



Microsoft Copilot Studio

Lab 06: Make HTTP requests to connect to an API

Hands-on lab step-by-step

January 2025

UDPP Copilot Studio Workshop

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Microsoft Copilot Studio

This lab is subject to the Terms of Use found at the end of this document.

Goals for this lab

After this lab you will be able to:

- Understand the basics of the HTTP Request node
- Use Copilot Studio to request data from another data source using HTTP node in a basic use case (using the [Gemini](#)) and return the data in a conversational dialog with a customer or user

The time to complete this lab is **[20]** 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)**
- **Access to external website (<https://api.gemini.com>)**

Exercise 1: Build a simple HTTP request node query

Connecting to data provides companies with some of the most benefits as it provides information and insight to users that is up to date and often the relevant for customer or user questions.

In this exercise, you will go through creating a new topic, adding a simple HTTP Request node action to retrieve information from an external service, and display that data back to the user.

Task 1: Create a new topic

1. Open the Copilot Studio authoring canvas' **Topics** page and click **Add a topic** drop down at the top of the screen, select the **From blank** option. Name your topic

Crypto Currency Price

2. Add some **trigger phrases** that a user may ask such as the below ones

What's the current price of Bitcoin
Can you tell me the latest crypto prices
How much does Bitcoin cost now
What are the prices of digital currencies today
What's the latest on crypto prices

3. Create a new **Question** node and enter this text:

What currency do you want to see the current price of Bitcoin in?

4. For the purpose of these labs, make the question a **Multiple-choice options** in Identify.
Add the Options for user of **USD**, **EUR**, and **GBP**. Save response as a variable named **Currency**.

Add synonyms for each option, like **dollars**, **euros**, and **pounds**.

Question Text ▾ ...

What currency do you want to see the curre...

