Read and write
- Ad-hoc data
- No import
- (Developer required)

# Message Extensions demo




<https://github.com/OfficeDev/Copilot-for-M365-Plugins-Samples/tree/main/samples/msgext-northwind-inventory-ts>

# Message Extensions – Demo Plugins interactivity

 **Northwind Inventory**


Product inventory | Discounts | Revenue


chai




**Chai**  
Supplied by Contoso Beverage Company of London...

Supplied by Contoso Beverage Company of London...  
2 in stock



 Toni Pohl 11:32 AM

Pls. check the status of chai

 Northwind Inventory

**Chai** On order

**Supplier information**  
Name Contoso Beverage Company  
City London

**Stock information**

Category	Beverages	Units in stock	2
Unit price	18 USD	Units on order	7
Avg discount	8.6 %	Reorder Level	25
Inventory valuation	36 USD	Revenue this period	12,788 USD

Take action


Quantity  
3


Update stock ✓

Restock 📦

Cancel restock ✗

Restock 📦

 Reply

 Northwind Inventory

Restocking Chai placed order for 3 units.

**Chai** On order

**Supplier information**  
Name Contoso Beverage Company  
City London

**Stock information**

Category	Beverages	Units in stock	2
Unit price	18 USD	Units on order	10
Avg discount	8.6 %	Reorder Level	25
Inventory valuation	36 USD	Revenue this period	12,788 USD

Take action

Your response was sent to the app

The background of the image is a dark, textured surface. It features several 3D blue cloud icons. These clouds are interconnected by a network of thin, glowing blue lines that form a web-like structure. The lines connect the clouds in various directions, some horizontally, some vertically, and some diagonally. The overall aesthetic is high-tech and digital.

Azure OpenAI

# Create your custom Copilot with your data










1. Data source - documents (PDF, Office, Web, etc.)
2. Azure AI Document Intelligence API – Get the content
3. Azure Cognitive Search API – Build Index & search
4. Open AI API – refine the search result
5. Bot API – chat with the user (in Teams, etc.)



