

Lab 03: Knowledge sources, Al knowledge, and custom instructions

Hands-on lab step-by-step

January 2025

UDPP Copilot Studio Workshop

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Microsoft Copilot Studio		
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Microsoft Copilot Studio

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Goals for this lab

After this lab you will be able to:

- Make your bot instantly smart by pointing to your website and other knowledge sources.
- Navigate to the Generative AI settings
- Navigate to the Conversational Boosting system topic
- Set custom prompt instructions

The time to complete this lab is [30] minutes.

Prerequisites

Labs have been designed to be completed with only a Microsoft Copilot Studio trial. You can start most labs without having to complete the previous module but note that some exercises may reference previous labs. To fully experience the features and functionality of the product, it is recommended that you make sure to have completed all pre-requisites below before starting this lab.

For this lab you need:

- A computer with internet access.
- Be able to log into the provided Microsoft tenant (some companies enforce users to only connect to their company tenant) or your own enterprise tenant with a Copilot Studio User License (or trial)
- Generative AI should be set to "classic" (in Settings, Generative AI)
- "Allow the AI to use its own general knowledge" should be set to "Disabled" (in the Overview tab)

Knowledge
Add data, files, and other resources to inform and improve Al-generated responses.

Allow the Al to use its own general knowledge. Learn more

Disabled

Access to external websites (learn.microsoft.com, <u>www.microsoft.com</u>, adoption.microsoft.com)

Knowledge sources

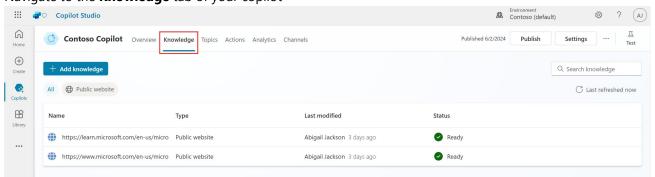
Knowledge in Microsoft Copilot Studio allows you to add enterprise data from Power Platform, Dynamics 365 data, and external systems, so your Copilots provide relevant information and insights for your end users. In addition, knowledge can be incorporated with <u>Generative answers</u> in copilots. Published copilots that contain knowledge use the configured knowledge sources to ground the published copilot.

For more information regarding each knowledge sources, please refer to the documentation: <u>Knowledge</u> sources overview - <u>Microsoft Copilot Studio | Microsoft Learn</u>

Websites

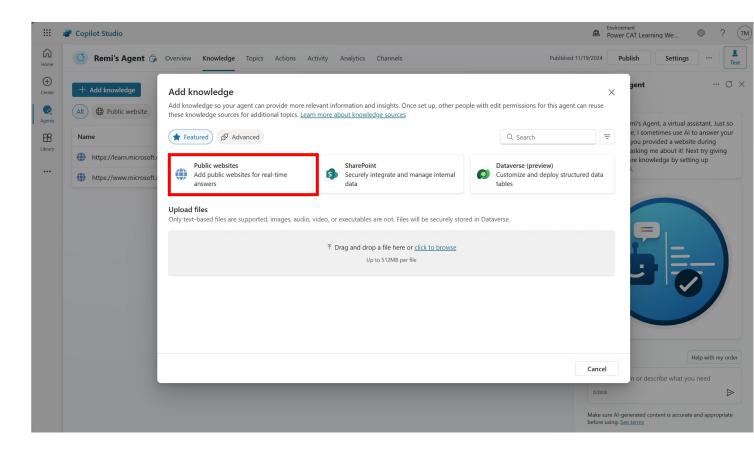
Task 1: Configure website knowledge sources

1. Navigate to the **Knowledge** tab of your copilot



From previous labs, you may see existing knowledge sources, such as public websites. If that is not the case, please add the following website for this lab:

- https://learn.microsoft.com/en-us/microsoft-copilot-studio/
- https://www.microsoft.com/en-us/microsoft-copilot/
- 2. Select Add knowledge.
- 3. Consider adding a new **website**, such as https://adoption.microsoft.com/en-us/
 Make sure **each** knowledge source has a good **name** and explicit **description** of what it can return.