+ Add ▾

Identify

Multiple choice options >

Options for user

USD

EUR

GBP

+ New option

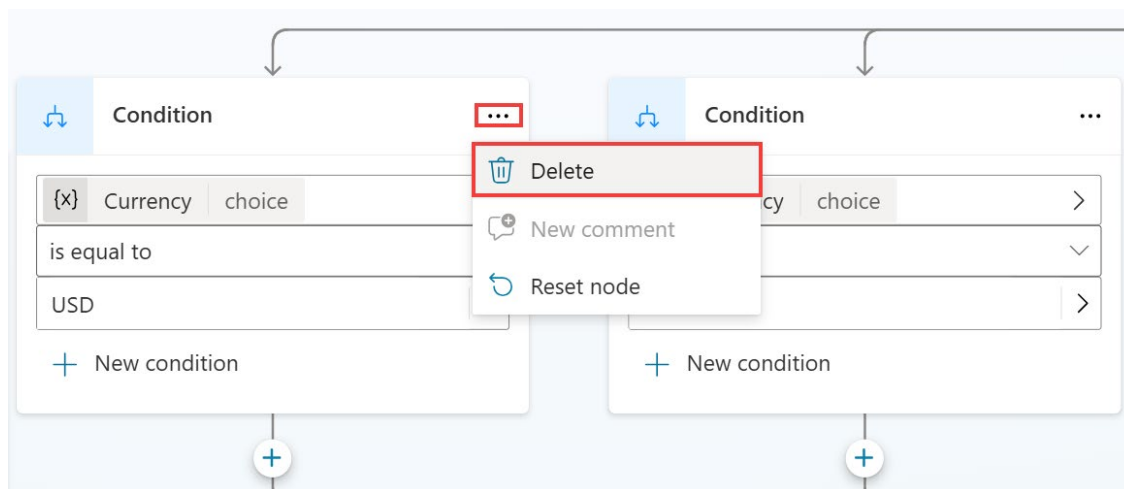
Save user response as

{x} Currency choice >

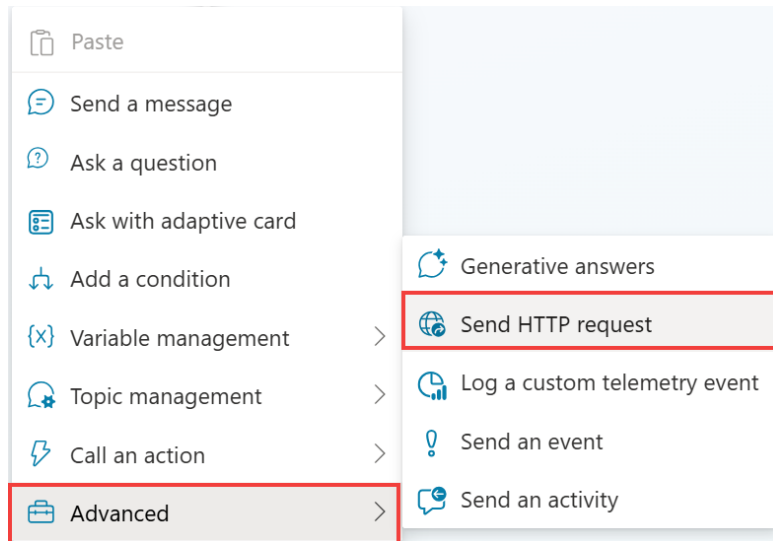


Pro tip: You can add **synonyms** by selecting your options and adding synonyms like dollars for USD.

5. Copilot Studio will automatically create the **choice condition logic** underneath the question node. We will want to remove all the conditions for this scenario by clicking the ellipsis and then selecting **Delete**.

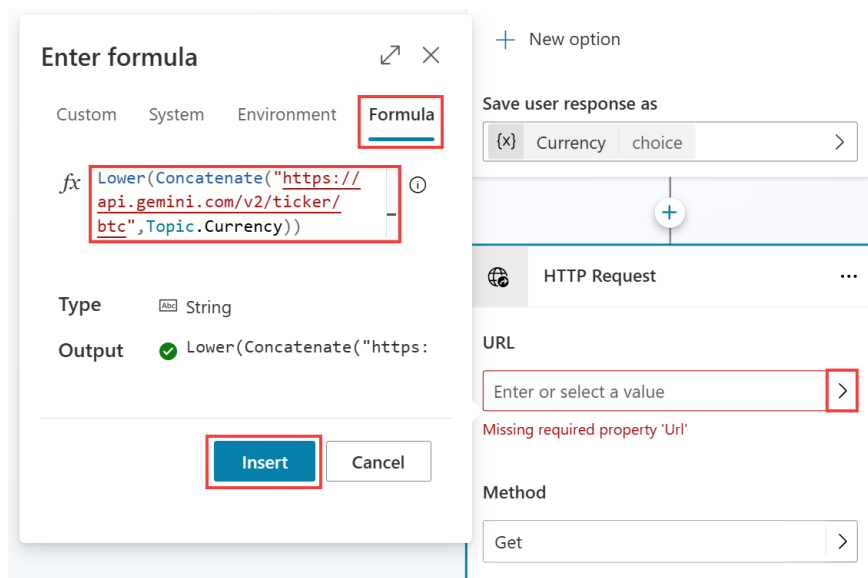


6. Next, you will want to add the **HTTP Request** node to make the API call to check the price of Bitcoin. You do this by clicking the (+) and go to **Advanced** and **Send HTTP request**.



7. Now we need to provide information about the API to allow Copilot Studio to get the price of Bitcoin in the selected Currency. To do this, inside the **URL** field we will need to select **Formula** and put the following the Power Fx formula.

```
Lower(Concatenate("https://api.gemini.com/v2/ticker/btc",Topic.Currency))
```



This formula does several things. It makes sure that the URL passed in is lower case, then it concatenates the URL to include the currency that the user selected in the question above. This will make sure that the URL for USD or EUR for example is correct for the API.

8. Now we need to provide a sample output of the JSON payload that will be returned by the API to allow the node to parse the response for us.

To do this you select **From sample data** in the **Response data type** field in the HTTP Request node.
Select Get schema from sample JSON and paste the below sample JSON payload.



