

- 13 -

Topic inputs and outputs:
efficient information capture



MONTHLY MASTERY

FEATURE-A-DAY

with Copilot Studio



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Katerina Chernevskaya





JingleBot

Overview

Knowledge

Topics

Actions

Activity

+2

Publish



...

Santa's Wish Sorting System



Copilot

Comments

Topic checker

Details

...

More

Save



Are you tangled up in an endless chain of Ask a Question nodes and conditions that feel more convoluted than the Grinch's plan to swipe every last Christmas present? Let's face it - maintaining that setup is no holiday treat. It's outdated, hard to maintain, and eats up your time.



Here's the good news: with Topic Inputs and Outputs, you can clean up that mess faster than the Grinch returning stolen presents. Let's dive in!



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Topic inputs and outputs

What are they?

In Copilot Studio, topic **inputs** and **outputs** are essential for capturing, passing, and sharing data efficiently within and between topics.

Topic inputs allow you to **capture specific information** when a topic is triggered. This input data is passed into a topic, where it can be used to influence the flow of the conversation, trigger conditions, or be shared with other topics.

Topic outputs enable you to **pass data** out of a topic after processing is completed. Outputs are useful for sharing information with other topics or providing final responses to users.



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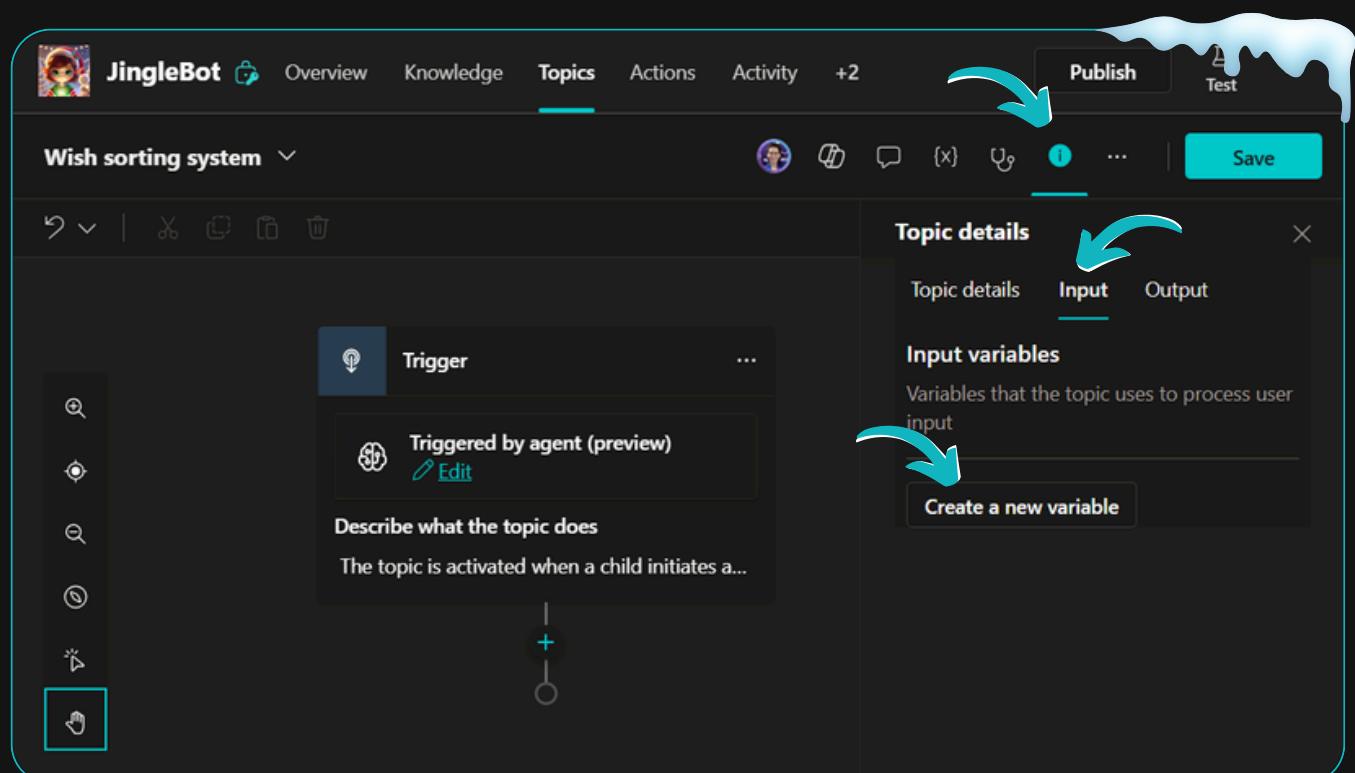