Pro tips:

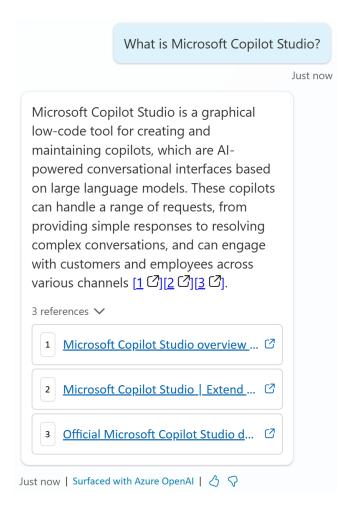
- When using the default built-in natural language understanding model, knowledge sources are invoked from the Create generative answers node. By default, user sentences that don't trigger a topic will go to the Conversational boosting topic, where a generative answers node is preconfigured.
- When **generative AI orchestration** is enabled, the large language model will look at each knowledge source model **description** to know what data source to use to answer a user query.

Task 2: Test website knowledge sources

- 1. Launch the **Test** pane
- 2. Ask a question that doesn't match an existing topic to trigger the **Conversational boosting** topic.

What is Microsoft Copilot Studio?

3. Notice that it generates an answer and includes **citations** to ground its answer on and offer the user the option to navigate to the **sources** that were used to generate this answer.



4. Ask a **follow up** question.

What knowledge sources does it support?

Just now

Microsoft Copilot Studio supports various knowledge sources, including Public
Website, Documents, SharePoint,
OneDrive, Dataverse, and Enterprise data via graph connections [1 2].

1 reference

1 Knowledge sources overview - Mic... 2

What knowledge sources does it support?

Just now | Surfaced with Azure OpenAI | ♂ ♀

Notice that even though the follow up question didn't refer to the specific product this question applied to, the generative answers features made sure context was preserved and that the follow up question was interpreted in context of the previous messages in the conversation.

Files

Task 1: Configuring the Files knowledge source

- Download the Azure Compliance Offerings document from https://servicetrust.microsoft.com/DocumentPage/7adf2d9e-d7b5-4e71-bad8-713e6a183cf3
- Navigate to the Knowledge tab of your agent and select Add knowledge.
- 3. Select **Files, Upload** the document downloaded in step 1, and click **Add**.

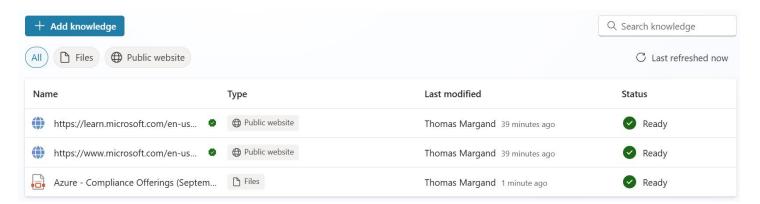
Task 2: Test the Files knowledge source

1. Navigate to the **Knowledge** tab of your copilot.

For the file you have uploaded, wait for the status to be **Ready**.

Click the **refresh** button to get an update on the status.

Make sure the "Allow the Al to use its own knowledge" is turned OFF.



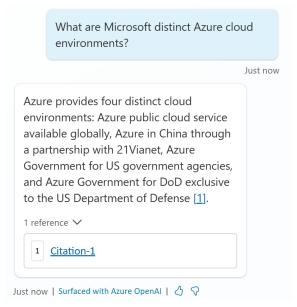


Tip: While the file is indexing, explore and complete the other lab's data sources and tasks.

- 2. Launch the **Test** pane
- 3. Ask a question that doesn't match an existing topic to trigger the **Conversational boosting** topic.

What are Microsoft distinct Azure cloud environments?

4. Notice how the **citation** is rendered differently.



Dataverse

Task 1: Configuring the Dataverse knowledge source

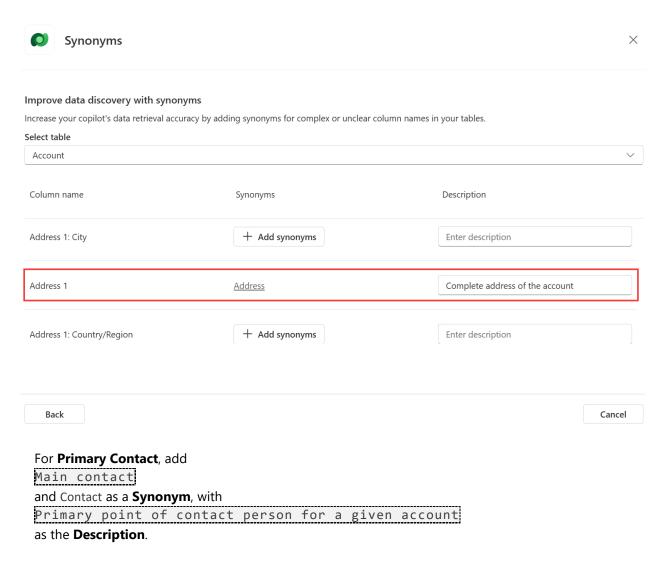
The Dataverse knowledge source allows users to make natural language queries over structured data, stored in Dataverse tables.