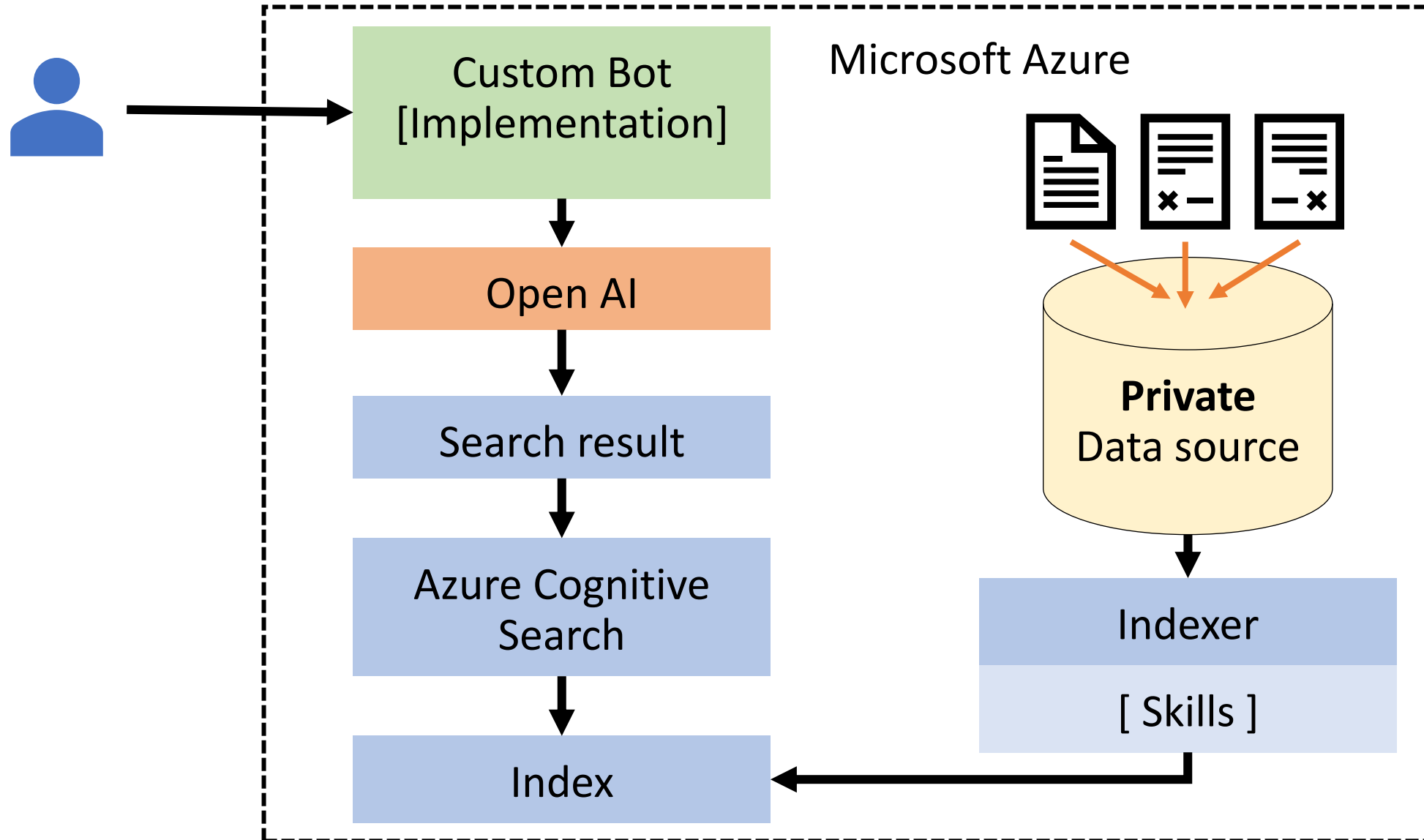


# Sample data source for the index



<input type="checkbox"/> Name	Size	Date modified	Type
▼ Yesterday			
 azure-governance-policy.pdf	230.946 KB	22.09.2023 12:35	Adobe Acrobat Docu...
 Microsoft Azure Active Directory M365 Minimum Viable SCB Draft v0.1.pdf	725 KB	22.09.2023 12:30	Adobe Acrobat Docu...
 Microsoft 365 Defender M365 Minimum Viable SCB Draft v0.1.pdf	602 KB	22.09.2023 12:28	Adobe Acrobat Docu...
 Microsoft Power BI M365 Minimum Viable SCB v0.1.pdf	559 KB	22.09.2023 12:30	Adobe Acrobat Docu...
 Microsoft Teams M365 Minimum Viable SCB Draft v0.1.pdf	547 KB	22.09.2023 12:30	Adobe Acrobat Docu...
 Microsoft Exchange Online M365 Minimum Viable SCB Draft v0.1.pdf	530 KB	22.09.2023 12:28	Adobe Acrobat Docu...
 Microsoft Power Platform M365 Minimum Viable SCB Draft v0.1.pdf	478 KB	22.09.2023 12:30	Adobe Acrobat Docu...
 Microsoft OneDrive for Business M365 Minimum Viable SCB Draft v0.1.pdf	472 KB	22.09.2023 12:30	Adobe Acrobat Docu...
 Microsoft SharePoint Online M365 Minimum Viable SCB Draft v0.1.pdf	459 KB	22.09.2023 12:30	Adobe Acrobat Docu...