Topic inputs and outputs

Add in a topic

To add inputs or outputs for a topic:

1. Select **Details** from the navigation bar at the top of the authoring canvas (or from the context menu on the **Topics** list page).
2. In the **Details** pane, go to the **Inputs** or **Outputs** tabs.
3. Click **Create a new variable** to add input or output variables.



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Topic inputs and outputs

Configure input variable

- Enter the **Variable name** and **Display name**.
- Choose **how** the value will be populated:
 - Dynamically (powered by AI) or
 - Predefined (static value).
- Select the **Variable data type** (e.g., string, number, boolean, date, and more).
- Specify the **Entity type** (e.g., user's entire response, person's name, city, etc.).
- Add a **Description** to guide the AI on what information to fill in the variable.

Topic details

Topic details **Input** Output

Input variables
Variables that the topic uses to process user input

Tv Name ✖

Variable name ⓘ

How will the agent fill this input?

Variable data type

Display name

Identify as

Description

42/1024

> **Additional settings**



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Topic inputs and outputs

Configure input variable

You can configure **Additional settings**:

- Override default questions and create **personalized** ones with variables or Power Fx.
- Choose **retry attempts** and customize follow-up questions.
- Add **conditions** to validate inputs and provide specific error prompts.
- Define actions like **escalation** or **default values** when retries fail.

The screenshot shows the 'Topic details' section of the Microsoft Copilot Topic configuration interface. It includes:

- Topic details** section with a 'Additional settings' dropdown.
- Should prompt user** checkbox (checked).
- Copilot prompts user for input** section with a 'Configure how the copilot will ask the user to fill the input' note.
- Prompt** section with a 'Customize' checkbox (checked) and a message template: "You create a message".
- Create the message to display** section with a rich text editor and a placeholder message: "Could you please tell me your name?".
- Condition** section with a 'Builder' dropdown and a 'Select a variable' button.
- Condition not met prompt** section with a 'Customize' checkbox.
- Action if no entity found** section with a 'Escalate' button.



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Topic inputs and outputs

Configure input variable

You can create multiple input variables to capture necessary information.

In this example, we created four variables to store details from the child's letter to Santa:

- Name
- Age
- Location
- Wishes

The screenshot shows a configuration interface for four input variables, each represented by a card with a teal border:

- Tv Name**: Variable name: tv_location. How will the agent fill this input?: Dynamically fill with best option (default). Variable data type: String. Display name: Location. Identify as: City. Description: The city where the child is from. 32/1024
- Tv Age**: Variable name: tv_age. How will the agent fill this input?: Dynamically (default). Variable data type: Number. Display name: Age. Identify as: Age. Description: The child's age for Christmas. 35/1024
- Tv Wishes**: Variable name: tv_wishes. How will the agent fill this input?: Dynamically (default). Variable data type: String. Display name: Wishes. Identify as: User's entire message. Description: The child's letter for Christmas. 53/1024
- Tv Location**: Variable name: tv_name. How will the agent fill this input?: Dynamically (default). Variable data type: String. Display name: Location. Identify as: Person name. Description: The name on the letter. 42/1024