- 1. Because **Dataverse** is an internal data source, end-users have to be authenticated. If it's not the case, go to **Settings**, **Security**, **Authentication**, choose **Authenticate with Microsoft**, then **Save**.
- 2. Navigate to the **Knowledge** tab of your agent and select **Add knowledge**.
- 3. Select **Dataverse** and select the **Account** and **Contact** tables and click **Next**.
- 4. Check the table contains data and click **Next**.
- 5. To improve the understanding of questions about specific attributes of the table, in Synonyms, select Edit.

For Address 1, add

Address
as a Synonym, with

Complete address of the account
as the Description.



- 6. Then select Back.
- 7. To improve the understanding of user questions about accounts, in **Glossary**, select **Edit**.

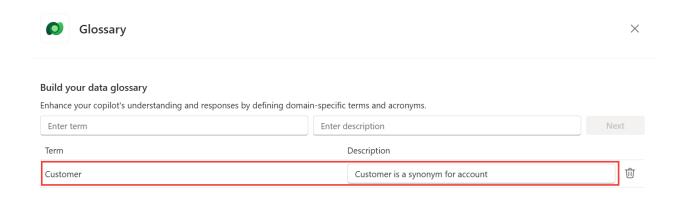
In this example, add

Customer

as a Term, with

Customer is a synonym for account

as the **Description**. Then select **Next**, then **Back**.



- 8. Keep the default values Knowledge name and Knowledge description.
- 9. Click Add.



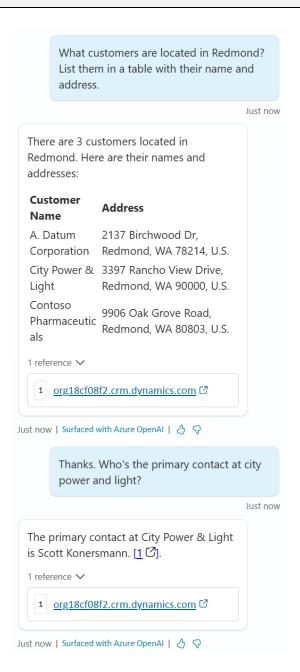
Pro tip: This data source requires authentication because any search is done in the context of the connected end-user. So, only records the end-user has at least read access to are returned and summarized.

Task 2: Test the Dataverse knowledge source

- 10. Launch the **Test** pane
- 11. **Ask** these 2 below questions, one after the other.

What customers are located in Redmond? I need their name and address

Thanks. Who's our main contact at city power and light?



SharePoint

Task 1: Configuring a SharePoint knowledge source

- 12. Navigate to the **Knowledge** tab of your agent and select **Add knowledge**.
- 13. Select **SharePoint** and use this URL: https://csudpp.sharepoint.com/sites/KnowledgeBase Give it a description "Answer question about HR, health plan and benefits".



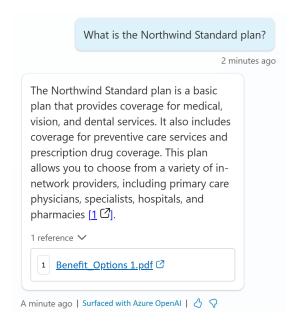
Pro tip: This data source requires authentication because any search is done in the context of the connected end-user. So, only documents and pages the end-user has at least read access to are returned and summarized.

Task 2: Test the SharePoint knowledge source

- 1. Launch the **Test** pane
- 2. Ask a question that doesn't match an existing topic to trigger the **Conversational boosting** topic.

What is the Northwind Standard plan?

Notice that it generates an answer and includes **citations** to ground its answer on and offer the user the option to navigate to the **sources** that were used to generate this answer



Graph Connectors

Task 1: Configuring a ServiceNow Knowledge graph connector knowledge source

- 1. Navigate to the **Knowledge** tab of your agent and select **Add knowledge**.
- 2. Select Advanced
- 3. Select ServiceNow Knowledge
- 4. Under "Select an existing connection:", choose the pre-created **ServiceNowKB1** connection.



Pro tip:

- This data source requires authentication because any search is done in the context of the
 connected end-user. So, only documents and pages the end-user has at least read access to are
 returned and summarized.
- The connection is realized through Microsoft Graph Data Connect on the tenant level. More info available here https://learn.microsoft.com/en-us/MicrosoftSearch/connectors-overview

Task 2: Test the ServiceNow Knowledge graph connector knowledge source

- 1. Launch the **Test** pane
- 2. Ask a question that doesn't match an existing topic to trigger the **Conversational boosting** topic.