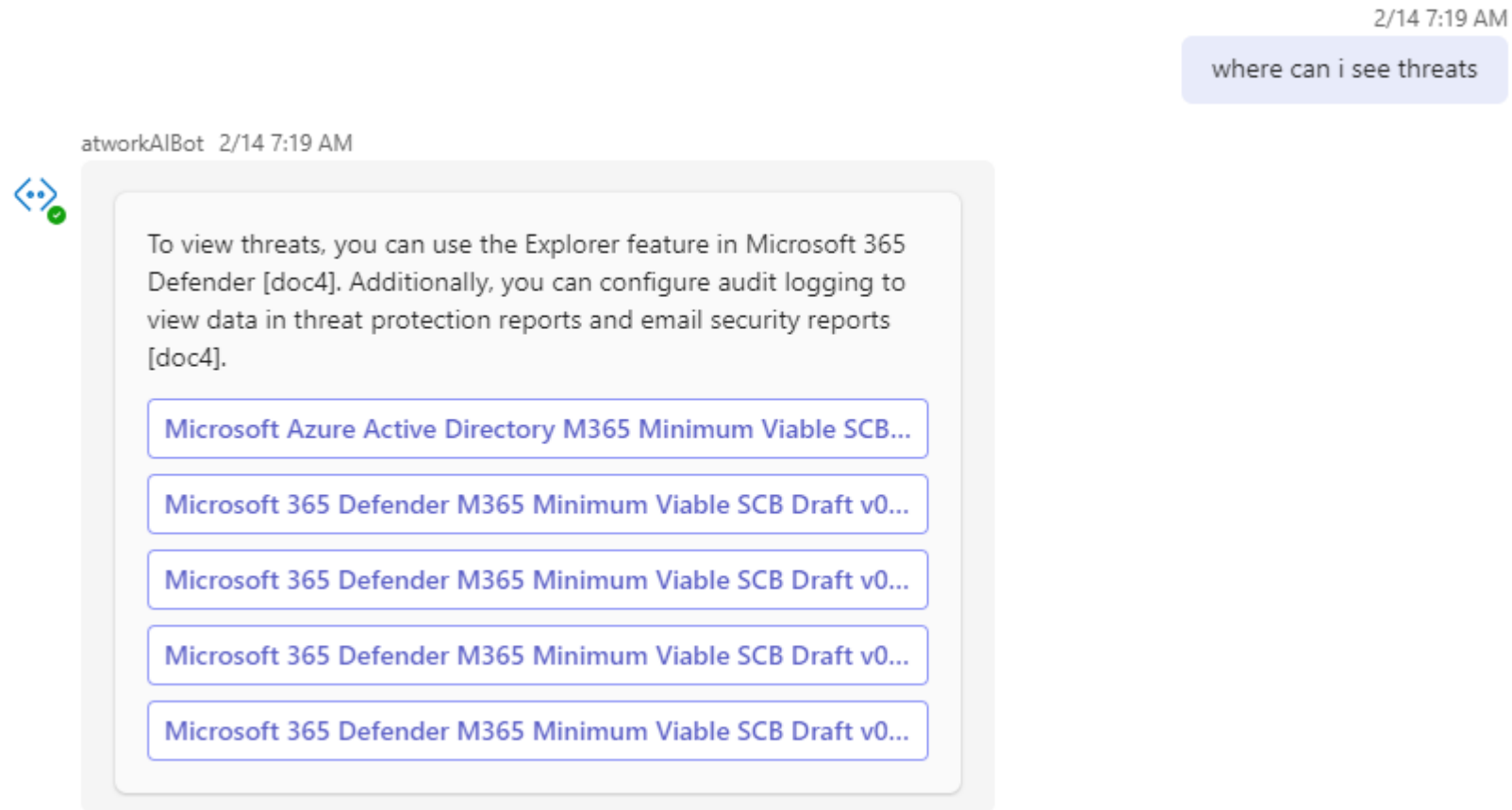
# Custom Copilot with Azure Cognitive Search