If you struggle copying the below text, go the **Misc** folder in **Lab files**, and open [Bitcoin Sample JSON Payload.txt](#)

```
{
  "symbol": "BTCUSD",
  "open": "67781.09",
  "high": "68382.33",
  "low": "67293.74",
  "close": "67707.13",
  "changes": [
    "67882.6",
    "67781.09",
    "67805.66",
    "67744.15",
    "67651.01",
    "67863.46",
    "68053.16",
    "68080.11",
    "68186.09",
    "68109.26",
    "67914.8",
    "68079.54",
    "67455.47",
    "67468.58",
    "67712.98",
    "67662.82",
    "67771.15",
    "67680.26",
    "67799.25",
    "67736.21",
    "67653.87",
    "67698.36",
    "67832.24",
    "67707.13"
  ],
  "bid": "67837.17",
  "ask": "67843.41"
}
```

9. Select **Confirm**.

10. Then we will create a variable to store the parsed results from the API.

Name the Variable

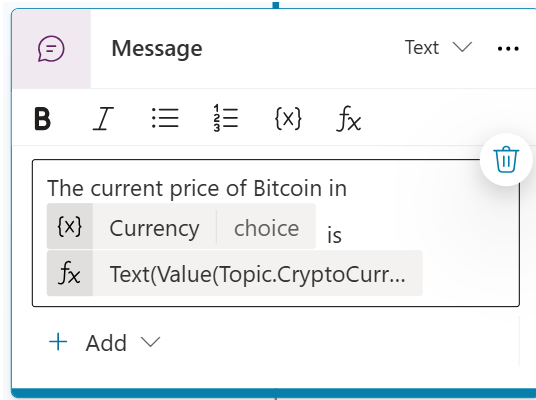
`CryptoCurrentPrice`

11. Now, let's add a message to give the user of your bot a formatted response to tell them the current price of Bitcoin. Click the (+) to add a new node and select **Send a message**. You can create your own message leveraging the variables to structure a response to the user about the price of Bitcoin.

The current bid price for Bitcoins in {Topic.Currency} is
{Topic.CryptoCurrentPrice.bid}

You can use a **formula** to format the price a specific way, for example with a thousand separators and currency symbols:

```
Switch(
  Text(Topic.Currency),
    "USD",
    Text(Value(Topic.CryptoCurrentPrice.bid), "$#,###"),
    "EUR",
    Text(Value(Topic.CryptoCurrentPrice.bid), "#,###€"),
    "GBP",
    Text(Value(Topic.CryptoCurrentPrice.bid), "£#,###")
)
```

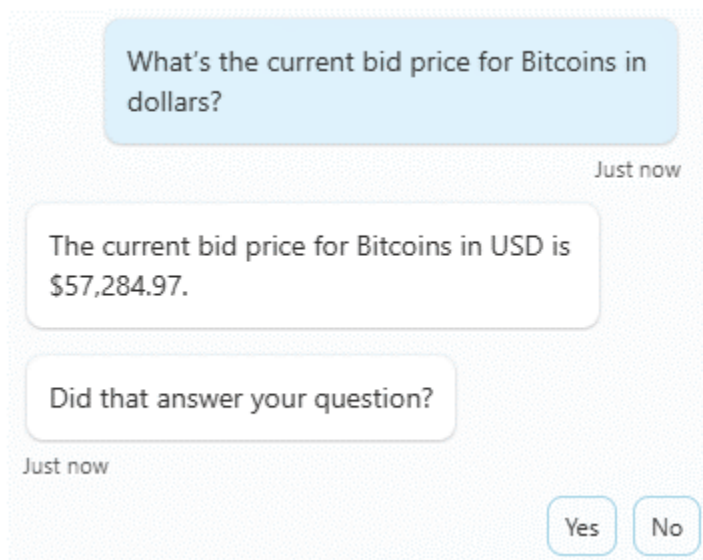



12. To end the conversation, select **Topic management** and **Go to another topic** and select **End of Conversation**.
13. **Save** your topic

Task 2: Test your topic

1. Open the **test** pane and test your copilot.

What's the current bid price for Bitcoins in dollars?



You have successfully created a HTTP Request node to provide real time data from an external service to the user!

Summary

Thank you for completing the lab 'Make HTTP requests to connect to an API'. You have successfully:

- Created a HTTP API call through the HTTP Request node in Copilot Studio
- Structured a GET API call using Power Fx
- Displayed dynamic data back to the user in Copilot Studio

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