How do I configure the VPN on my iPhone?

Notice that it generates an answer and includes **citations** to ground its answer on and offer the user the option to navigate to the **sources** that were used to generate this answer



Custom instructions

Prompt modification allows you to expand the capabilities of generative answers and knowledge sources, by adding custom instructions. When using custom instructions, it's important to follow best practices for prompt engineering. Here are some tips to help you get the most out of this feature:

- **Be specific** Custom instructions should be clear and specific, so the agent knows exactly what to do. Avoid vague or ambiguous language that could lead to confusion or incorrect responses.
- **Use examples** Provide examples to illustrate your instructions and help the agent understand your expectations. Examples help the agent generate accurate and relevant responses.
- **Keep it simple** Avoid overloading your custom instructions with too many details or complex logic. Keep your instructions simple and straightforward so the agent can process them effectively.
- **Give the agent an "out"** Give the agent an alternative path for when it's unable to complete the assigned task. For example, when the user asks a question, you might include "respond with 'not found' if the answer isn't present." This alternative path helps the agent avoid generating false responses.
- **Test and refine** It's important to test your custom instructions thoroughly to ensure they're working as intended. Make adjustments as needed to improve the accuracy and effectiveness of your copilot's responses.

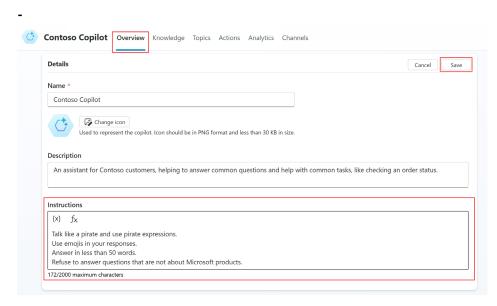
Task 1: Configure custom instructions for Generative AI Orchestration

Custom instructions can be set in distinct places, depending on whether you use **Generative Al Orchestration** as the main intent recognition mechanism, or if you use the **Classic** natural language understanding approach. When **Generative Al Orchestration** is enabled, instructions need to be set at the **agent** level.

- 1. Let's first make sure Generative AI orchestration is enabled. From the navigation, go to **Settings** tab.
- 2. Navigate to the **Generative AI** menu.
- 3. In How should your agent decide how to respond? select Generative (preview).
- 4. Save and Close the settings.
- 5. From the navigation, go to the **Overview** tab.
- 6. In the **Details** area, select **Edit**.
- 7. Update/replace the **Instructions**Notice that you can use variables that are specific to the user context.

Talk like a pirate and use pirate expressions. Use emojis in your responses. Answer in less than 50 words.

8. **Save**



Task 2: Configure custom instructions for classic orchestration (optional)

When **Classic** orchestration is enabled for intent recognition, instructions need to be set at the **Create generative answers** node level, typically in the **Conversational Boosting** system topic (as this node can be added anywhere).

- 1. Let's make sure **Classic** orchestration is enabled. From the navigation, go to **Settings** tab.
- 2. Navigate to the **Generative AI** menu.
- 3. In How should your agent decide how to respond?, select Classic.
- 4. Save and Close the settings.
- 5. From the navigation, go to the **Topics** tab.
- 6. Select the **System** topics area.
- 7. Select the **Conversational boosting** topic.
- 8. Go to the Create generative answers node properties
- 9. In Customize your prompt with variables and plain language. Add your custom instructions here.

Talk like a pirate and use pirate expressions. Use emojis in your responses. Answer in less than 50 words.



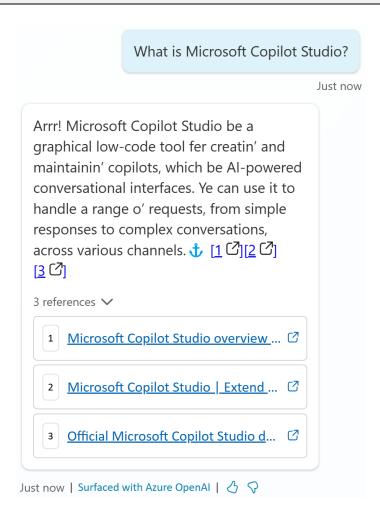
10. **Save**

Task 3: Test custom instructions

1. Launch the **Test** pane

2. Ask a question that doesn't match an existing topic to trigger the Conversational boosting topic.

What is Microsoft Copilot Studio?