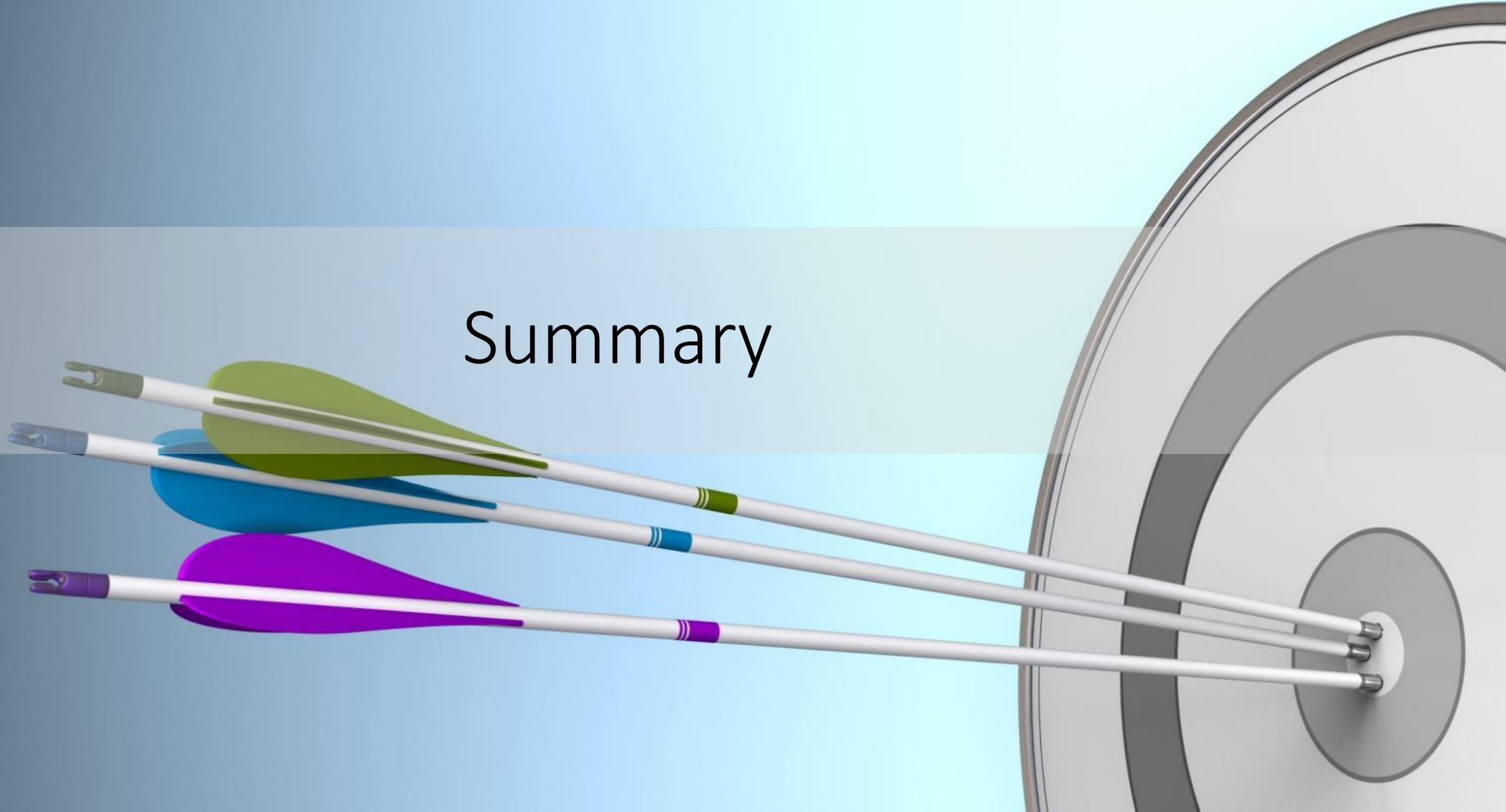
# Azure Open AI Demo



# Integrated OpenAI Bot into Teams chat



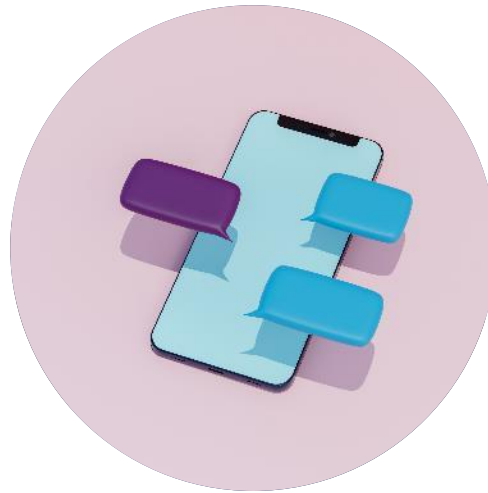
# Summary



# Take aways to integrate your data into Copilot



Graph Connectors



Message Extensions



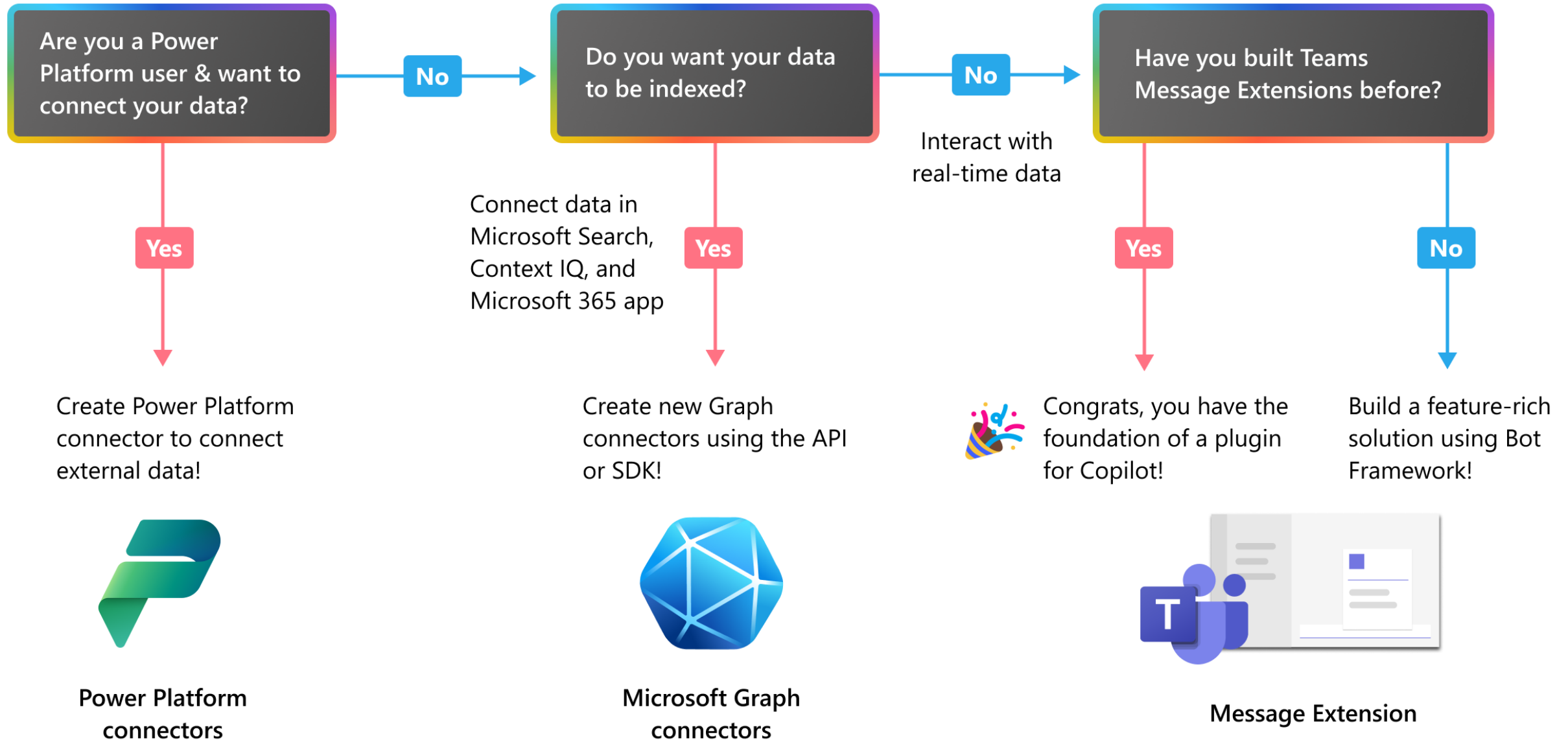
Bot + Azure Cognitive  
Search





## Which Microsoft 365 extensibility option for Copilot should you choose?

Start here!



# Copilot and Search Options...

	Graph Connectors	Message Extensions	Copilot Studio	Azure OpenAI
Type	Integrates in Graph and add a Vertical in Search	Interactivity, adaptive cards	Simple to use, fast solution	Integration on your terms
Development	N	Y	N	Y
Data Location	Graph	Data storage	Data storage	Data storage
Solution complexity	*	**	*	***

## Do

- Learn, Learn, Learn
- Define your use cases
- Validate your use cases against available solutions
- Integrate Open AI into your solutions as helper, not as a decision maker
- **Validate security and compliance**


## Don't

- Reinvent the wheel again
- Think twice if you really need a custom model
- Copilot is not a replacement for a human
- GPT model is not a search engine