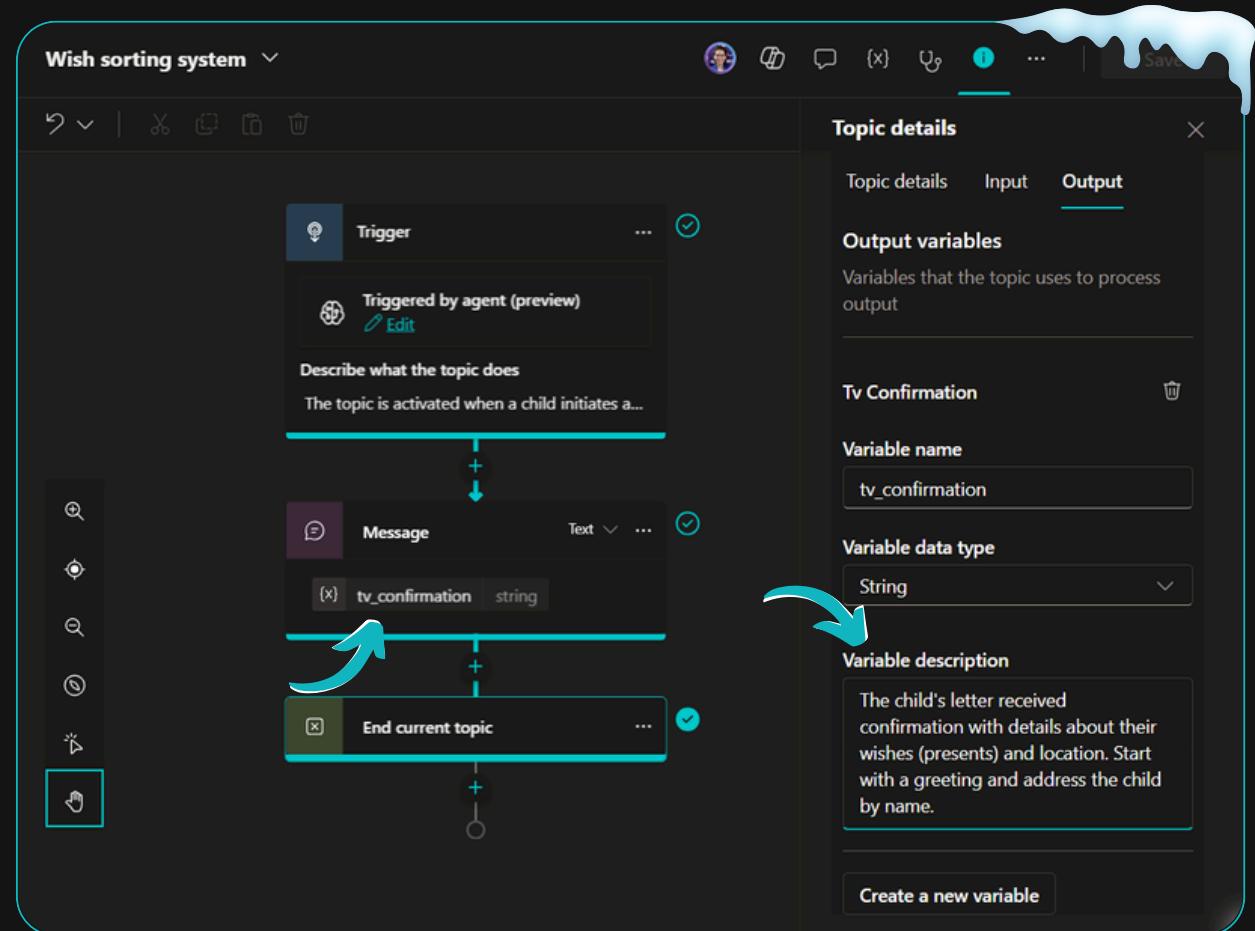
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Topic inputs and outputs

Configure output variable

For an output variable, provide a **name** and use the **Variable description** field to clarify what information it will store.

This variable can then be used to share its value with the user during the conversation.



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Topic inputs and outputs

Test the topic

Use the **Test** tool to check how your topic with just trigger and one action works.



No more endless chain
of Ask a Question nodes
and conditions!

JingleBot Overview Knowledge Topics Actions Activity +2 Publish Test

Wish sorting system

Trigger Triggered by agent (preview) Edit

Describe what the topic does

The topic is activated when a child initiates a...

Message Text tv_confirmation string

End current topic

Test your agent

Dear Santa, I'm Emma from New York, and I want a Teddy Bear and a Storybook!

A minute ago

Your letter to Santa has been sent, Emma! 🎅 Santa will know that you wish for a Teddy Bear and a Storybook this Christmas.