Al general knowledge

In addition to knowledge sources, you can use AI general knowledge to allow your agent to find and present information in response to your customer's questions. General knowledge saves you from needing to manually author multiple topics, which might not even address all your customer's questions.

This capability allows the agent to try and answer questions with its own knowledge, outside of any grounding data from your knowledge sources. It is like asking questions to ChatGPT.

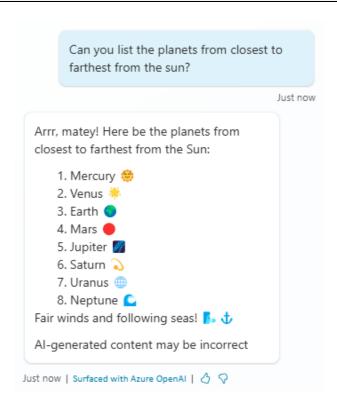
Task 1: Configure the use of AI general knowledge

- 1. From the navigation, go to the **Overview** tab.
- 2. In the Knowledge area, make sure Allow the Al to use its own general knowledge is switched on.

Task 2: Test the use of AI general knowledge

- 1. Launch the **Test** pane
- 2. Ask a question that neither matches an existing nor a configured knowledge source.

Can you list the planets from closest to farthest from the sun?



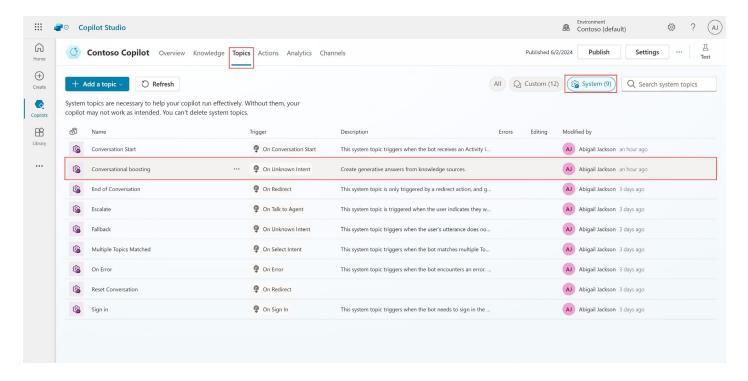
The conversational boosting topic and the generative answer node

With the built-in, default, natural language understanding model, any user utterance that doesn't trigger a topic goes to the Conversational boosting topic (and then goes to fallback, if no answer is identified).

Like any other topic, the logic in the Conversational boosting topic can be configured to further meet your scenarios.

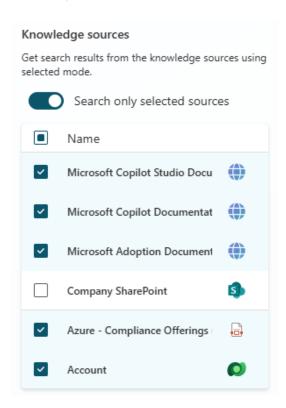
Task 1: Access the Conversational boosting topic

- 1. From the navigation, go to the **Topics** tab.
- Select the **System** topics area.
- 3. Select the **Conversational boosting** topic.

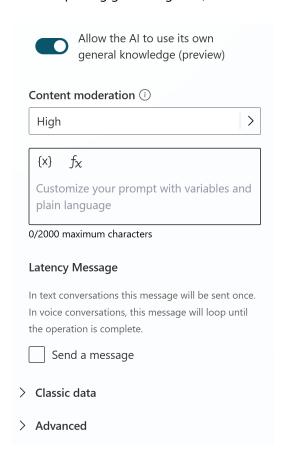


Task 2: Review the generative answers node

- In the Conversational boosting topic, go to Create generative answers node properties
- 2. With the **Search only selected sources**, see that you hand-pick the **knowledge sources** that should be used when entering that specific node.
- 3. For example, select **all** but the SharePoint knowledge sources (at it's currently the slowest one).



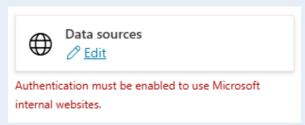
4. You can also choose to **disable Al to use its own general knowledge**, and you can also set **additional custom instructions**. The **Content moderation** setting is the level of controls you apply to avoid the agent from hallucinating (i.e., coming up with a wrong answer to a question, for example by misinterpreting or overinterpreting grounding data).



5. **Save**



Pro tip: You may disregard the authentication warning as this won't apply to the tests done in this lab



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