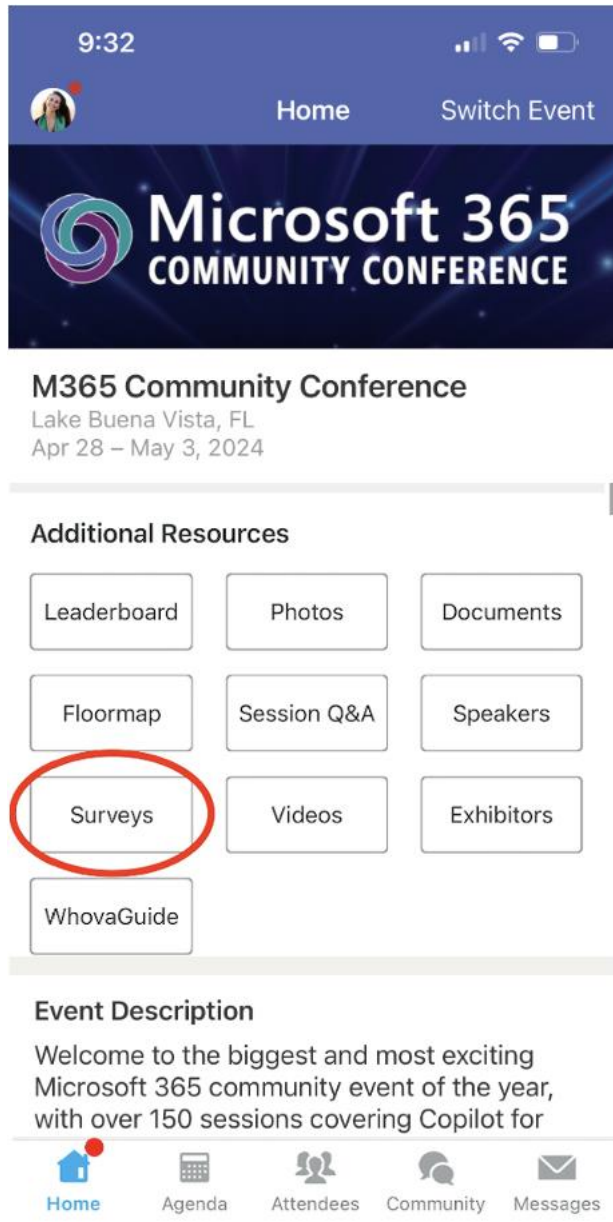
# Start here!

- <https://aka.ms/Copilot-Plugins>
- <https://aka.ms/Message-Extensions>
- <https://aka.ms/GraphConnectors>
- <https://aka.ms/ExtendCopilotM365>
- <https://aka.ms/community/samples>



## Q & A

In case of questions, please contact us.  
We are happy to engage in further conversations.



# Session Feedback Surveys

*We really want to hear from YOU!*

*In the pursuit of making next year's Microsoft 365 Community Conference even better, we want to hear your feedback about this session.*

## ***Here's How -***

- *Simply go to the Whova App on your smartphone*
- *Scroll down on the M365 Community Conference Homepage to 'Additional Resources' to click "Surveys'.*
- *Click Session Feedback.*
- *Scroll down to find this session title.*
- *Complete the session feedback survey.*
- *Finally, click 'Submit'*

*It's just that easy!*



# Thank You!



Find the presentation and demos at  
<https://github.com/tonipohl/CustomCopilots>

## Let's Connect



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**Toni Pohl**

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@atwork



3<sup>RD</sup> ANNUAL



# Power Platform COMMUNITY CONFERENCE

POWER BI

POWER AUTOMATE

POWER APPS

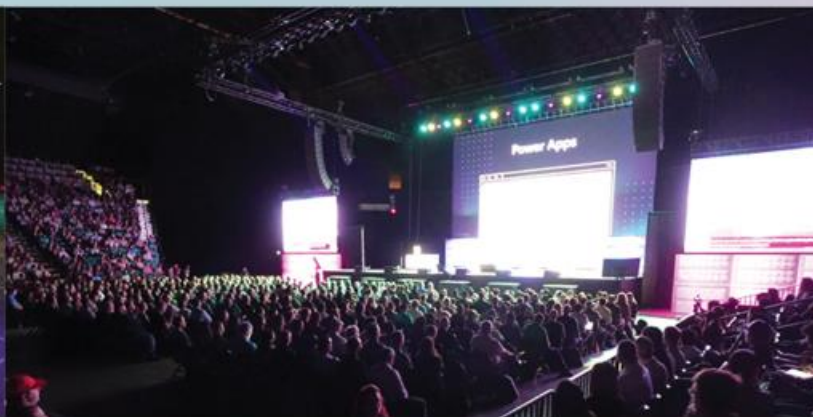
COPILOT STUDIO

POWER PAGES

SEPT 18-20, 2024 • MGM GRAND LAS VEGAS, NV

*Workshops Sept 16, 17 & 21*

[PowerPlatformConf.com](https://PowerPlatformConf.com) [X PowerPlatConf](#)



# Links

- Create, update, and delete items added by your application via Microsoft Graph connectors  
<https://learn.microsoft.com/en-us/graph/connecting-external-content-manage-items>
- External groups let you manage permissions to view external items in a Microsoft Graph connection (Salesforce Profiles, Dynamics Business Units, SharePoint groups, ServiceNow local groups, or Confluence local groups)  
<https://learn.microsoft.com/en-us/graph/connecting-external-content-external-groups>