Keep the magic alive!

Just now

Ask a question or describe what you need

0/2000

Make sure AI-generated content is accurate and appropriate before using. [See terms](#)



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Topic inputs and outputs

Advantages

The agent **automatically** prompts for required information when needed, without relying on manually created nodes.

The screenshot shows the JingleBot AI interface. At the top, there's a navigation bar with 'JingleBot' and various tabs like 'Overview', 'Knowledge', 'Topics', 'Actions', 'Activity', and '+2'. On the right, there are 'Publish' and 'Test' buttons. Below the navigation, there's a header with 'Activity map', 'Review', 'Variables', and 'Track between topics'. A message 'Session started' is displayed above a card. The card itself is titled 'Wish sorting system' and is categorized under 'Topic'. It has three input fields: 'Location' (String), 'Name' (String) with the value 'Kate', and 'Wishes' (String). An output field shows '(x) tv.confirmation | String ='. A message at the bottom says 'Session in progress'. To the right of the card, a conversation window shows a message from the bot: 'Hello, I'm JingleBot, a virtual assistant. Just so you are aware, I sometimes use AI to answer your questions. If you provided a website during creation, try asking me about it! Next try giving me some more knowledge by setting up generative AI.' Below that, a message from a user says 'Dear Santa, my name is Kate and I'm very much looking forward to Christmas!' followed by a reply from the bot: 'Just now What city are you from? Please tell me your location so we can write to Santa!'. At the bottom, there's a text input field with placeholder 'Ask a question or describe what you need' and a character limit of '0/2000'. A note at the bottom right says 'Make sure AI-generated content is accurate and appropriate before using. See terms'.



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Topic inputs and outputs

Advantages

If the condition for an input variable is not met, the configured message will be sent to the user.

The screenshot shows the JingleBot interface with a dark theme. At the top, there's a navigation bar with 'JingleBot' and various tabs like 'Overview', 'Knowledge', 'Topics', 'Actions', 'Activity', and '+2'. Below the navigation is a toolbar with 'Publish', 'Settings', and a highlighted 'Test' button. The main area has sections for 'Activity map', 'Review', 'Variables', and 'Track between topics'. A 'Session started' button is visible. On the left, a 'Wish sorting system' topic is selected, showing 'Inputs (4)' and 'Output (1)'. Inputs include 'tv_age' (Number), 'Location' (String), 'Name' (String), and 'Wishes' (String). The output is 'tv_confirmation' (String). In the center, a 'Test your agent' window shows a conversation: 'What wishes or presents would you like to ask Santa for this Christmas?' followed by 'I would love to have Teddy Bear'. Below it, 'How old are you, my dear friend?' followed by '99'. Then, a message from Santa: 'Ah, it seems you've outgrown Santa's list this year, but don't fret! Even the Grinch agrees you deserve a cozy holiday filled with cheer and joy. Santa sends his warmest wishes your way!' with a yellow star emoji. At the bottom of the test window, it says 'Ask a question or describe what you need' and '0/2000'. A note at the bottom of the page says 'Make sure AI-generated content is accurate and appropriate before using. [See terms](#)'. On the right side, there's a sidebar titled 'Additional entity validation' with a 'Builder' dropdown. It shows a condition: '{x} tv_age number > is less than 20'. Below that is a 'New condition' button. Under 'Condition not met prompt', there's a checked 'Customize' checkbox and a dropdown menu set to 'You create a message'. A large blue arrow points from the 'Customize' dropdown towards the 'Create the message to display' section, which contains the same Santa message as the test window. The entire sidebar is surrounded by a decorative blue snowflake border.



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Topic inputs and outputs

Benefits

Reduce complexity

Minimize the number of nodes by dynamically passing and reusing data.

Streamline conversations

Improve flow by sharing data seamlessly across multiple topics.

Enhance efficiency

Avoid redundant steps by capturing and using information where needed.



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Today's Task: Master input and output topic's variables



1. Create the Topic

Set up a new topic for experiments.

2. Configure Inputs and Outputs

Add input and output variables. Include conditional checks.

3. Test the Topic

Run your topic and test the flow with different input values to ensure inputs are captured correctly and outputs display the correct messages based on conditions.



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